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CAREER EDUCATION

RELATING THE BASICS

TO

LIFE

Fall 1984

D R A F T

by:

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PREFACE

The purpose of this book is to provide educators with a practical planning and implementation guide for K-12 curriculum improvement in a context called Career Education - which encourages us to reach beyond the teaching of knowledge and skills and to teach the practicality and applications of what we teach.

This guide interprets careers in its broadest sense of being living literacy, relating the "basics" to life. Careers are, in this sense, all of the pursuits one undertakes throughout a lifetime.

In Chapter 1 we have attempted to establish a rationale explaining the value of career education as an appropriate organizer for curriculum improvement.

Chapter 2 provides the terminology and definitions necessary to acquaint readers with the Iowa Career Education Model which has evolved over the last fifteen years. This model along with the Iowa Career Education Inventory (1983) developed by the Iowa Department of Public Instruction and Educational Testing Services of Princeton, New Jersey, combine to provide a clean definition of career education for Iowa schools.

In Chapter 3 we have suggested some beginning points for initiating/reviewing career education programs in local districts. This is a comprehensive listing of what has to happen and suggested responsibilities needed in a career education program K-12.

An attempt has been made in Chapter 4 to provide "state of the art" curriculum overviews for all discipline areas and to give hints and clues for incorporating needed curriculum improvements in an area with career education concepts.

Chapter 5 describes "special components" needed for a comprehensive career education program. "Special Components" refers to all the elements other than those that are "infused" into other courses. For example, guidance, library media, community, project discovery, and etc.

Chapter 6 contains information and ideas on process and evaluation. Having a systematic approach to implementation and evaluation is necessary for determining modifications and refinements. These resources are certainly not all inclusive but, hopefully, they will represent a place to start.

Chapter 7 provides some helps and a listing of selected resources. These aids were chosen upon recommendations from consultants that aided us in this effort. They were selected as those that would be most helpful to beginning efforts for understanding, planning and implementing curriculum improvement/career education.

This draft copy is the result of a rather intensive effort that began last March in an effort to meet the increasing need for a practical guide for developing comprehensive career education programs. This interest appears to relate to the use of the newly created, and available, Iowa Career Education Inventory which was used for the first time during the 1983-84 school year. The reader should keep in mind that this document is a draft copy and development will continue throughout the 1984-85 school year.

550 copies of this report were produced at a total printing cost of $5,181.00. Unit cost $9.42.

Please send us the following form and we will send you the refinements and modifications as they occur. Your ideas are also welcomed, and necessary for the satisfactory completion of this undertaking.

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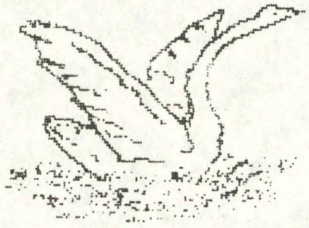

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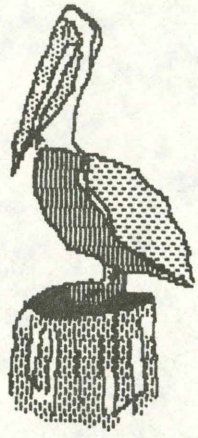

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Special recognition is due to Dr. Jo Kiley, formerly of DPI, for the development of sophisticated resource instruments and materials upon which this document relied heavily.

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Career Education
Relating the Basics to Life

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"The progress as a nation can be no swifter than our progress in education"

- John F. Kennedy

CHAPTER 1

Philosophy and Rationale

'Minds are like parachutes, they only work when they're open.'

- Author Unknown

THOUGHTS FOR CHAPTER 1

"Education must have an end in view, for it is not an end in iteself."

- Sybil Marshall, Educator

* *

"I feel that the greatest reward for doing is the opportunity to do more."

- James Edward Salk

* *

"Common sense is the knack of seeing things as they are, and doing things as they ought to be done."

- Calvin Ellis Stowe

* *

"The aim of education should be to teach the child to think, not what to think."

- John Dewey

* *

"Knowledge is the eye of desire and can become the pilot of the soul."

- Will Durrant

* *

"People are usually down, on what they are not up on."

- Anonymous

* *

"In the long run, men hit only what they aim at."

- Thoreau

* *

INTRODUCTION TO THE CAREER EDUCATION HANDBOOK

Education is becoming, in this time, education. This is the statement to be made by career education. Career is herein the definition that a person gives to their life - the expression lived, living and to be lived. Education is, inpart, to acquire the ability to utilize one's mind in the use of determining and fulfilling one's own blueprint for living.

Diversity accepted, and appreciated, it then becomes necessary to deal with the myriad of possibilities and expressions one may make in speaking one's life. This is, perhaps, what America is all about, "by the people for the people".

Career education is to help all students become confident users of the mind in the determination of their destiny. At the same time it needs to underline the interrelatedness and dependency of self to the whole - to underline the need for responsibility and cooperativeness - and to see competitiveness as a motivator rather than a "winning at all cost" attitude. A goal of career education is to educate all students in citizenship, to educate students to the need for responsibility and how to gain satisfaction and fulfillment in occupations. This requires understanding. This requires education that goes beyond training and instilling. This is the challenge of the new age of sophisticated technology and information. This is what career education is all about.

"A child is a person who is going to carry on what you have started. He is going to sit where you are sitting, and when you are gone, attend to those things which you think are important. You may adopt all the policies you please, but how they are carried out depends on him. He will assume control of your cities, states, and nations. He is going to move in and take over your churches, schools, universities, and corporations ... the fate of humanity is in his hands."

- Abraham Lincoln

Dr. Kenneth Hoyt has built a tremendous amount of support for the career education movement across this country. For that reason, along with our agreement with his philosophy for career education, we include the following paper by Dr. Kenneth Hoyt, formerly Director of U.S. Office of Career Education.

A PHILOSOPHY FOR CAREER EDUCATION

The primary purpose of education is to develop informed, responsible individuals capable of making decisions and creating meaningful involvement with others in the content of a free society. Career Education is based on the premise that the relationship between the best interests of the individual and those of society are synergistic. The career education concept functions within the educational structure and process to create a learning environment where creativity, individual expression and personal worth, and social awareness are valued. Emphasis on self-concept development and understanding of work, interpreted in its broadest sense, contributes to (1) making one's life creative and productive, (2) developing humaneness in individuals toward themselves and mankind, and (3) developing in the individual a capacity to love, appreciate, and respond emotionally to the world about him.

Career education contributes to adventures and creative use of the learner's talents in satisfying personal goals and the goals of others and in discovering new talents which contribute to the learner's self perception. It also contributes to learner understanding of the social, economic, and occupational demands of a local, national, and world society. Society and the world around the learner provide the parameters within which the learner develops an understanding of the nature and scope of these attributes.

Self-identity development is fundamental to wise career decision-making. As learners establish and understand their own identity, the role self-identity plays in the career decision-making process, and the subsequent development of a personally satisfying life style, the learner will be able to establish an orderly approach to career planning. This understanding enhances the ability to master those developmental tasks confronting each individual as he/she matures to adulthood and becomes established in a functional and satisfying career in the contemporary world.

Fundamental to establishing a viable self-identity is the development of a positive self-concept. Mental, social, and emotional self-perceptions and perceptions of how one is being received by others affect one's interpretations of tasks that confront the individual as he or she matures and formulates alternative approaches to mastering these tasks. Educational experiences provided by the school contribute to developing a positive self-concept by stressing, throughout the learning process, the formation of attitudes, values, beliefs, and distinctive abilities in the learner that will assist in this decision-making process.

Basic to the career education concept is that of work, the use of time and personal resources for the pursuit of economic and self-fulfilling rewards, including all manner of paid and unpaid purposive activity. Work is more than a way of making a living. It is a means of expressing oneself and contributing to the welfare to society which involves a meaningful connection between the worker and the job that transcends a cash reward.

Understanding on the part of the learner of the diversity of occupations in society, the major characteristics of each of these occupational areas, and the development of special interests and skills are an integral part of the total educational enterprise. To develop such understandings of occupations and the occupational structure in our society, the fullest possible use is made of community resources, thus providing a rich source of knowledge, information, and skill not normally available in the instructional environment. Increased association of students with adults in a meaningful and satisfactory relationship is of paramount importance for the development of values, character, and standards in the learner. The study of occupations and the role of work in society assists the learner, through study and inquiry, to examine some of the significant conflicts, controversies, and difficulties in national and international economic, political, and social systems.

The School Curriculum

The school curriculum includes the total offerings of planned and spontaneous educational experiences. It is under continuous revision, responding to and affecting responsible socio-economic change. Career education is infused into this ever-changing, dynamic curriculum and is implemented through attainment of specific objectives. To successfully infuse the concept into the curriculum necessitates involvement of the home, community, and school in the reordering of subject matter, emphasizing the interrelatedness, mutual support, and relevance of all knowledge.

Recognition of the learner as an ever-changing person being confronted with different developmental tasks and problems at each age level requires that career education begin in kindergarten and continue throughout the learner's educational experiences. Curriculum content is oriented toward assuring that the learner establish personal goals, standards, and strategies for the mastery of these tasks and providing opportunities for the learner to appraise the economy critically and engage in it actively as producer, consumer, critic, and responsible citizen.

The study of the world-of-work introduces an additional dimension of relevancy into the learning process and subject matters from which familiar problems emerge to serve as a basis for instruction. The study of the world-of-work is not unique to specific subject matter areas. It is an integral part of the content of the total instructional program.

The Learner

Knowledge, learned merely as knowledge, has no immediate significance for the learner. To come to life, knowledge must be functional to the learner, appropriated, literally taken in, made one's own, internalized. How one understands its application in one's world and what commitments a person makes in working it into his/her own life finally determines what that individual learns. Career education, when infused into daily learning experiences, enables learners to go from where they are in morals, attitudes, and values--to a larger and fuller expression of human possibilities.

Learning takes place when students are fully engaged participants in the educational process. When they respond actively to educational stimuli, growth begins and awareness expands. Career Education focuses the educational process on meeting the needs of the learner and recognizes that the abilities, aptitudes, past and present experiences of the learner are the important parameters within and around which the educational process functions.

Students learn individually and in groups. When emphasis in the instructional process is placed on self-concept development and the world around the student, the student has the opportunity for solitary and group study as well as reflection and personal decision making. As a result, the student learns to define who he or she is and give purposive attention to his or her career planning.

Inherent in the world-of-work concept, a fundamental concept underlining career education, is the realization that as youth look to the future for which they are preparing occupationally, preparation is for more than a specific occupation in its present form. Rather, the focus rests on the occupational area. From the occupational area emerge multiple options in choice as well as level of formal preparation required.

The Teacher

Career education enhances the teacher's role by expanding the educational environment to include the world surrounding the learner, thus stimulating learner response and subsequent course of activities. It contributes to the modification of educational practice eliciting learner responses that result in the formation of learner goals and ambitions.

Emphasis on self-concept development and the world around the learner in the educational process requires that pedagogical approaches include the study of concepts and facts (observed, recalled, read, felt, discussed, and suggested) in the context of experiences familiar to the learner. It further requires understanding by teachers of the importance of positive teacher perceptions of the learner (emotionally, socially, mentally) and how these perceptions affect their interactions with the learner in the learning environment. The formal instructional environment should be oriented to studies of cultural, social, economic, and occupational situations in the community and society and their interrelatedness to give meaning to present and future behavioral changes that occur in the learner. Throughout this process, the teacher's role is that of interpreting and using these situations as stimuli to assist learners to better understand their own identity and how they relate to the world around them.

Subject Matter

Mastery of those developmental tasks that confront the learner in progressing through varying stages of cultural, social, mental and physical growth is the foundation upon which all educational processes are based. Subject matter content should be oriented to assisting the learner in analyzing those tasks, establishing personal standards and goals, and developing strategies for their mastery.

Subject matter is the culmination of human experiences as applied to learning. An understanding of these experiences will assist the learner in mastering those tasks congruent with his/her cultural, social, mental, and physical growth. In this context, subject matter becomes a part of the pedagogical process in the educational enterprise. It is used to emphasize facts and concepts pertinent to assisting the learner in mastering those developmental tasks confronting him/her. It serves as one of the stimuli in the learning process.

All subject matters should include the study of materials and occupations pertinent to each subject matter. Learning situations including these components provide an environment in which learners can generate familiar problems that, when solved, will assist in solving their problems and relating the subject matters to the society and world around them.

Summary

Career education is, in the main, pragmatic in its approach, yet draws from other theories of educational thought for its foundations and manifestations in the educational enterprise. Fundamental to the career education concept is the realization that preparing for the future grows out of a successful coping with the present and that individual self-fulfillment and career preparation involves all educational endeavors experienced by the learner.

IDEAS RELATING TO CAREER EDUCATION

The following information, taken from an Encyclopedia of Educational Research article on Career Education, Fifth Edition, Volume One, describes the status of Career Education today.

It is suggested that most movements in education pass through five phases of development: 1) idea stage, 2) conceptual development, 3) try-out implementation, 4) evaluation, 4) research, and 6) further refinement. The research collected suggests Career Education has not advanced beyond the evaluation stage.

The ideas of Dr. Hoyt and several other key individuals in the Career Education movement have established three basic goals of the movement: 1) Change the educational system by inserting a "careers" emphasis; 2) Increase community-education linkages; and 3) Provide students with ten general employability-adaptability-promotability skills.

A study by the National School Boards Association (NSBA) (1980) reports a sampling of superintendents and school board members rated Career Education as the single topic "most deserving" of more attention among the 16 topics introduced during the 1970's. Career Education ranked third among those judged most likely to receive increased interest and financial support during the 1980-85 period. To strengthen the support for Career Education, 32 national organizations and associations in education have, to date, endorsed Career Education.

A survey completed in 1974 in all states found that well over half of the teachers and counselors surveyed recommended it was important to include Career Education into the curriculum. In conjunction with this, a survey of ten attitude studies conducted in ten states concluded that students responded positively to Career Education regardless of grade level or type of program. After extensive review of the literature, the summary stated, "Surveys of parents, teachers and students are positive with almost no exceptions about the goals of Career Education". Similar strong support was found in a 1979 survey of chief state school officers, concluding that 15 of 20 felt Career Education was "very important" or "extremely important", whereas only one in 20 felt it was "not very important".

The 1974-75 national survey relating to the implementation of Career Education in school systems suggests 60% of the districts have begun Career Education implementation efforts and only 3% have taken the five essential steps demanded by a comprehensive Career Education effort.

The information from this article restates most people's attitude toward Career Education and that it is a good idea, however, we just cannot get any action started. We hope that perhaps with the use of this guide we can.

THE WHY, WHAT AND HOW OF CAREER EDUCATION

CAREER EDUCATION PHILOSOPHY

Career education is infused into all school subjects. The emphasis is on individual development, instruction, and guidance. It is interrelated within levels, and from level to level. This offers each individual multiple opportunities to assess personal attributes and aspirations; explore educational and occupational opportunities; understand the world of work and its impact on self and society through economics; develop personal, social, and educational goals; make realistic choices about life styles and values; and develop the ability to solve problems related to present and future roles and life situations.

RATIONALE

Career education gives the educational community the stimulation, emphasis, and means to deliver educational experiences which prepare individuals for a changing and increasingly complex society. Career education brings into the educational process the realities of the world, and experiences that relate to preparing for one's life work.

LEGISLATION

The board of directors of each local public school district and the authorities in charge of each nonpublic school shall incorporate into the educational program the total concept of career education to enable students to become familiar with the values of awork-oriented society. Curricular and cocurricular teacher-learning experiences from the pre-kindergarten level through grade twelve shall be provided for all students currently enrolled in order to develop an understanding that employment may be meaningful and satisfying. However, career education does not mean a separate vocational-technical program is required. A vocational-technical program includes units or partial units in subjects which have as their purpose to equip students with marketable skills.

Essential elements in career education shall include, but not be limited to:

1. Awareness of self in relation to others and the needs of society.
2. Exploration of employment opportunities and experience in personal decision making.
3. Experiences which will help students to integrate work values and work skills into their lives.

WHY WHAT HOW

WHAT IS CAREER EDUCATION?

STUDENT: Career education means all activities and experiences through which students prepare themselves for work and for personal fulfillment in the pursuit of a career.
SCHOOL: Career education means structuring learning experiences to assure the development of interests, appreciations, attitudes, values, skills, and adjustment to changes related to career development.
COMMUNITY: Career education is involvement in the educational process of home, business, industry, arts, and humanities to form a "community" approach to career development and self-fulfillment.

WHY IS CAREER EDUCATION NECESSARY?

STUDENT: Career education helps students who have completed their formal education become more successful in realizing satisfying and worthwhile experiences in the world of work.
SCHOOL: Career education brings about the integration of the concept of career development into the total school curriculum.
COMMUNITY: Society must have individuals entering the work force who are able to contribute and gain satisfaction from their life's work.

WHAT CHANGES DOES CAREER EDUCATION BRING ABOUT?

STUDENT: The changes are a new source of motivation to study subject matter, increased adaptability skills, a set of work values developed as part of a personal value system, increased decision-making skills, increased knowledge and understanding of occupational and educational opportunities and increased ability to make better use of leisure time.
SCHOOL: The infusion of career development concepts establishes a stronger, more relevant relationship among subject matter areas, basic academic skills and career-related experiences, as well as overcoming sex role stereotyping in occupations.
COMMUNITY: The results are a community with a new quality of employees who are likely to be more productive and satisfied with career experiences.

HOW DOES CAREER EDUCATION AFFECT THE CURRICULUM?

STUDENT: Career education provides enriched educational experiences and increased options for students. It gives students a broader look at the relationships and interdependence among individuals within the social, political, educational, and economic systems of the community.
SCHOOL: Career education provides a learner-centered, career-development-focused process. It also provides working relationships in the business, industry, the arts, and humanities aspects of the community.
COMMUNITY: Career education provides society with a new quality of individuals with skills for life roles-citizen, earner, learner, and consumer.

List of decisions

The following questions begin to outline the decisions that need to be made by a district. The list is by no means all inclusive, however, it will be a place to start. Hopefully, this list will provide some structure to your decision-making process.

Who will make the decisions and the timeline for making those decisions is something that should be made early in the planning stages. The list of decisions is organized by chapter to assist districts with understanding the content of each section of the guide.

Chapter I Philosophy and Rationale

*What are the plans for incorporating the information in this guide?
*What is the district's philosophy for career education?
*What was/is the rationale for including career education into the district's curriculum?
*What are some of the anticipated changes in the education of your students to be accomplished by incorporating career education?
*What process is going to be used in your system to decide who decides on these issues?
*What are some of your major concerns that need to be addressed during the planning cycle?

CHAPTER 2

Iowa Model

'Nothing will ever be attempted if all possible objections must be first overcome.'

- Samuel Johnson

THOUGHTS FOR CHAPTER 2

"One pound of learning requires ten pounds of common sense to apply it."

- Persian Proverb

* *

"The great difficulty in education is to get experience out of ideas."

- George Santayana

* *

The question "Who ought to be boss?" is like asking "Who ought to be the tenor in the quarter? Obviously, the man who can sing tenor."

- Henry Ford

* *

"Periods of tranquility are seldom prolific of creative achievement. Mankind has to be stirred up."

- Alfred Worth Whitehead

* *

"The best way to show that a stick is crooked is not to argue about it, or spend your time denouncing it, but to lay a straight stick alongside of it."

- Dwight Moody

* *

"Our fears are always more numerous than our dangers."

- Seneca

* *

"It is better to know some of the questions than all of the answers."

- James Thurber

* *

IOWA MODEL

The Iowa Model provides a sound basis to develop a comprehensive career education plan. The model consists of four levels: awareness K-3; accommodation 4-6; exploration 7-9; and preparation 10-12, outlines key concepts to be addressed in seven domains (self, interpersonal relation, self and society, decision-making, economics, occupational knowledge and work attitudes and values).

This Chapter provides the necessary definitions and terms, along with the model instructional objectives to become familiar with the Iowa Career Education Model. The information will assist educators to advance forward with a functional level of knowledge.

CONCEPT

The mode for career development was generated showing the relationship of career education concepts in the total curriculum. The model depicts a concept of career development beginning in kindergarten and continuing throughout life. It evolves around two basic concepts--the concept of self and the concept of the world of work. The self-concept focuses on the learner's understanding of themselves physically, mentally, socially, and emotionally. The world of work concept focuses on the learner's understanding of and preparation for entry into the world of work. The purposes of these two concepts remain the same throughout the model, but functions differently during each phase of career development.

During the awareness phase of career development, the self-concept emphasizes those educational experiences that will lead the learner to becoming aware of themselves and others in a physical sense, their personal feelings, and about living with others. The learners becomes knowledgeable of the function and operational structure of the school, recognizes accepted school behavior, and recognizes factors which contribute to optimum learning potential. The student recognizes personal attributes, suggests individual steps for improvement of learning, describes personal feelings toward school, exercises feelings toward self and others and examines individual, family and social characteristics and needs of man. For the world of work concept, emphasis is placed on developing understandings of and appreciations for work, the value of the worker, and the role of work and the worker in our society.

The learner examines the world of work as it relates to the "total" life of individuals and groups. They interpret the concept of work, recognizes the reasons people work, and exhibit a positive attitude toward work.

Each individual examines occupations, occupational change, and how self-perception relates to selected occupations by exploring a wide variety of occupations. Learners discover that people change occupations and relate self-perception with those occupations of interest.

Learners explore the economic aspects of work differentiating between employers and employees and consumers and producers, recognizes money as a medium of exchange, examines how workers are paid for their services, and identifies the influence of transportation in the economic system. During this phase, no attempt is made to relate the points of emphasis stressed in this phase, no attempt is made to relate the points of emphasis stressed in each of the concepts.

The accommodation phase has two purposes. The learner continues developing their self-awareness and their awarensss of the world of work. In addition, they begin to relate to fuse (accommodate) their understanding of self and the development of academic skills, and develop an appreciation of individual characteristics by adapting and adjusting them to contribute to school and community. The learner examines the world of work as related to the well-being of individuals and society. They investigate (1) the nature of occupational clusters, (2) factors which influence our economic system, and (3) the similarities and differences between values in diverse cultures. The fusion of these two concepts continues throughout the career development process leading eventually to entry into a lifestyle and occupation suited to their interests, abilities, and desires.

In the exploration phase, the learner begins indepth exploration of their real interests, aptitudes, and desires and the occupational clusters that comprise the world of work and their interrelatedness. During this phase of career development, they recognize the educational setting as a place to gain direction and needed skills for the development of career goals. They consider their developing maturity as continually influencing self perception of educational needs; examines specific behaviors and lifestyles relating to the organization of the world of work; explores careers, career change, and how skills perception relates to selected careers. The learner continues self analyses of the economic aspects of the world of work and investigates societal and cultural factors which influence and control human behavior. Through educational experiences provided during this phase of career development, the learner will be prepared to assess and pursue the career options open. By careful screening and selection; students will be able to choose those high school courses which relate to their personal attributes, satisfactions, and career learnings. As a result of these experiences, they begin the process of selecting an occupational area for which to prepare for job entry.

The fourth phase of career development, the preparation phase, has a two-fold purpose. The learner may continue self exploration of the occupational clusters that comprise the world of work or begin preparing for occupational entry into a cluster area. As a result of educational experiences provided in this phase of career development, the learner will attain employment qualities and skills for the world of work, including attitudes, values, and occupational skills to the extent necessary for economic independence and personal fulfillment. The learner will utilize the educational setting as any place or program in the school and/or community which will give direction and skills for career development.

The learner utilizes self aspirations, experiences, values, and abilities to give orientation and direction to their career development. The learner continues analysis of specific behaviors and lifestyles while determining and preparing a personalized direction for the world of work. Students examine selected careers and corresponding lifestyles as they relate to their own skills, capabilities, self-perception and needs, and recognized societal functions that influence human behavior.

The final phase of the model suggests broad opportunities for the learner once the learner has entered an occupation and a lifestyle. While it is recognized that occupations that exist today may be nonexistent in the year ahead, the career development process that the learner has experienced throughout their formal education should provide them with those skills.

During the accommodation stage, the learner continues to develop self-awareness and awareness of the world of work. The learner also begins to relate or fuse their own self-perception with their own comprehension of the world of work.

During the exploration stage, the learner continues to compare personal characteristics with the knowledge gained from the exploration of careers. The learner begins to identify occupational areas that most closely align with their self-concept.

During the preparation stage, the learner will attain employable qualities of the world of work, including attitudes, values, and skills to the extent necessary for economic independence and personal fulfillment.

LEVELS

AWARENESS
(K-3)

During the awareness phase, students become aware of self--physically, socially, emotionally, culturally and mentally, and begin to develop skills in dealing with others. In addition, students learn to recognize and to demonstrate appropriate behaviors for home, school and community settings. In this developmental phase students also become aware of economic and technological influences and recognize work roles and responsibilities that apply to a variety of occupational areas and occupations.

ACCOMMODATION
(4-6)

Progressing into the accommodation phase, students continue to develop awareness while beginning to relate and to fuse self perceptions with evolving personal goals. Occupational knowledge and the understanding of related work habits, attitudes and values are correlated with their personal interests. Students are afforded experiences in making decisions and accepting the consequences of those decisions in this developmental phase, students learn to recognize the influences of cultural/societal values and the impact of economic/technological advances on global relations.

EXPLORATION
(7-9)

Students continue to develop and assess their personal characteristics, values, interests and potentials. They assess personal goals in relation to a wide range of occupations which they experience through hands-on exploration and sample work situations conducted in the school and community. Students recognize the nature of change within the work force, the contribution of the individual to work in society and analyze the benefits of paid and non-paid work. In this developmental phase students recognize the need for and seek the assistance of the home, school and community for career guidance and the development of life skills in a changing society.

PREPARATION
(10-12)

Students begin to actualize personal aspirations, abilities, potentials and life goals. Students understand and experience the economic aspects of the world of work as a producer and consumer. Students learn to manage their behavior in terms of their own value systems, social expectations and varying life roles. Decisions are made about preparation for a chosen career area(s) of interest requiring a vocational and/or college program. In this developmental phase students continue to evaluate and revise plans for achieving personal or career goals.

BASICS OF CAREER DEVELOPMENT

SKILLS & CONCEPTS	SETTINGS	OUTCOMES
Self		Self and Career Identity
Interpersonal Relations	HOME	Effective Human Interactions
Self and Society		Self and Social Fulfillment
Decision-Making	SCHOOL	Career Direction Goals
Economics		Economic Understanding
Occupational Knowledge		Career Competency and Confidence
Work Attitudes and Values	COMMUNITY	Appropriate Role Behavior

DOMAINS

SELF

The domain of self includes items which reflect developing interests, values, feelings, mental and physical characteristics and potential of individuals in grades K-12. Concepts within this domain encourage the examination of self in relation to personal and career development goals, encourage assessment of the self concept and appraisal of interests and capabilities.

INTERPERSONAL RELATIONS

The domain of interpersonal relationships provides for interaction within and between peer and adult groups. (The individual learns to relate appropriately with peers and all significant others within the environment.) The impact of group dynamics on career paths and opportunities is recognized by the individual.

SELF AND SOCIETY

The domain of self and society pertains to the role, expectations and interdependence of an individual as a contributing member of society. The individual recognizes the impact and expectations of societal units and institutions on personal values. As a member of society, the individual develops the ability to adjust to technological forecasts and trends which influence personal and career opportunities.

DECISION MAKING

The domain of decision making encompasses learning to apply the decision-making processes and analyzing the consequences in the development of both short- and long-range personal and career goals. The decision making processes include the recognition and utilization of individual strengths and limitations in setting and achieving goals.

ECONOMICS

The economic domain emphasizes the development of economic literacy and the concept that work is central to any economic system. This involves understanding the roles and contributions of producers and consumers. The costs and rewards of work influenced by supply and demand are included in this domain as well as the realization the economic system affects lifestyle pursuit and the attainment of career goals.

OCCUPATIONAL KNOWLEDGE

The occupational knowledge domain encompasses the qualifications required and the related similarities of various jobs and career paths. The roles and influences of labor management are recognized in the development of a productive work force. Gaining occupational knowledge includes the examination of a variety of careers and an analysis of personal interests and abilities. (Skills, education and training are recognized as the keys to achieving personal and career goals.)

WORK ATTITUDES AND VALUES

The domain of work attitudes and values allows the individual to recognize, develop, evaluate personal, social, and economic satisfaction derived from productivity. The acquired work values and attitudes are demonstrated in appropriate role behaviors and activities which occur within various school, community and work settings.

CAREER EDUCATION STRANDS

INTERESTS AND FEELINGS

Aware that people have different feelings and interests about work; Recognizes that a person's feelings and interests influence career choices, opportunities and paths; Examines relationships between a person's feelings and interests and specific career choices, opportunities and paths; Reconciles conflict between a person's feelings and interests and specific career paths.

MENTAL AND PHYSICAL CHARACTERISTICS

Aware that people have different mental and physical charcteristics; Recognizes that a person's mental and physical characteristics influence career choices, opportunities and paths; Examines relationships between a person's mental and physical characteristics and specific career choices, opportunities and paths; Reconciles confict between a person's mental and physical characteristics and specific career paths.

INTERACTION WITHIN GROUPS

Familiar with types of interactions within groups; Recognizes different ways people interact within groups, Examines impact of interaction within groups on career paths and opportunities; Recognizes how people resolve conflict within groups.

INTERACTION BETWEEN GROUPS

Familiar with types of interactions between groups; Recognizes different ways groups interact; Examines impact of group dynamics on career paths and opportunities; Recognizes how people resolve confict between groups.

SOCIETAL ROLES AND EXPECTATIONS

Aware of societal units and institutions and their different values and expectations about work (e.g., person, family, community, school, job); Differentiates among societal units and institutions and their values and expectations; Examines influence of societal values and expectations on career choices and opportunities; Recognizes ways people resolve conflicts between personal values and the expectations of societal units and institutions.

SOCIAL CHANGE AND TECHNOLOGY

Recognizes that social roles and values change with shifts in resources and technology; Recognizes sources of change in societal roles, values in response to shifts in resources and technology; Examines impact of changing social roles, values and technology on career choices and opportunities; Forecasts long-term impact of trends in social roles, values and technology on career choices and opportunities.

SETTING AND ACHIEVING GOALS

Differentiates between short-term and long-term goals; Recognizes determinants of short-term and long-term goals on career opportunities and paths; Examines influence of short-term and long-term goals on career opportunities and choices; Reconciles conflicts between competing short-term goals in career and life planning.

DECISION-MAKING STRATEGIES

Aware that choices and decisions must be made actively; Recognizes how people make decisions; Examines benefits and disadvantages of different decision-making strategies; Applies appropriate decision-making strategies to career planning.

CONSUMERS AND PRODUCERS

Aware that everyone serves in both consumer and producer roles; Differentiates between the roles and contributions of consumers and producers; Examines ways local, state, national and international economic conditions, policies, trends influence career opportunities; Resolves conflicts between economic conditions, policies and trends and career opportunities.

COSTS AND REWARDS OF WORK

Aware that different costs and rewards are associated with different types of work (e.g., life styles, paid/unpaid work); Understands influence of supply and demand on costs and rewards of different careers; Examines costs/benefits in economic system for different career paths; Resolves conflicts between costs/benefits of different career paths.

WORLD OF WORK REQUIREMENTS

Aware that jobs/careers have different requirements; Differentiates among job/career requirements; Examines entry level requirements of different job/career paths; Matches a person's preparation and experience with the requirements of different job/career paths (e.g., transferability of skills, serial careers, matching people to opportunities).

WORLD OF WORK OPERATIONS

Aware of units of organization in the world of work (e.g., employers, employees, unions); Differentiates among roles and contributions of units of organization in the world of work; Recognizes how decisions are made which influence access to advancement opportunities among employers and employee groups (e.g., how roles and customs of internal/external labor markets affect lines of progression); Resolves conflict between a person's preparation/experience and access to opportunities in internal/external labor markets.

SCHOOL AND WORK BEHAVIORS

Aware of appropriate behaviors in family, community and school settings; Differentiates among roles of leadership and collaboration (e.g., teamwork) in school, community, home and work settings; Recognizes behavioral requirements of school, community and work settings; Recognizes consequences of appropriate and inappropriate behavior in work and community settings.

WORK INCENTIVES

Aware that jobs/careers have different rewards; Recognizes benefits and disadvantages of different kinds of work; Identifies/examines trade-offs between a person's values and the benefits, costs of specific job/career paths and choices; Maximizes net advantages of alternative career paths and choices.

CAREER EDUCATION OBJECTIVES
Awareness Phase

MEASUREMENT OBJECTIVES

INSTRUCTIONAL OBJECTIVES

Self

1. Interests and Feelings - aware that people have different feelings and interests about work
   - 1a. Recognizes personal interests
   - 1b. Recognizes feelings toward self

2. Mental and Physical Characteristics - aware that people have different mental and physical characteristics
   - 2a. Becomes aware of own developing mental and creative abilities
   - 2b. Becomes aware of own physical characteristics

Interpersonal Relations

3. Interaction within Groups - familiar with types of interactions within groups
   - 3a. Recognizes feelings toward self, peers, adults and near environment
   - 3b. Recognizes that human beings are more alike than different
   - 3c. Recognizes the dignity of the individual

4. Interactions between Groups - familiar with types of interaction
   - 4a. Becomes aware of the feelings of peers and adults
   - 4b. Recognizes that there are various peer groups with which one associates

Self and Society

5. Impact of Societal Units and Institutions on Values and Expectations - aware of societal units and institutions and their different values and expectations about work (e.g., person, family, community, school, job)
   - 5a. Recognizes societal institutions that influence personal attitudes and values.
     - i. Becomes aware of the family and as basic social unit influencing the individual
     - ii. Becomes aware of the school and community as influences on the individual
   - 5b. Recognizes the contributions of various units to a functioning society

6. Interaction of Social Change and Developing Technology - recognizes that social roles and values change with shifts in resources and technology
   - 6a. Understands that other people and tasks may depend on completion of one's own tasks
   - 6b. Recognizes that technology and changes in technology influence daily life and values

Decision-Making

7. Setting and Achieving Goals - differentiates between short- and long-term goals
   7a. Acquires short-term personal goals

8. Decision-Making Processes and Strategies - aware that choices/decisions must be made actively
   8a. Becomes aware of decision-making processes

Economics

9. Consumers and Producers - aware that everyone serves in both consumer and producer roles
   9a. Sees the concept of work as including various types of activities
      i. Sees that work produces goods and services
      ii. Differentiates between consumers and producers

10. Costs and Rewards of Work - aware that different costs and rewards are associated with different types of work (e.g., lifestyles, paid/unpaid work in different career paths)
   10a. Becomes aware of the economic aspects of the world of work
      i. Becomes aware of money as a medium of exchange
      ii. Becomes aware that workers are paid for their services
   10b. Becomes aware that ownership can result in loss as well as gain

Occupational Knowledge

11. World of Work Requirements - aware that jobs and careers have different requirements
   11a. Recognizes the importance of the educational setting (home, school, community) to own personal growth
   11b. Recognizes the relationship between school activities and tasks outside the school
   11c. Becomes aware of the environment best suited to own learning
   11d. Becomes aware of the wide variety of occupations
      i. Considers occupations that interest him/her
      ii. Becomes aware of the occupations represented in the school
   11e. Becomes aware of similarities among occupations

12. World of Work Operations - aware of units of organization within world of work (e.g., employers, employees, unions)
   12a. Becomes aware of organization within the work world
      i. Differentiates between employers and employees
   12b. Recognizes that people change occupations

Work Attitudes and Values

13. School and Work Behaviors - aware of appropriate behaviors in family, community and school settings
   13a. Recognizes and performs appropriate behaviors for the school setting
   13b. Recognizes the need for leadership and collaboration in family, community and school settings

14. Work Incentives - aware that jobs and careers have different rewards
   14a. Recognizes the reasons why people work
   14b. Becomes aware of the range of social and economic benefits associated with various occupations

CAREER EDUCATION OBJECTIVES
Accommodation Phase

MEASUREMENT OBJECTIVES

INSTRUCTIONAL OBJECTIVES

Self

1. Interests and Feelings - recognizes that a person's feelings and interests influence career choices, opportunities and paths
   - 1a. Analyzes present interests as a basis for development of new interests
   - 1b. Appraises feelings toward self

2. Mental and Physical Characteristics - recognizes that a person's mental and physical characteristics influence career choices, opportunities and paths
   - 2a. Recognizes own developing mental and creative abilities in terms of an evolving life goal
   - 2b. Recognizes physical abilities

Interpersonal Relations

3. Interactions within Group - recognizes different ways people interact within groups
   - 3a. Relates emotional characteristics as an interpersonal function among self, peers, adults and near environment
   - 3b. Appraises others' perceptions of self
     - i. Copes with praise and criticism from adults and peers in a positive manner

4. Interactions between Groups - recognizes different ways groups interact
   - 4a. Recognizes variations in attributes of self, peers, and adults
   - 4b. Relates successfully with various peer groups

Self and Society

5. Impact of Societal Units and Institutions on Values and Expectations - differentiates among societal units and institutions and their values and expectations
   - 5a. Sees the interdependence among contributing members in units of society
   - 5b. Exhibits understanding of the influence of diverse cultures on values
     - i. Recognizes that all cultures are to be respected
     - ii. Recognizes that what is considered acceptable behavior in one culture may be considered anti-social in another

6. Interaction of Social Change and Developing Technology - recognizes sources of change in societal roles, values in response to shifts in resources and technology
   - 6a. Differentiates among reasons for changing technology and values

Decision-Making

7. Setting and Achieving Goals - recognizes determinants of short- and long-term goals on career opportunities and paths
   - 7a. Becomes aware of future goal possibilities
   - 7b. Recognizes that self knowledge is related to a set or system of values
   - 7c. Recognizes aptitudes which relate to various career clusters

8. Decision-Making Processes and Strategies - recognizes how people make decisions
   - 8a. Acquires experience in making decisions and accepting their consequences
   - 8b. Recognizes that there is a continuous interaction between one's knowledge and opportunities
   - 8c. Chooses activities which will utilize personal interests and abilities in making contributions
     - i. Identifies opportunities afforded through school programs
     - ii. Identifies opportunities afforded through community activities
     - iii. Uses the decision-making process in choosing projects to commensurate with own abilities and interests

Economics

9. Consumers and Producers - differentiates between the roles and contributions of consumers and producers
   - 9a. Expands the concepts of work to include paid and unpaid work
     - i. Differentiates between consumers and producers

10. Costs and Rewards of Work - understands influence of supply and demand on costs and rewards of different careers
   - 10a. Investigates the economic factors which influence the life of the individual
     - i. Describes the flow of money in the economic system
     - ii. Compares the effects of supply and demand factors in the labor market on job availability, pay, and work roles
     - iii. Describes how income varies with career type and level
   - 10b. Recognizes that different types of costs, risks and rewards are involved with investment and ownership
     - i. Correlates compensation with geographical areas
     - ii. Recognizes that greater competencies generally increase pay (training, experience, knowledge)
     - iii. Recognizes the implications of discrimination (racial, sex, age, cultural)
   - 10c. Relates lifestyles to work roles
     - i. Describes a lifestyle
     - ii. Realizes that monetary rewards affect lifestyles
     - iii. Realizes that work hours affect lifestyles
     - iv. Considers that personal needs affect lifestyles
     - v. Recognizes that occupations and their resulting lifestyles may affect physical and mental health

Occupational Knowledge

11. World of Work Requirements - differentiates among job and career requirements
    - 11a. Understands that the education setting (home, school, community) can help one to know own strengths and weaknesses and to develop life skills
    - 11b. Recognizes the relationship between education and opportunities in the world of work
    - 11c. Recognizes personal modes of learning, management, action, and operation
    - 11d. Comprehends that a wide variety of occupations exist
        - i. Contemplates work roles which could lead to desired lifestyles
        - ii. Observes qualities desirable for various occupations
    - 11e. Comprehends the similarities and relatedness of occupations

12. World of Work Operations - differentiates among roles and contribution of units of organization in the work world
    - 12a. Recognizes that occupational areas have different levels of responsibility
    - 12b. Realizes that work responsibilities change within occupations due to technology, personal competencies, and job requirement

Work Attitudes and Values

13. School and Work Attitudes - differentiates among roles of leadership and collaboration (e.g., teamwork) in school, community and work settings
    - 13a. Recognizes and performs appropriate behaviors for the community setting
    - 13b. Recognizes that rewards and problems are involved in leadership roles in family, school, community and work settings

14. Work Incentives - recognizes benefits and disadvantages of different kinds of work
    - 14a. Recognizes that various rewards may come from work
    - 14b. Describes the personal growth and rewards of work and/or leisure
        - i. Realizes that personal satisfaction may come from work
        - ii. Distinguishes the need for personal satisfaction in work and leisure
        - iii. Describes the satisfaction gained when personal capabilities are effectively used in work and leisure
        - iv. Expresses the personal value that is received from creative work and leisure
        - v. Acknowledges that social recognition may be related to work
        - vi. Recognizes that personal satisfaction results from work that is interesting to the individual
        - vii. Recognizes that monetary rewards may come from work

CAREER EDUCATION OBJECTIVES
Exploration Phase

MEASUREMENT OBJECTIVES

INSTRUCTIONAL OBJECTIVES

Self

1. Interests and Feelings - examines relationships between a person's feelings and interests and specific career opportunities, choices, and paths
   1a. Assesses personal interests
   1b. Relates to own emotional charcteristics as a function of his/her own total being

2. Mental and Physical Characteristics - examines relationships between a person's mental and physical characteristics and specific career opportunities, choices, and paths
   2a. Assesses developing mental and creative abilities in terms of an evolving life goal
   2b. Analyzes own physical abilities and potentials

Interpersonal Relations

3. Interactions within Groups - examines impact of interaction within groups on career paths and opportunities
   3a. Identifies appropriate personal emotional characteristics (feelings) when interacting with self, peers, and near environment
   3b. Analyzes others' perception of self
   3c. Demonstrates understanding and appreciations for variations in personal characteristics

4. Interactions between Groups - examines impact of group dynamics on career paths and opportunities
   4a. Recognizes that different circumstances give rise to different group relationships

Self and Society

5. Impact of Societal Units and Institutions on Values and Expectations - examines influence of societal values and expectations on career choices and opportunities
   5a. Assesses how personal values relate to changing society roles and norms
   5b. Recognizes that at least some people must work if society is to survive

6. Interaction of Social Change and Developing Technology - examines impact of changing social roles, values and technology on career choices and opportunities
   6a. Examines impact of changing technology and values on present career choices and opportunities

Decision-Making

7. Setting and Achieving Goals - examines influence of short- and long-term goals on career opportunities and choices
   - 7a. Acquires some long-term personal goals
   - 7b. Understands the process of evaluating own abilities, personal qualities, aspirations, and other values and their interrelationships
   - 7c. Relates personal characteristics to selected clusters of occupations

8. Decision-Making Processes and Strategies - examines benefits and disadvantages of different decision-making strategies
   - 8a. Cultivates the ability to make decisions and analyzes the consequences of own decisions (problem-solving process)
   - 8b. Understands the process of assessing personal competencies such as experience, education, and skills
   - 8c. Formulates tentative career expectations in terms of personal characteristics
     - i. Recognizes that personal characteristics may make a career choice suitable or unsuitable
     - ii. Analyzes possible career directions compatible with personal characteristics
     - iii. Identifies personal reasons for wanting to change job types
     - iv. Describes the importance of personal characteristics in seeking employment
     - v. Distinguishes among preparations needed to pursue personal career directions

Economics

9. Consumers and Producers - examines ways local, state, national and international economics conditions, policies and trends influence career opportunities
   - 9a. Differentiates between consumers and producers
   - 9b. Analyzes the economics aspects of the world of work
     - i. Examines the rule of financial institutions in today's economy
     - ii. Analyzes the effect of supply and demand on the world of work
   - 9c. Considers the economic impact of national policies on the availability of jobs

10. Costs and Rewards of Work - examines costs/benefits in the economic system for different career paths
   - 10a. Develops an idea of the type of lifestyle desired
     - i. Relates desired lifestyles to occupational preference
     - ii. Realizes that individuals may choose a lifestyle
   - 10b. Recognizes factors which influence remuneration and benefits of employment
     - i. Recognizes skill development as a factor influencing remuneration
     - ii. Recognizes the impact of state and federal minimum wage and hour laws
     - iii. Comprehends the Social Security program as related to employment (application procedures, purpose, functions, responsibilities)
     - iv. Recognizes federal and state income tax programs
     - v. Recognizes various kinds of fringe benefits available to employees (insurance, retirement, sick leave, vacation)
   - 10c. Differentiates among costs, risks and rewards of various types of investment and ownership

Occupational Knowledge

11. World of Work Requirements - examines entry level requirements of different job and career paths
    - 11a. Identifies educational setting (home, school, community) as a possible aid in developing life skills
    - 11b. Examines clusters of occupations
        - i. Differentiates among occupational clusters by their relationships to education and training
        - ii. Distinguishes the characteristics which are common and unique among clusters
    - 11c. Analyzes personal modes of learning, management, action, and operation
    - 11d. Explores a wide range of occupations
        - i. Describes specific educational and skills requirements of occupations
        - ii. Differentiates between job tasks
        - iii. Investigates the training and personal requirements for advancement within a given occupation
        - iv. Acquires insight into difference in working conditions
        - v. Distinguishes between occupations related to the production of goods and occupations related to the production of services

12. World of Work Operations - recognizes how decisions are made which influence access to advancement opportunities among employers and employee groups (e.g., how roles and customs of internal/external labor markets affect lines of progression)
    - 12a. Describes organization within the work force
        - i. Becomes aware of role, structure, membership and leadership of labor unions
        - ii. Becomes aware of the role in management in the work force
        - iii. Becomes aware of labor relations including employer-employee responsibilities
        - iv. Recognizes governmental role in the work force
    - 12b. Recognizes the nature of change within the work force
        - i. Identifies that some occupations become obsolete because of progress in technology
        - ii. Sees the interrelationship between the law of supply and demand of workers and continual change in the work force. Comprehends the impact of migration and immigration on supply and demand of workers
        - iii. Recognizes that the availability of human and natural resources affects career opportunities
        - iv. Becomes aware that changes in societal attitudes affect roles within the work force (equal rights, job status, roles, laws, labor unions)
    - 12c. Recognizes the process of seeking employment
        - i. Becomes aware of the sources of assistance in seeking employment
        - ii. Becomes aware of the procedures involved in applying for a job

Work Attitudes and Values

13. School and Work Behaviors - recognizes behavioral requirements of school, community and work settings
    - 13a. Evaluates behaviors considered appropriate for the school and community settings
    - 13b. Examines responsibilities and functions of different leadership and collaboration strategies in school, community and work settings
    - 13c. Recognizes that work allows for the integration of the individual into society

14. Work Incentives - identifies/examines trade-offs between a person's values and the benefits/costs of specific job/career paths and choices
    - 14a. Describes the personal growth and rewards of work and leisure
        - i. Recognizes that personal satisfaction may come from work and leisure
        - ii. Distinguishes the need for personal satisfaction in work and leisure
        - iii. Describes the satisfactions gained when personal capabilities are effectively used in work and leisure
        - iv. Expresses the personal value that is received from creative work and leisure
        - v. Acknowledges that social recognition may be related to work
        - vi. Recognizes that personal satisfaction results from work that is interesting to the individual
        - vii. Recognizes that monetary rewards may come from work
    - 14b. Recognizes that there is continual personal change during career development
        - i. Recognizes that personal characteristics change as the learner matures
        - ii. Recognizes that personal characteristics change as the learner experiences the world of work
        - iii. Recognizes that change in personal qualifications influences changes in career alternatives
    - 14c. Becomes aware of the philosophy of work and leisure as influenced by cultural diversity and diffusion resulting from national migration patterns

CAREER EDUCATION OBJECTIVES
Preparation Phase

MEASUREMENT OBJECTIVES

INSTRUCTIONAL OBJECTIVES

Self

1. Interests and Feelings - reconciles conflict between a person's feelings and interests and specific career paths
   - 1a. Refines personal interests, both awareness and judgment
   - 1b. Considers emotional characteristics as a function of own total being

2. Mental and Physical Characteristics - reconciles conflict between a person's mental and physical characteristics and specific career path
   - 2a. Correlates personal aspiration and life goals to own mental and creative abilities
   - 2b. Conceptualizes the importance of own physical abilities and potentials

Interpersonal Relations

3. Interactions with Groups - recognizes how people resolve conflict within groups
   - 3a. Utilizes appropriate personal emotional characteristics (feelings) when interacting with self, peers, adults, and near environment
   - 3b. Evaluate image of self as perceived by one-self and others
   - 3c. Recognizes and appreciates the contributions and interdependence of workers with different attributes

4. Interactions between Groups
   - 4a. Differentiates among ways in which different peer groups exert formal and informal controls

Self and Society

5. Impact of Societal Units and Institutions on Values and Expectations - recognizes ways people resolve conflicts between personal values and the expectations of societal units and institutions
   - 5a. Recognizes that in a service-oriented society, work consists of activities which allow individuals to fulfill personal needs and those of society
   - 5b. Recognizes the interdependency between the individual and society's needs
   - 5c. Reconciles personal values in terms of one's own needs and societal welfare

6. Interaction of Social Change and Developing Technology - forecasts long-term impact of trends in social roles, values, and technology on career choices and opportunities
   - 6a. Forecasts trends in career choices and opportunities emerging from changing technology and values

Decision-Making

7. Setting and Achieving Goals - reconciles conflicts between competing short- and long-term goals in career/life planning
   - 7a. Synthesizes and develops plan for achieving personal goals
   - 7b. Demonstrates the ability to apply the process of evaluating own abilities, personal qualities and values and their interrelationships
   - 7c. Analyzes personal characteristics as they relate to areas of interest

8. Decision-Making Processes and Strategies - applies appropriate decision-making strategies to career planning
   - 8a. Effects decisions and anticipates consequences of those decisions
   - 8b. Demonstrates the ability to apply the process of evaluating personal competencies, such as experience, education and skills
   - 8c. Generates plans and begins preparation for occupational entry into selected occupational area(s):
     - i. Identifies specific educational and skills requirements for occupational entry in a selected occupational area(s)
     - ii. Aligns personal goals and desired lifestyle plans with an occupational area(s)
     - iii. Identifies personal alternatives in terms of current occupational trends
     - iv. Evaluates impact of altering occupational objectives to accommodate individual lifestyle preference
   - 8d. Realizes that preparation for occupational entry at the secondary level can lead to employment upon high school graduation or lead to more specific preparation for occupational entry at the postsecondary level

Economics

9. Consumers and Producers - resolves conflicts between economic conditions, policies and trends and career opportunities
   - 9a. Differentiates between consumers and producers
   - 9b. Analyzes and experiences the economic aspects of the world of work
     - i. Evaluates the role of the financial institutions in today's economy
   - 9c. Becomes aware of the effect of international and national economic policies on employment possibilities

10. Costs and Rewards of Work - resolves conflicts between costs and benefits of different career paths
   - 10a. Identifies the implications of the concept of leisure time, vocation, and avocation as they relate to a person's life needs
     - i. Demonstrates the understanding of the application of economic principles in remuneration for different kinds of work
     - ii. Evaluates factors influencing incomes and advancement opportunities in occupations
     - iii. Investigates fringe benefits
     - iv. Examines the cost of attending vocational schools, colleges, apprenticeship, trade schools, and technical schools
     - v. Considers avocational pursuits and their economic impact
   - 10b. Examines impact of various investment costs, risks and rewards on career choices and opportunities

Occupational Knowledge

11. World of Work Requirements - matches a person's preparation and experience with the requirement of different job/career paths (e.g., transferability of skills, serial career paths, matching people to opportunities)
    - 11a. Recognizes and utilizes the educational setting (home, school, and community) as aid in developing life skills
    - 11b. Analyzes how skills, education, training are related to a variety of occupational choices (transferability of skills from job to job)
    - 11c. Effectualize personal modes of learning, management, actions, and operations
    - 11d. Continues exploration of occupational areas while doing an indepth analysis of areas of interest
        - i. Differentiates between lifestyles as affected by occupational choices
    - 11e. Examines the interrelatedness of skill requirements for similar occupations
    - 11f. Develops competencies in seeking employment
    - 11g. Develops entry-level occupational competencies
        - i. Differentiates between entry level and skilled employment
        - ii. Defines logical points of occupational entry
        - iii. Identifies educational opportunities available in the school and community that will assist in implementing a plan for occupational entry into selected occupational area(s)
        - iv. Participants in those educational opportunities that will develop desired occupational skills

12. World of Work Operations - resolves conflict between a person's preparation/experience and access to opportunities in internal/external labor markets
    - 12a. Analyzes organizations within the work force
        - i. Analyzes role, structure, membership, and leadership of labor unions
        - ii. Analyzes the role of management in the work force
        - iii. Analyzes labor relations including employee-employer responsibilities
        - iv. Analyzes governmental role in the organization of the work force
        - v. Becomes aware of alternative organizational structures based on cooperation
    - 12b. Recognizes the dynamic nature of the work force
        - i. Recognizes that some occupations become obsolete because of advances in human and scientific technology
        - ii. Analyzes the demographic implications of occupational opportunities

Work Attitudes and Values

13. School and Work Behavior - recognizes consequences of appropriate and inappropriate behavior in work and community settings
    - 13a. Assesses and manages own behavior in terms of personal value system and societal expectations
    - 13b. Evaluates the effectiveness of different leadership and collaboration strategies in various schools, community and work settings
    - 13c. Recognizes the interdependency between the individual and society's needs, and their implications for work

14. Work Incentives - maximizes net advantage of alternative career paths and choices
    - 14a. Describes the personal growth and rewards of work and leisure
        - i. Recognizes that personal satisfactions may come from work
        - ii. Distinguishes the need for personal satisfaction in work and leisure to maintain mental and physical well-being
        - iii. Describes the satisfaction gained when personal capabilities are effectively used in work and leisure
        - iv. Expresses the personal value that is received from creative work and/or leisure
        - v. Acknowledges that social recognition may be related to work
        - vi. Recognizes that personal satisfaction results from work that is interesting to the individual
        - vii. Recognizes that monetary rewards may come from work
    - 14b. Recognizes that personal characteristics and values change as careers progress
    - 14c. Evaluates personal preference in types of work and leisure and the balance therein as influenced by demographic, occupational, and preparation level components

List of decisions

The following questions begin to outline the decisions that need to be made by a district. The list is by no means all inclusive, however, it will be a place to start. Hopefully, this list will provide some structure to your decision-making process.

Who will make the decisions and the timeline for making those decisions is something that should be made early in the planning stages. The list of decisions is organized by chapter to assist districts with understanding the content of each section of the guide.

Chapter II Iowa Model

*Do you agree with the Iowa Model objectives?
*What is meant by the district plan?
*How will program goals help in the establishment of a district-wide plan?
*Do you understand and agree with the seven domains as being important major concepts?
*Do you feel the Iowa Model objectives are inclusive sufficiently?
*What additional concepts do you feel needs to be addressed?

CHAPTER 3

First Steps

'There can be no such thing as curriculum development without teacher development.'

- Laurence Stenhouse

THOUGHTS FOR CHAPTER 3

"Individual commitment to a group effort - that is what makes a team work, a company work, a society work, a civilization work."

- Vince Lombardi, Football Coach

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"It is no longer resources that limit decisions; it is the decision that makes the resources."

- U. Thant, Secretary-General of UN 1961-71

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"Success often comes to those who dare and act; it seldom goes to the timid who are ever afraid of the consequences."

- Jawaharlal Nehru

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"The best way out is always through."

- Robert Lee Frost

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"If you want to get across an idea, wrap it up in a person."

- Ralph Bencke

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"The first step of knowledge is to know that we are ignorant."

- Richard Cecil

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"Self confidence, in itself, is of no value. It is useful only when put to work."

- Anonymous

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-Before you can score, you must have a goal-

- Greek Proverb

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ROLES

Understanding the need for direction in identifying roles in the development of a career education plan for a (K-12) district, the suggested roles of all participants is outlined in this chapter.

These roles are to serve as a guide for identifying lead responsibilities for all involved in the career education movement. The list of participants includes:

- the Board of Education
- educational administrators and supervisors
- parents
- students
- career education coordinators
- curriculum specialists
- classroom teachers
- counseling and guidance personnel
- media specialists/librarians
- advisory committee
- business/labor/industry
- community service organizations
- college faculty

ROLES IN CAREER EDUCATION

Because career education is a program that affects the total educational program in a school, it requires much attention and careful effort in planning and implementation throughout the school curriculum. To orient the total educational program to exposing students to self and world of work concepts awareness, accommodation, exploration, and preparation requires dynamic leadership on the part of local school leadership personnel. To achieve such a goal requires as much if not more administrative expertise and coordination than is required of other educational endeavors. Such planning and administrative requirements are necessary because of increased community involvement in the school and its programs, integration of career education concepts into the instructional programs of all educational disciplines in the curriculum, and the inservice requirements of staff members.

Career education, coupled with administrative requirements in other educational endeavors of the school, provides a new challenge to the administrative branches and personnel in the school. To be most effective in integrating career education into the school curriculum requires total commitment of administrative resources and personnel in the school. Such a commitment must come from the board of education, the superintendent and his administrative assistants, building principals, teachers, and other personnel in administrative positions in the school. Without such commitment, any attempt to integrate career education into the school curriculum will become difficult.

In order for local school administrators to enhance effectively the process of integrating career education concepts into their total school curricula, they must understand fully their roles in the integration process. Once these roles are understood, administrators must move with discretion and confidence to establishing the guidelines for their implementation and assist with the administration.

Local Board of Education

The chief function of the board of education in the local school is that of establishing policy and administrative directions for the school. These directives from the board of education provide the framework within which the superintendent and other school personnel are to function. School Board Members, members of education governing bodies are legally responsible for establishing basic educational policies. School board members should:

1. Adopt policies and regulations for career education in terms of definitions, needs, purposes, and goals.

2. Adopt policies and regulations for community collaboration in career education in ways compatible with legal policy-making responsibilities of school boards and educational governing bodies.

3. Provide recognition and support for the career education efforts of school personnel.

To facilitate the process of integrating career education concepts into the curriculum, boards of education should do the following:

Study, determine how the school will become involved, and describe the philosophy of career education that school personnel will follow when implementing career education concepts in their curriculum. Teachers and lay persons should be involved in determining this philosophy. This philosophy should be put in writing and shared with all educational personnel in the school and members of the school district.

With a clearly stated philosophy as a matter of record in the school, the board should move immediately to establish specific policies and directives that will be followed in implementing the school philosophy on career education throughout the curriculum. These policies should be clearly stated and understood by all who will work with them.

As the program is being initiated in the school, support should be given to teachers and administrators as problems arise. Support should be demonstrated through providing assistance in solving these problems. This may mean that board members will need to become involved, on a limited scale, in working out these problems.

Throughout the process of implementing the concept in the school curriculum, the board should keep the community well informed on the progress the teachers are experiencing. Careful thought should be given to a means of informing the public. At all times, what is reported should be presented in a positive manner.

Board members should be represented on and participate in all advisory groups established to assist in implementing career education concepts in their school curriculum. In all cases, they should serve in an advisory and informative capacity.

Finally, it is imperative that adequate financing be provided to support all activities required to implement the concept in the school curriculum.

Educational Administrators and Supervisors

The administrators of the local school must be fully committed to an operational concept of career education, founded on the philosophy and policies of career education established by the board of education. In addition, commitment to a continuous process of curriculum revision and development that provides adequate opportunity for staff to incorporate career education concepts in their instructional programs is of major importance.

Educational Administrators and Supervisors provide the professional leadership and administrative decisions that both allow and encourage career education to take place. Educational administrators and supervisors should:

1. Provide time for inservice education of educational personnel in career education. Analyze the inservice needs of staff members relative to their work with career education.

2. Provide, if possible, a position of "Career Education Coordinator" at the school system (if K-12) or institutional (if postsecondary) level and filling of that position with a qualified person.

3. Provide arrangements for students to receive elective educational credits for various kinds of career awareness and career exploration experiences taking place outside the school building including, for example, such things as:

   a. Credit for work experience (paid and/or unpaid).
   b. Credit for participating in career awareness/exploration activities sponsored by community groups.

4. Provide arrangements for students to make maximum use of the institution's educational offerings for purposes of career exploration, including, for example, means by which college-bound students in the secondary school can use vocational education offerings as career exploration experiences.

5. Provide professional leadership in supporting and encouraging career education as a vehicle for refocusing the educational system (approved as official Board policy).

6. Form internal steering and external advisory committees that will assist in directing the integration of career education in the total school curriculum. Involve community members in advisory capacities to the administration and as resource people for the instructional staff.

7. Conduct needs assessments of the students, school, and community served by the school. Based on the information provided in these studies, priorities should be determined and these priorities built into all career education efforts.

Parents, at the elementary/secondary school levels, are among the most crucial of all participants in a comprehensive "Career education treatment". There are many roles parents could play in increasing the effectiveness of career education. Parents should:

1. Help their children understand both the nature and the positive social significance of the work done by them as parents (including both paid and unpaid work).

2. Provide opportunities, within the home/family structure, for their children to experience work, as a family member, in ways that both help the child understand his/her own worth and his/her own contributions to the well-being of the family as a social unit.

3. Help their children find and engage in career awareness and career exploration experiences as part of family activities.

4. Help their children think about and discuss career decisions, including decisions regarding both educational and occupational choices.

5. Help their children understand and appreciate the career implications of the subject matter represented by homework they have been assigned.

6. Help their children discover and utilize ways of making productive use of leisure time.

7. Help their children think about and reflect on work values as part of their total system of personal values.

8. Help their children develop attitudes to avoid bias with respect to race, sex, or physical/mental handicaps.

9. Involve themselves in the career education classroom.

Students must taken an active role in preparing themselves for the future. Students should:

1. Develop competence in the basic academic skills required for adaptability in our rapidly changing society.

2. Show good work habits.

3. Explain a personally meaningful set of work values that foster in them a desire to work.

4. Demonstrate career decision-making skills, job-hunting skills, and job-keeping skills.

5. Exhibit a degree of self-understanding and understanding of educational vocational opportunities sufficient for making sound career decisions.

6. Recognize the means available to them for continuing and recurrent education.

7. Choose placement in an occupation, or in further education, to develop skills for a career goal.

8. Actively seek to find meaning through work in productive use of leisure time.

9. Develop an awareness of means available to themselves for changing career options.

Career Education Coordinator

One of the first steps taken by an administration interested in integrating career education concepts into the school curriculum should be that of designating an individual to coordinate career education efforts and activities throughout the school system. This person may be a principal, classroom teacher, guidance counselor, or a person from the central administrative staff. Best coordination results, however, will be attained if a person is employed full-time by the school administration to coordinate these activities. Whoever is assigned this role in the school should have clearly delineated responsibilities and be structurally placed in the administration with authority to work with all staff members in the school. The coordination of career education activities should be the sole responsibility of this individual.

Career Education Coordinator is the person who communicates the conceptual base among all participating segments in the career education effort. Career education coordinators should:

1. Know the career education literature and national/state trends in career education.

2. Provide system-wide leadership expertise for promoting the application of career education to the teaching/learning process.

3. Provide system-wide leadership expertise for promoting the kinds of career education activities and actions called for on the part of all other career education "actors" identified in this section.

4. Coordinate and strengthen the concept of collaboration in career education through conscious and conscientious efforts aimed at helping and encouraging various kinds of career education participants to work together.

5. Communicate career education concepts and philosophy to all career education participants and to the general public.

6. Formulate and carry out a systematic plan for implementing career education in the community on an orderly and systematic basis.

7. Work closely with the "Career Education Action Council" in developing and gaining community acceptance for a conceptual view of career education consistent with the nature and needs of the community.

8. Provide expertise and leadership in carrying out and reporting results of system-wide continuing efforts to evaluate the effectiveness of career education.

9. The career education coordinator must identify human, material, and physical resources and determine how these may be most effectively utilized in program development.

10. Determine strategies and the timeframe to follow when integrating career education concepts into the total school curriculum.

11. Determine inservice needs of staff members and develop strategies for meeting these needs.

12. Develop and carry our procedures for evaluating career education activities in light of career education program and curriculum level objectives stated for the school.

Curriculum Specialists have professional leadership and coordinative roles to play in implementation of career education. Curriculum specialists should:

1. Promote career education as a vehicle for use in refocusing educational practice.

2. Develop and implement policies with respect to the use of community resources in education including their use as part of the extended school concept.

3. Provide means for dealing with the costs of implementing career education.

4. Implement a scope and sequence plan for use in integrating career education in existing curriculum guides through the grade levels.

5. Devise and implement means for helping and rewarding teachers in their efforts to use a career education approach in the classroom.

Classroom teachers are the single most important resources for change in education. Classroom teachers should:

1. Infuse the career education concept into the existing curriculum.

2. Teach students the goal of education as preparation for work in relationship to:

   a. Other basic goals of education
   b. The process and content goals to which the teacher is already accustomed.

3. Teach about the nature of the world of paid and unpaid employment.

4. Learn about the multiple career implications of their subject matter.

5. Use community personnel and parents as resource persons in the classroom.

6. Use the community as a learning laboratory.

7. Use the basic principles of career development in planning classroom activities.

8. Integrate career education skills, knowledge, and attitudes into the teaching/learning process in ways that will retain the basic importance of subject matter.

Counseling and Guidance Personnel play key roles in the implementation of career education at the building level. Counseling and guidance personnel should:

1. Help members of the teaching faculty understand and utilize the career development process and resources as a basic for threading career education content into the teaching/learning process.

2. Help students develop increased self-awareness, self-understanding and understanding of educational/occupational opportunities.

3. Coordinate special career education activities, at the building level, in a pattern consistent with the basic principles of career development.

4. Develop contact with members of the business/labor/industrial/professional community in terms of serving as resources for career education at the building level.

5. Help members of the faculty and parents in providing guidance to students.

6. Provide professional career guidance and counseling to students, both individually and in small groups.

7. Assist students in the placement process, including both job placement and placement in postsecondary educational institutions.

8. Develop and promote a variety of educational and community actions and efforts to give all students an equal opportunity.

Media Specialists/Librarians have resources and teacher contact which help make career education possible. The media specialist should:

1. Maintain a career center with structured programs or activities to help individuals or groups utilize resources available.

2. Organize or assist in the organization of career seminars on occupations of interest to students.

An Advisory Committee can add considerable strength to the career education process in your community. Ideally, it should be composed of representatives from business, community organizations, parents, school faculty and administration. The career education advisory committee should:

1. Assist in formulating specific objectives.

2. Determine subcommittee structure.

3. Identify career education learning resources in the community. Possible advisory subcommittees could be:

   a. Steering committee: Functions as an executive body providing general direction, coordination and reporting to official bodies and agencies inside and outside the community. It calls for all advisory committee meetings and assigns major roles and tasks to the other working groups.
   b. Visitation committee: Contacts other schools and communities and visits other programs that are under planning or in actual operation. The visitation committee also collects information and reports on its observations and assessments.
   c. In-school committee: Works with faculty, students, and community resources to introduce change into the existing program of instruction and determines how career education can best fit into the regular education system.
   d. Off-campus committee: Identifies learning resources in the community, but outside regular school facilities. Its function is to make provisions for assessing these on-campus resources so that they can be available as useful learning experiences in career education. The off-campus committee as a whole will provide alternatives to on-campus or in-school education programs.

A continuous public relations campaign is essential to keep the school and community informed about career education. To be successful, career education must have community involvement. For this reason, public relations with the community at large as well as students, staff, and parent, becomes very important to the success of career education. All participants in the Career Education program need to inform the community about:

1. The philosophy of Career Education.
2. The objectives of Career Education.
3. The community cooperation with the schools.
4. The successful projects that have been completed.
5. The new projects or activities that will be happening.

Business, Labor, Industry, Professional, Government must become active participants if the career education effort is to be successful. Business, labor, industry, professional, government officials should:

1. Understand the nature and goals of career education as these relate both to other educational goals and with broader societal goals.

2. Become partners in the career education collaborative efforts, i.e., career education calls for more than simply cooperation with educators.

3. Relate positively with teachers and students in the teaching/learning process.

4. Participate effectively in the career development process in ways that protect freedom of choice for those students with whom they come in contact.

Community Service Organizations concerned about and active in helping youth solve education/work problems should become an integral part of a coordinated community career education effort. Community service organizations should:

1. Organize and operate their programs as a part of the extended school concept.

2. Work with other community agencies in ways that assure maximum efficiency in utilization of community resources and availability of opportunities for maximum numbers of students.

3. Relate programmatic efforts to adopted parts of the curriculum.

Examples of such agencies and organizations include:

1. Chamber of Commerce
2. Local service clubs (Rotary, Lions, Kiwanis, etc.)
3. American Legion and Legion auxiliary
4. Exploring Programs, Scouting, USA
5. Girl Scouts of America
6. Junior Achievement
7. Local labor union councils
8. Local JTPA operations
9. Local Council of Churches
10. YWCA
11. YMCA
12. National Alliance of Businessmen
13. Women's American ORT
14. Council of Business and Professional Women's Clubs
15. Grange
16. National Urban Coalition
17. National Association for Advancement of Colored People
18. National Organization for Women

College Faculty members have opportunities for involvement and influence in career education. The college faculty should:

1. Adopt the career education philosophy that eduction prepares for your work.

2. Teach career education goals to perspective teachers.

3. Teach career education classes to experienced teachers needing revitalization in the career education concept.

4. Provide consultative services to school districts on how to effectively teach career education.

DEPARTMENT OF PUBLIC INSTRUCTION EDUCATIONAL PROGRAM (670)

670—3.5 (257) Educational Program. The following standards shall apply to the educational program of approved schools.

3.5 (1) Curriculum Defined

The word curriculum is hereby defined as including all pupil experiences that take place under the guidance of the school. It shall be used to describe the school--connected learning experiences of any pupil and also to indicate the arrangement of a group of courses to be taken by groups of pupils having a common objective.

3.5 (3) Educational Program Defined

The educational program, as adopted by each board, shall set forth in the administrative measures and the sequence of learning situations through which attempts are made to provide pupils with well-articulated developmental learning experiences from the date of school entrance until high school graduation. The educational program in each area of instruction shall be from a multi-cultural, non-sexist approach.

3.5 (4) Educational Program--Description and Filing

The board shall require its admnistrators and professional staff to develop and furnish a description of the total pre-kindergarten, if offered, through grade twelve educational program that the Board is willing to approve. This description, after having been adopted by the Board, and all subsequent revisions thereof, shall be filed locally in a readily available form and location as evidence of compliance with the provision of the law. The description of the Pre-kindergarten School Educational Program, if offered, Elementary School Educational Program, Middle School Educational Program, Junior High School Educational Program, and the High School Educational Program shall be in sequential order and shall explain the manner which pupils are served in each of the areas of instruction as specified in Chapters 257, 280, and 321 of the Code.

3.5 (5) Board of Directors' Responsibility for Assuring Multi-Cultural Non-Sexist Approaches to Educational Programs

Each Board shall develop a written plan of action within one year of the effective date of this rule. The plan shall include a specific timeline for implementation, not to exceed five (5) years, for achieving and maintaining a Multi-Cultural, Non-Sexist Educational Program. A copy of the plan shall be filed locally in a readily available form and location, as evidence of compliance with the provison of the law.

A. Multi-Cultural Approaches to Educational Program

These shall be defined as educational processes which promote the understanding and appreciation of the cultural diversity of our pluralistic society. Within the total multi-cultural education process, special emphasis shall be placed on the following groups: Asian American, Black American, Hispanic American, Native American, and on the Handicapped. The

educational program shall be characterized by practices which provide equal opportunity for all participants regardless of race, color, age, national origin, religion, or handicap.

B. Non-sexist Approaches to the Educational Program

These shall be defined as educational processes which foster the knowledge of respect, and appreciation for the historical and contemporary contributions of men and women to society as well as those educational processes that reflect the wide variety of roles open to both men and women. The educational program shall be characterized by practices which provide equal opportunity to both sexes.

C. The Multi-Cultural, Non-Sexist Educational Plan Shall Include:

(1) Specific goals and objectives with implementation timelines for each component of the educational program;
(2) A description of the inservice activities planned for all staff members of multi-cultural, non-sexist education;
(3) Evidence of systematic input by men and women, minority groups, and the handicapped in the development and implementation of the plan, and that in schools where no minority students are enrolled, minority group resource persons shall be utilized at least annually;
(4) A description of the periodic, ongoing system to monitor and evaluate the plan.

3.5 (6) Instructional Program for Each Subject

Classroom instruction in each subject taught in the schools shall be based on careful planning. The Board shall require that a resource guide be developed for each instructional sequence reflecting multi-cultural, non-sexist approaches, and it shall include a statement and a description of the performance criteria useful in evaluating each pupil's progress during the educational sequence.

The curriculum structure and content, instructional materials, and teaching strategies shall reflect the contributions perspectives of men and women and diverse racial or ethnic groups to the instructional program. Where sex or cultural-racial stereotyping exists in instructional materials, it shall be brought to the attention of the student and supplementary materials shall be used to offset the stereotyping. Multi-cultural, non-sexist instructional materials shall be adopted at the first opportunity. The curriculum shall include activities which promote an awareness of sexism and cultural-racial bias in the English Langugage.

3.5 (9) Provision for Career Education

The Board of each school, public and nonpublic, shall incorporate into the educational program the total concept of Career Education. Curricular and co-curricular teaching/learning experience from the pre-kindergarten level through grade twelve shall be provided for all students in accordance with Section 280.9.

CHECKLIST FOR THE DEVELOPMENT OF A CAREER EDUCATION PLAN

PART I

ADMINISTRATION

Developed by
Dr. Jo Kiley

A. STRUCTURE AND PROCESS

Administrators should be aware of the essential elements that are necessary to the development and maintenance of career education. Both effective and efficient use of these elements depends upon the leadership abilities, the communications skills, and the planning, implementation, and evaluation processes used by local administrators, teachers, community representatives, and liaison personnel from the State Department of Public Instruction.

ASSESSMENT CRITERION: A WRITTEN CAREER EDUCATION PLAN

1.0 A written plan detailing the district's commitment to career education has been prepared by local school officials and has been formally endorsed by the local board of education.

INDICATORS:

(___) 1.01 Local school officials have developed a written plan which outlines the district's commitments to career education development and maintenance.

(___) 1.02 The written district plan includes statements of intent to organize, implement, and maintain career education for students of differing ages, interests, and abilities.

(___) 1.03 Local school administrators have presented this written plan to members of the board of education during a regular meeting of the board.

(___) 1.04 Opportunities were made available for both regular board members and local citizens to respond to this plan prior to its endorsement by the board of education.

(___) 1.05 Once endorsed, the district's career education plan is utilized by local decision makers when determining career education.

(___) 1.06 Once endorsed, the district's career education plan is utilized by local decision makers when determining the basis and priorities for financing the local career education needs.

ASSESSMENT CRITERION: POLICY AND GUIDELINES

2.0 Existing district policy statements and operational guidelines have been reviewed to insure their compatibility with the district career education plan. Wherever necessary, new policies and guidelines have been developed.

INDICATORS:

(___) 2.01 Separate elements of the district's career education plan have been analyzed to determine all local policy/guideline implications.

(___) 2.02 Wherever necessary, new policy/guideline statements have been developed and taken before the board of education for review and adoption.

(___) 2.03 All new policies/guidelines have been incorporated within the district's policy manual or operational handbook.

ASSESSMENT CRITERION: DISTRICT AND BUILDING COORDINATION

3.0 The local school district's administrative structure and processes provide for both district-level and building-level coordination of career education.

INDICATORS:

(___) 3.01 A person at the district level has been identified and given the responsibility to coordinate the planning and implementation of career education at the district level.

(___) 3.02 The career education coordinator's position is identifiable within the district's organizational chart and has been assigned formal authority.

(___) 3.03 A person at each school in the district has been given the responsibility for coordinating the building-level career education.

(___) 3.04 The local building coordinator for career education has been provided duty-free time to carry out assigned responsibilities.

(___) 3.05 The responsibilities of the local building coordinator have been specified within a written position description.

B. THE PLANNING PROCESS

Systematic planning is essential if career education is to be successfully implemented, upgraded, and properly maintained. The planning process should focus on active efforts to determine the needs of all students, staff, and community. In addition, the planning process should contribute to the formulation of district-level and building-level career education goals, the identification of necessary resources, and a determination of implementation and infusion procedures.

ASSESSMENT CRITERION: DISTRICT AND BUILDING NEEDS ASSESSMENT

1.0 District-level and building-level career education objectives have been implemented on the basis of local student, staff, and community needs.

INDICATORS:

(___) 1.01 Formal strategies have been employed to determine local student, staff, and community needs related to career education.

(___) 1.02 Students, staff, and local community members have been involved in the processes leading to the determination of local career education needs.

(___) 1.03 District-level and building-level needs assessment is an ongoing part of the district's commitment to career education development and revision.

(___) 1.04 Information gained from needs assessment work has contributed to the formulation of both district-level and building-level career education goals and objectives.

(___) 1.05 Clearly stated educational goals and objectives are included within the district's written career education plan.

ASSESSMENT CRITERION: RESOURCE IDENTIFICATION

2.0 Both district and building planning processes contribute to the identification of human and physical resources needed to support career education.

INDICATORS:

(___) 2.01 Formal strategies have been employed to determine available human and physical resources contained within the local district which can be used to support career education.

(___) 2.02 Formal strategies have been employed to determine available human and physical resources contained within each school which can be used to support career education

(___) 2.03 Formal strategies have been employed to determine available human and physical resources contained within the surrounding community which can be used to support career education.

(___) 2.04 Career education advisory committees have been involved in the process of local resource identification.

(___) 2.05 Some procedure is used within the district for cataloging information related to identifiable human and physical resources.

(___) 2.06 Human and physical resource information can be retrieved, when needed, to support local career education needs or requirements.

ASSESSMENT CRITERION: IMPLEMENTATION PROCEDURES

3.0 Procedures for implementing career education at the local level are suggested within the district's written career education plan.

INDICATORS:

(___) 3.01 The local school district has developed written guidelines for implementing its long-range career education plan.

(___) 3.02 Each school in the district has developed written guidelines for implementing its long-range plan.

(___) 3.03 As local needs change, the district's long-range plan is revised.

(___) 3.04 As local needs change, each local school's long-range plan is revised.

C. FINANCING

Adequate financial resources are required to implement and maintain quality career education within a local school district or in an individual school. The available budget should support the needs and priorities within the district's long-range career education plan.

ASSESSMENT CRITERION: BUDGETING

1.0 The local district's operating budget is sufficient to support the needs and priorities outlined within its own long-range career education plan.

INDICATORS:

(___) 1.01 The district's budget includes adequate provision for personnel, facilities, supplies, equipment, and supporting services to carry out local career education objectives.

(___) 1.02 Provisions have been made to support extended staff contracts as such contracts are needed.

(___) 1.03 Monies are budgeted to support staff development or staff inservice programs as such programs are needed.

(___) 1.04 Monies are budgeted to support local career education curriculum development activities.

(___) 1.05 Resources are budgeted to offset the costs associated with the transportation of students to on-site work experience locations. (Exploration and Preparation)

ASSESSMENT CRITERION: PARTICIPATION IN BUDGETING PROCESS

2.0 Instructional staff and advisory personnel are involved in the process of developing the career education budget.

INDICATORS:

(___) 2.01 Instructional staff assist the district's administrative staff in the process of developing the career education budget.

(___) 2.02 Advisory personnel are consulted during the process of developing the career education budget.

D. FACILITIES AND EQUIPMENT

Many career education activities can be conducted without specialized facilities and/or equipment. However, as students become more aware of their interests and aptitudes in relationship to potential careers, proper facilities, equipment, and other related resources become essential to enhance their educational growth. A comprehensive career education implementation plan does require adequate facilities and equipment.

ASSESSMENT CRITERION: FACILITIES AND EQUIPMENT

1.0 Appropriate facilities and equipment are available within the district to properly support career education needs and requirements as these are suggested in the district's own long-range career education plan.

INDICATORS:

(___) 1.01 The facilities and equipment that are needed to implement different portions of the district's career education goals have been identified by administrative and instructional personnel.

(___) 1.02 Existing facilities and equipment are adequate to carry out immediate career education instructional objectives.

(___) 1.03 Existing facilities and equipment are being utilized to the actual limits of their potential.

E. EVALUATION

The district should have a definite plan for the evaluation of career education. Such a plan should be formally implemented in a manner that will aid the district's staff in determining how well the total career education implementation plan is meeting the needs of students, the community, and the world of work.

ASSESSMENT CRITERION: EVALUATION PLAN AND INTENT

1.0 A written plan has been developed and adopted by the district for evaluating the effectiveness of career education and for reporting this information to appropriate district decision makers.

INDICATORS:

(___) 1.01 A written plan outlining methods/intents for the evaluation of career education has been developed by district administrators.

(___) 1.02 The career education advisory committee or curriculum review committee has been involved in reviewing the career education evaluation plan prior to its adoption and implementation.

(___) 1.03 The evaluation plan has been formally implemented by district personnel.

(___) 1.04 Evaluation information is used by local district personnel to improve the quality and effectiveness of career education.

(___) 1.05 As local needs dictate, provisions are made for third-party or external program evaluation provided by non-district evaluation specialists.

(___) 1.06 The results of the district's career education evaluation efforts are disseminated to advisory committee members and to members of the board of education.

PART II

PERSONNEL

A. STAFF QUALIFICATIONS

The knowledge, ability, skill, and interest of the school's staff directly affects the quality of the educational programs which operate within the school. Since the staff plays such a significant role in dynamic, ongoing educational programs, it is important that staff be selected on the basis of their demonstrated knowledge, skill, and interest.

ASSESSMENT CRITERION: INTEGRATING CAREER EDUCATION

1.0 The staff within a building is able to integrate career education concepts, skills, and attitudes into their curriculum areas/levels.

INDICATORS:

(___) 1.01 Staff members have identified and stated specific student learning outcomes within their program areas/levels.

(___) 1.02 Staff members have identified specific career education concepts, skills, and attitudes which can be appropriately developed in their program areas/levels.

(___) 1.03 Staff members work to fully integrate career education concepts, skills, and attitudes into their program areas/levels.

(___) 1.04 The advisory committee or curriculum review committee is kept informed of the staff's goals and objectives, student outcome statements, and career-related instructional strategies.

B. STAFF DEVELOPMENT

Continuous professional staff development is a highly desirable element within all school or school district programs. Well-designed and fully-implemented staff development programs should facilitate the ongoing exploration and development of career-related concepts applied to different educational areas/levels. In addition, staff development activities should help staff members identify new career education resources, initiate better instructional techniques and strategies, and assist in the identification of systematic methods for integrating career education into all areas of the school's educational program.

ASSESSMENT CRITERION: STAFF NEEDS

1.0 Professional development plans and programs should be based upon an accurate, ongoing assessment of the staff's professional development needs and current trends in career education.

INDICATORS:

(___) 1.01 Staff members have had an opportunity to identify their own professional development needs and interests prior to the formulation and implementation of specific professional development programs.

(___) 1.02 Career education goals and objectives and requisite staff competency requirements form one basis for the determination of professional development program needs.

(___) 1.03 The advisory committee has made input into the planning process used to initiate formal professional development programs for staff.

ASSESSMENT CRITERION: IMPLEMENTING PROFESSIONAL DEVELOPMENT PROGRAM

2.0 A program for professional staff development is available within the district for all staff and is used by staff members as a means for them to enhance their knowledge, skills, and competencies related to career education.

INDICATORS:

(___) 2.01 Local district and building guidelines for professional staff development have been written and are made available to all district staff.

(___) 2.02 Adequate resources, including release time and finances, have been identified and made available for professional staff development activities.

(___) 2.03 Provisions have been made for consultant help sufficient to support the professional development process.

(___) 2.04 Staff and consultants have been included in the planning and implementation of staff development activities.

(___) 2.05 All staff members have been strongly encouraged to participate in staff development activities/programs.

(___) 2.06 Career education topics have been included within the scope of the district's staff development program.

(___) 2.07 Released time is provided the staff for upgrading career education knowledge, skills, and competencies.

PART III

SCHOOLS AND COMMUNITY RELATIONS

A. RESOURCES

Adults within the community who are actively pursuing careers can share valuable and direct information with students who are exploring the world of work or preparing for a specific career. Students can gain realistic impressions of careers and occupations through direct contact with people throughout the immediate community.

ASSESSMENT CRITERION: COMMUNITY RESOURCE UTILIZATION

1.0 The entire community should be utilized in support of career education development.

INDICATORS:

(___) 1.01 Representatives from the business-labor-industry community are actively involved in career education.

(___) 1.02 Community Resources people are identified and utilized to make career education classroom presentations.

(___) 1.03 Community resource people have been utilized to support small groups of students/staff who are involved in on-site explorations of different career fields.

(___) 1.04 Community sites are used to support career cluster programs.

B. COMMUNICATIONS

Career Education needs to provide for direct communication with all elements of the community it serves. The school staff plays a critical role in the development of such communication.

ASSESSMENT CRITERION: DISSEMINATING INFORMATION

1.0 The school staff should inform the community about current career education goals, plans, and activities.

INDICATORS:

(___) 1.01 A plan for disseminating information about career education has been developed and initiated.

(___) 1.02 A variety of methods and materials have been utilized for disseminating information about career education.

ASSESSMENT CRITERION: RECEIVING INFORMATION

2.0 The school's staff should seek information from the community regarding educational needs, goals, plans and activities appropriate for career education development.

INDICATORS:

(___) 2.01 An ongoing needs assessment effort has been initiated and maintained which seeks information from members of the community regarding educational needs and goals.

(___) 2.02 Reports and recommendations from local advisory committees are given to the board of education and the school's staff in support of effective career education development.

PART IV

CURRICULUM

A. CAREER GUIDANCE

Career education should assist students to become aware of a broad variety of careers to help them make tentative occupational decisions, understand personal economics, and provide them with a wide range of career developmental tasks which include the attitudes and values required for productive citizenship. In this broad context, career guidance services are extremely important to all students at the career awareness, accommodation, exploration, and preparation levels. Through these career guidance services, each student should gain a knowledge of how to make personal choices, an understanding of himself/herself, interpersonal relationships, and the career selection process. As the student grows and matures, attitudes and values associated with self-responsibility and refined decision-making abilities, career life choices become important in career exploration.

ASSESSMENT CRITERION: A WRITTEN CAREER GUIDANCE PLAN

1.0 A long-range career guidance plan has been written which details the district's K-12 career guidance service commitments. This plan has been reviewed by the career advisory committee and has been adopted by the board of education.

INDICATORS:

(___) 1.01 A career education guidance plan has been written which details career guidance services at the awareness, accommodation, exploration, and preparation levels on a district-wide basis.

(___) 1.02 This career guidance plan has been reviewed by the career educational committee or curriculum required committee prior to receiving school board consideration.

(___) 1.03 The career guidance plan for the district has been reviewed and adopted by the board of education during a regular meeting of the board.

ASSESSMENT CRITERION: CAREER GUIDANCE FUNCTIONS

2.0 The district's career guidance program provides for the continuous assessment of student aptitudes and interests, opportunities for exploring different occupations, and assistance in career-related decision making.

INDICATORS:

(___) 2.01 A means for assessing student aptitude and interest has been identified for use at the awareness, accommodation, exploration and preparation career development plan.

(___) 2.02 Actual assessment of student aptitude and interest has been carried out at each career development level throughout the school district.

(___) 2.03 Information from student aptitude and interest assessments has been collected and summarized within each building and across the district.

(___) 2.04 Student assessment information has been utilized by the district's staff in designing appropriate career education activities at each developmental phase.

(___) 2.05 Both guidance and instructional staff have cooperated in the planning, implementation, and evaluation of career education activities at each phase.

(___) 2.06 A system of record keeping has been developed and maintained which enables building-level staff to monitor individual student progress toward meeting personal career education goals.

ASSESSMENT CRITERION: INTEGRATION OF CAREER GUIDANCE SERVICES

3.0 Career guidance services are integrated and are maintained by trained district personnel.

INDICATORS:

(___) 3.01 Career guidance services are integrated with other educational services provided for students.

(___) 3.02 The district's regular instructional staff and its counseling and guidance staff have received inservice or staff development training related to career guidance information/services.

B. CURRICULUM DESIGN

All the district's instructional programs should have a direct relationship to career education development concepts. The curriculum design should include the identification of goals, objectives, and minimal student competencies, as well as outline procedures designed to encourage each student to participate in effective school and community-based learning activities.

ASSESSMENT CRITERION: PHILOSOPHY, GOALS, OBJECTIVES, AND COMPETENCIES

1.0 The philosophy, goals, objectives, and minimum competencies associated with career education have been specified by district personnel, reviewed by the career advisory committee, and adopted by the board of education. (Committee member)

INDICATORS:

(___) 1.01 A philosophy statement and goals and objectives have been written by district personnel for career awareness, accommodation, exploration, preparation career development.

(___) 1.02 The district's curriculum design and plan includes statements of measurable, minimum student competency requirements.

___) 1.03 The written philosophy, goals, objectives, and minimum competency statements have been reviewed by the career advisory committee prior to receiving school board consideration.

(___) 1.04 The written philosophy, goals, objectives, and minimum competency statements have been reviewed and adopted by the board of education during a regular meeting of the board.

ASSESSMENT CRITERION: A CURRICULUM PLAN

2.0 The district's curriculum plan should demonstrate the continuity of career education experiences between career awareness, accommodation, exploration, and preparation program-level goals, objectives, and minimum student competency requirements.

INDICATORS:

(___) 2.01 The district's curriculum plan for career awareness, accommodation, exploration, and preparation has been reviewed to determine the consistency and continuity of career education development. (K-12)

ASSESSMENT CRITERION: COMMUNITY-BASED LEARNING (Optional)

3.0 The district's career-related curriculum has been designed to insure the appropriate use of community-based learning experiences for students at each level.

INDICATORS:

(___) 3.01 Career awareness utilizes both the immediate work environment and the surrounding community as elements of the curriculum/instruction process related to career concept development.

(___) 3.02 Career exploration provides for community-based, on-site exploration experiences for all students.

(___) 3.03 Career preparation is designed to insure that all students have an opportunity to participate in community-based work experiences and in cluster programs that use community sites as learning stations.

C. INSTRUCTIONAL PROCESS

The instructional processes which are utilized in delivering career education to students should seek to incorporate the many unique features and experience-base of the school, community, and area into educational opportunities for all students. While many possible instructional processes may be used, interdisciplinary approaches offer significant potential when incorporated with the experience potential of the surrounding work environment.

ASSESSMENT CRITERION: SELECTION OF INSTRUCTIONAL PROCESSES

1.0 A wide variety of different instructional processes are utilized by district personnel to facilitate the delivery of career education concepts to all students.

INDICATORS:

(___) 1.01 All areas within the curriculum have been identified which can be taught successfully using an interdisciplinary instructional approach.

(___) 1.02 Interdisciplinary approaches have been utilized by district personnel when presenting career education concepts to students.

(___) 1.03 Community work environments and local community resource people have been incorporated into the district's instructional processes related to career education.

(___) 1.04 Alternative approaches are used to teach students with different abilities, interests, or aptitudes.

(___) 1.05 Combinations of classroom, laboratory, and on-site learning experiences have been utilized to assist students in achieving their career education objectives.

D. STUDENTS

Career education should be designed to provide all students with diverse opportunities to become aware of careers, actively explore different career areas and interests, and to prepare for employment or an opportunity for continued education in their chosen areas of interest.

ASSESSMENT CRITERION: STUDENT-CENTERED PROGRAMMING

1.0 Students should be provided with diverse opportunities to continuously identify, assess, and explore their aptitudes and interests in relation to career fields.

INDICATORS:

(___) 1.01 The aptitudes and interests of students are systematically and frequently assessed by the district's staff. (optional)

(___) 1.02 Students receive career guidance help based on identified aptitudes and personal interests.

(___) 1.03 Students have had opportunity and encouragement to experience different work environments and different occupations for which they have demonstrated aptitude and interests.

(___) 1.04 Instruction designed to lead to greater student self-awareness and world-of-work understanding has been incorporated within the school curriculum.

(___) 1.05 The career selection process has been incorporated as an integral element of the district's curriculum.

SAMPLE OUTLINE OF A DPI TEAM VISIT EVALUATION

_____
School District

CAREER EDUCATION

Successful implementation of career education includes four components. They are administration, personnel, school and community relations, and curriculum.

Administration

(___) Elem.
(___) Jr. H.
(___) Sr. H.

1. A written plan detailing the district's commitment to career education has been prepared by local school officials, has been formally endorsed by the local board of directors and is being utilized.

(___) Elem.
(___) Jr. H.
(___) Sr. H.

2. Existing district policy statements and operational guidelines have been reviewed to insure their compatibility with the district career education plan. Wherever necessary, new policies and guidelines have been developed.

(___) Elem.
(___) Jr. H.
(___) Sr. H.

3. The local school district's administrative structure and processes provide for both district-level and building-level coordination of career education.

(___) Elem.
(___) Jr. H.
(___) Sr. H.

4. District-level and building-level career education objectives have been implemented on the basis of local student, staff, community, and area needs.

(___) Elem.
(___) Jr. H.
(___) Sr. H.

5. Both district and building planning processes contribute to the identification of human and physical resources needed to support career education.

(___) Elem.
(___) Jr. H.
(___) Sr. H.

6. Procedures for implementing career education at the local level are suggested within the district's written career education plan.

(___) Elem.
(___) Jr. H.
(___) Sr. H.

7. The local district's operating budget is sufficient to support the needs and priorities outlined within its own long-range career education plan.

(___) Elem.
(___) Jr. H.
(___) Sr. H.

8. Appropriate facilities and equipment are available within the district to properly support career education needs.

(___) Elem.
(___) Jr. H.
(___) Sr. H.

9. A written plan has been developed and adopted by the district for evaluating the effectiveness of career education and for reporting this information to appropriate district administration and staff.

(___) Elem.
(___) Jr. H.
(___) Sr. H.

10. The career education program encourages students to explore varied academic and career options regardless of disability, sex or race.

Personnel

(___) Elem.
(___) Jr. H.
(___) Sr. H.

1. The staff within a building is able to integrate career education concepts, skills, and attitudes into their program areas/levels.

(___) Elem.
(___) Jr. H.
(___) Sr. H.

2. Professional development plans and programs are based upon an accurate, ongoing assessment of the staff's professional development needs and current trends in career education.

(___) Elem.
(___) Jr. H.
(___) Sr. H.

3. A program for professional staff development is available within the district for all staff and is used by staff members as a means for them to enhance their knowledge, skills, and competencies related to career education.

School and Community Relations

(___) Elem.
(___) Jr. H.
(___) Sr. H.

1. The entire community is utilized in support of career education development.

(___) Elem.
(___) Jr. H.
(___) Sr. H.

2. The school staff has an opportunity to inform the community about current career education goals, plans, and activities.

(___) Elem.
(___) Jr. H.
(___) Sr. H.

3. The school's staff seeks information from the community regarding educational needs, goals, plans, and activities appropriate for career education development.

(___) Elem.
(___) Jr. H.
(___) Sr. H.

4. The school's staff shares in the responsibility of placing students at community career exploration sites that practice nondiscrimination regarding race, sex, national origin and disability.

Curriculum

(___) Elem.
(___) Jr. H.
(___) Sr. H.

1. Curriculum resource guides reflecting multicultural, nonsexist approaches have been developed.

(___) Elem.
(___) Jr. H.
(___) Sr. H.

2. The philosophy, goals, objectives, and minimum competencies associated with career education have been specified by district personnel, reviewed by the committee members, and adopted by the board of directors.

(___) Elem.
(___) Jr. H.
(___) Sr. H.

3. The district's curriculum plan should demonstrate the continuity of career education experiences between career awareness, career exploration, and career preparation program-level goals, objectives, and minimum student competency requirements.

(___) Elem.
(___) Jr. H.
(___) Sr. H.

4. The district's career education objectives are identified and included in the academic curricular plan for each grade level.

(___) Elem.
(___) Jr. H.
(___) Sr. H.

5. The district's career-related curriculum has been designed to insure the appropriate use of community-based learning experiences for students at each level.

(___) Elem.
(___) Jr. H.
(___) Sr. H.

6. A wide variety of different instructional resources and methods are utilized by district personnel to facilitate the delivery of career education concepts to all students.

(___) Elem.
(___) Jr. H.
(___) Sr. H.

7. Students are provided with diverse opportunities to continuously identify, assess, and explore their aptitudes and interests in relation to career fields and decisions.

Comments

1. List the major goals for this area.

2. Identify the outstanding features of this program.

3. Indicate the features of this program which needs improvement.

4. Identify the items currently being completed to strengthen this program.

5. Indicate some suggestions for long-range improvement of this program.

SAMPLE

CHECKLIST

STEPS IN THE DEVELOPMENT AND IMPLEMENTATION
OF AN ARTICULATED CAREER EDUCATION PROGRAM

	TARGET DATES	
	START	FINISH
1. Review state requirements.	_____	_____
2. Appoint an ad hoc planning committee.	_____	_____
3. Designate a local ad hoc career education planning coordinator.	_____	_____
4. Review of career education literature by the planning committee.	_____	_____
5. (Optional) Visit school systems that have already implemented career education programs.	_____	_____
6. Adopt or develop a career education definition.	_____	_____
7. Adopt or develop a plan (model) conceptualizing the career education development of students.	_____	_____
8. Board of education adopt definition and plan (model) with commitment or time and funds for implementation.	_____	_____
9. Appointment of career education project leader.	_____	_____
10. Appointment of a career education committee (educators and community members).	_____	_____
11. Implement staff development programs on concepts and infusion process for career education.	_____	_____
12. Make definition and articulation model available to students, parents and community representatives for their review.	_____	_____
13. Establish priority levels of specific career education objectives for each stage.	_____	_____

CHECKLIST (Continued)

	TARGET DATES	
	START	FINISH
14. Have priority objectives reviewed by students, parents and community representatives. When appropriate, modify priorities as a result of the review.	_____	_____
15. Coordinate priority designation of objectives among grades and subject areas to facilitate articulation.	_____	_____
16. Administer as a pre-test the Iowa Career Education Inventory.	_____	_____
17. Select or adopt learning activities.	_____	_____
18. Monitor the career education activities through the use of a process monitoring instrument.	_____	_____
19. Evaluate the impact of the career education program on students.	_____	_____
20. Evaluate and revise classroom learning activities as appropriate.	_____	_____
21. Administer follow-up survey of graduates.	_____	_____
22. Analyze the results of the evaluation and modify programs, as appropriate, to meet goals.	_____	_____

SAMPLE

CAREER EDUCATION PROJECT CHECKLIST

			Date of Completion
___	___	(1) Board Approval (Admin. Support)	_____
___	___	(2) Needs Assessments - Students	_____
___	___	(3) Needs Assessments - Teachers	_____
___	___	(4) Needs Assessments - Community	_____
___	___	(5) Establishment of In-School Committee	_____
___	___	(6) Establishment of Community Committee	_____
___	___	(7) Establishment of Meeting Schedule of Committees	_____
___	___	(8) Selection of Scope/Sequence for District	_____
___	___	(9) Establishment of Staff Plans/Needs (In-Service)	_____
___	___	(10) Curriculum Mapping Process - Schedule	_____
___	___	(11) Curriculum Writing Schedule/Participants	_____
___	___	(12) Establishment of Implementation Strategy	_____
___	___	(13) Document Printing Schedule	_____
___	___	(14) Re-Assessment Activities	_____
___	___	(15) Ongoing Career Education Plans	_____

Based on a checklist developed by Keystone AEA 1.

SAMPLE

PARENT, EDUCATOR, AND COMMUNITY SURVEY

The following survey is sent to you in an effort to determine your feelings about the importance of career education in the school curriculum.

Please read each statement and then circle whether you agree, disagree, or are undecided about the statement or question.

EXAMPLE:

Career Education is important A D U

Are you answering this survey as a: (check one)

_____Parent

_____Educator

_____Community Representative

RETURN TO

_____

_____

_____

_____

BY

_____

SELF

It is important that students:

1. understand that how he or she feels about themselves can influence their ability to succeed.	A	D	U
2. understand that there are many situations in which it will be necessary to make adjustments.	A	D	U
3. be able to understand the relationship between being satisfied with self and achievement.	A	D	U

INTERPERSONAL RELATIONSHIPS

It is important that students:

4. be able to recognize the degree to which he or she is able to interact with other people by working as a team member.	A	D	U
5. display a positive attitude toward all individuals working and enjoying the fruits of their labor regardless of race, religion, sex, handicap, ethnic or socio-economic status.	A	D	U
6. be able to understand that there will be many instances in life when compromises are necessary.	A	D	U
7. understand the need for using good grammar and spelling in order to communicate with others.	A	D	U

SELF AND SOCIETY

It is important that students:

8. understand the consequences of not working.	A	D	U
9. be able to give several examples of good work habits, such as punctuality and planning one's work.	A	D	U
10. realize that nationalism, or loyalty to one's country, can contribute to progress and growth of the community and country.	A	D	U

DECISION MAKING

It is important that students:

11. be able to apply decision-making steps to solve a personal problem as well as to make a career choice.	A	D	U
12. realize the benefits gained from talking to parents, friends, and neighbors about jobs.	A	D	U
13. understand that many factors determine lifestyle, such as: income, culture, value system, career, and willingness to work.	A	D	U

ECONOMICS

It is important that students:

14. realize that changes in technology will affect his or her work and lifestyle.	A	D	U
15. understand that wages and prices are tied closely together and that as one goes up, usually the other will follow.	A	D	U
16. understand that the prices of products are determined by matching the amount supplied with the amount demanded.	A	D	U
17. be able to add, subtract, multiply, divide, and compute simple percentages to calculate change, wages, some taxes, and handle a checkbook.	A	D	U

OCCUPATIONAL KNOWLEDGE

It is important that students:

18. understand the necessity of seeking out knowledge about the supply of and demand for occupations before making a career choice.	A	D	U
19. be able to identify and locate information about jobs which will aid him or her in making a career choice, such as: availability, pay, location, and job openings.	A	D	U
20. be able to find and talk to people who are working in the career area of his or her choice.	A	D	U
21. given a sample employment application form, fill in all blanks, indicating "n/a" for those statements which do not apply.	A	D	U

22. be able to identify acceptable and unacceptable job interview behaviors.	A	D	U
23. understand that in order to become a manager or supervisor, it may be necessary to start a lower level and work up.	A	D	U

WORK ATTITUDES AND VALUES

It is important that students:

24. be concerned with the concept of quality if related to a task or job.	A	D	U
25. want to work for personal satisfaction and independence.	A	D	U
26. realize that work has dignity.	A	D	U
27. be willing to learn new concepts and tasks.	A	D	U
28. be provided a variety of exploration and/or training experiences before graduating.	A	D	U

SAMPLE

PARENT SURVEY

The following survey is sent to you in an effort to determine your feelings about the importance of career education in the school curriculum.

Please read each statement and then write whether you agree, disagree, or are undecided about the statement or question.

EXAMPLE:

1. Needs help in developing decision-making skills. A D U

Return to:

_____

_____

_____

_____

By

_____

PARENT SURVEY

Please circle the grade level your son or daughter is in

K-3 4-6 7-9 10-12

1.	Needs help in developing positive attitudes toward self, school, and work.	A	D	U
2.	Needs help in learning to appreciate the personal and social importance of work.	A	D	U
3.	Needs help in learning to appreciate the economic importance of work.	A	D	U
4.	Needs help in exploring his or her interests, skills, personal traits, and personal values as an aid to career planning.	A	D	U
5.	Needs help in relating to what he or she does in school to various occupations.	A	D	U
6.	Needs opportunities to go to work with me and/or visit other persons at their work to gain exposure to the world of work.	A	D	U
7.	Needs help in learning about and exploring a wide variety of jobs.	A	D	U
8.	Needs help in considering how a career choice may affect his or her lifestyle.	A	D	U
9.	Needs help in considering how his or her disability may affect his or her career choice.	A	D	U
10.	Needs opportunities to test his or her interests and skills in actual job experiences.	A	D	U
11.	Needs help in developing decision-making skills.	A	D	U
12.	Needs help in becoming aware of employer expectations.	A	D	U
13.	I feel my son or daughter needs considerable help with his/her future education and career plans.	A	D	U
14.	Needs preparation for a "next step" when leaving the public school, in either immediate employment or continuing education.	A	D	U
15.	Needs information about how to get, hold, and advance in a job.	A	D	U

16.	Needs information about how to qualify for entrance and how to succeed in postsecondary school.	A	D	U
17.	Needs placement services upon exit from high school either in employment or further education.	A	D	U
18.	Needs information about school and community career development efforts.	A	D	U
19.	Needs information about how I, as a parent, can foster a good self-concept and career development in my child.	A	D	U
20.	Needs information about the family projects that we can do to expand my child's self-awareness and career awareness.	A	D	U
21.	Need opportunities to become familiar with our school system's career development program.	A	D	U
22.	Need opportunities to become familiar with career development resources and suggestions on how to use them with my child.	A	D	U
23.	Need opportunities to learn what other parents are doing in career development with their child.	A	D	U
24.	Need suggestions and examples of how I can provide career development in the home.	A	D	U
25.	Need suggestions for how I can help my child develop skills in career planning. (Examples of skills are information-gathering, decision-making, etc.)	A	D	U

26. Please list other needs your child may have.

27. Please list other needs you may have.

SAMPLE

BUSINESS, INDUSTRY, PUBLIC AGENCIES, SERVICE ORGANIZATIONS SURVEY

The following survey is sent to you in an effort to determine your feelings about the importance of career education in the school curriculum.

Please read each statement and then circle whether you agree, disagree, or are undecided about the statement or question.

EXAMPLE:

1. Students should have opportunities to explore jobs in the community. A D U

Are you answering this survey as a: (check one)

_____Business Representative

_____Industry Representative

_____Public Agency Representative

_____Service Organization Representative

_____Other

Return To:

_____

_____

_____

_____

By

_____

1.	Present high school vocational programs are sufficient so the community does not have to get more involved.	A	D	U
2.	Community resources should be tapped heavily to supplement career education.	A	D	U
3.	The business (industry, agency, organization) I am associated with is a good source of occupational information for students.	A	D	U
4.	The school is aware of my business (industry, agency, organization) as a potential resource.	A	D	U
5.	Students are in favor of using the community as a career education resource.	A	D	U
6.	Parents are in favor of the schools using community resources.	A	D	U
7.	Teachers are in favor of tapping community resources for use in the career education program.	A	D	U
8.	School administrators and the Board of Education favor using community resources.	A	D	U
9.	Most local business and professional people would help with a career education program in the school.	A	D	U
10.	Our local community should pay for career education if the state and federal government cannot or will not do so.	A	D	U
11.	The community as a whole looks favorably toward students gaining experience in local businesses as a part of their regular school schedules.	A	D	U
12.	Career education will cost money but will be a savings for society because students will have increased knowledge about the world of work.	A	D	U
13.	The community should be vitally involved in the schools' career education program in whatever way the schools see fit.	A	D	U
14.	The community needs to hear about school needs regarding use of local resources.	A	D	U
15.	In general, I favor the use of community resources in the schools' career education efforts.	A	D	U
16.	Field trips are a good way for students to become acquainted with local occupational opportunities.	A	D	U
17.	My agency is available as a site for field trips and job shadowing.	A	D	U

18. Resource persons in the form of guest speakers in classrooms telling about their jobs are effective in providing career information.	A	D	U
19. As a representative of my business (industry, public agency, or service organization), I would be willing to serve as a resource person in any capacity the school needed.	A	D	U
20. High school students should have opportunities to explore and be trained in an occupation(s).	A	D	U
21. Work observation and work experience are essential to community involvement in career education.	A	D	U
22. My facility is available as a work experience opportunity.	A	D	U
23. I would be willing to serve on an advisory committee to help the school make the most effective use of community resources.	A	D	U

SAMPLE

ELEMENTARY STUDENT NEEDS ASSESSMENT

Directions: Please circle the number of the response which most nearly indicates your thought regarding that item. All extreme negative responses are on the far LEFT, and extreme positive responses are on the far RIGHT.

It is important to...	No	Maybe	Yes
1. do good work both in and out of school.	1	2	3
2. get along with people.	1	2	3
3. know how a business operates.	1	2	3
4. talk with my parents about their jobs.	1	2	3
5. learn to be responsible	1	2	3
6. know about my interests and skills regarding work.	1	2	3
7. know about my interests and skills regarding leisure.	1	2	3
8. know about several different occupations I would like.	1	2	3
9. have people talk about their jobs.	1	2	3
10. read about different careers.	1	2	3
11. view filmstrips, films, or video tapes about different careers.	1	2	3
12. take study trips in the community to learn about different careers.	1	2	3
13. know how to make decisions.	1	2	3
14. know what I like and dislike.	1	2	3
15. know how subjects I study in school will be used later in the world.	1	2	3

SAMPLE

SECONDARY STUDENT NEEDS ASSESSMENT

Directions: Please circle the number of the response which most nearly indicates your thought regarding that item. All extreme negative responses are on the far LEFT, and extreme positive responses are on the far RIGHT.

It is important to...	Not Important				Very Important
1. plan my course of study in relation to my career interests.	1	2	3	4	5
2. know the process for making good decisions.	1	2	3	4	5
3. know myself, my personality, my likes, my dislikes.	1	2	3	4	5
4. know about various jobs in my community.	1	2	3	4	5
5. know about various jobs not available in my community.	1	2	3	4	5
6. know what work values are important to me and how they affect my career development.	1	2	3	4	5
7. know how the courses I take in school are related to the working world.	1	2	3	4	5
8. know what my interests, skills, and abilities are.	1	2	3	4	5
9. be aware of how my leisure time relates to my life career.	1	2	3	4	5
10. know how to determine career plans and set career goals.	1	2	3	4	5
11. talk with my parents and other community people about their careers.	1	2	3	4	5
12. know what the various occupational options are as they relate to me.	1	2	3	4	5
13. know where I can find information about jobs.	1	2	3	4	5
14. take advantage of the audio visual and printed materials in school about work.	1	2	3	4	5

SECONDARY STUDENT NEEDS ASSESSMENT (Continued)

It is important to...	Not Important				Very Important
15. be aware of the educational/training opportunities available to me.	1	2	3	4	5
16. understand the importance of good work habits and how they transfer to the working world.	1	2	3	4	5
17. participate in shadowing experiences or work exploration in order to understand how the working world operates.	1	2	3	4	5

SAMPLE

TEACHER IMPLEMENTATION NEEDS SURVEY

Directions: Please circle the number of the response which most nearly indicates your thought regarding that item. All extreme negative responses are on the far LEFT, and extreme positive responses are on the far RIGHT.

During my class periods, it is important to...	Not Important				Very Important
1. use a variety of visual and printed materials to reflect occupations relevant to my curriculum area.	1	2	3	4	5
2. invite parents and community workers to talk about their work.	1	2	3	4	5
3. provide students an opportunity to participate in "hands-on" experience in order to explore work situations.	1	2	3	4	5
4. encourage my students to take advantage of the skills learned in school, realizing how they will be used in the world of work.	1	2	3	4	5
5. make my students aware of how my curriculum area will be used in the world of work.	1	2	3	4	5
6. take my students on study trips in the community to explore various work situations.	1	2	3	4	5
7. utilize activities to help my students identify their interests and skills.	1	2	3	4	5
8. provide various work simulations in order for students to "experience" the working world.	1	2	3	4	5
9. provide community information relative to current local occupational trends.	1	2	3	4	5
10. relate the importance of good work habits, work values, and skills in human relationships as they relate to my classroom and the working world.	1	2	3	4	5

SAMPLE

ADMINISTRATOR IMPLEMENTATION NEEDS SURVEY

Directions: Please circle the number of the response which most nearly indicates your thought regarding that item. All extreme negative responses are on the far LEFT, and extreme positive responses are on the far RIGHT.

In my school, it is important to...	Not Important				Very Important
1. provide encouragement to teachers and counselors regarding assisting students to understand their interests, skills, and abilities.	1	2	3	4	5
2. encourage staff to invite community workers to talk to students about their work.	1	2	3	4	5
3. provide a variety of resource materials to assist teachers and counselors in sharing career and occupational information with students.	1	2	3	4	5
4. have teachers demonstrate how their curriculum area(s) is used in the the world of work.	1	2	3	4	5
5. have teachers provide opportunities for students to explore the working world through study trips, work exploration, shadowing, or internships.	1	2	3	4	5
6. encourage staff to utilize parents as resource persons.	1	2	3	4	5
7. encourage staff to emphasize good work habits, work values, and human relationship skills as they relate to the present and the future.	1	2	3	4	5
8. provide time for staff to evaluate their present status with regard to the preceding items and make plans for future action.	1	2	3	4	5

SAMPLE

COMMUNITY INTEREST SURVEY

Directions: Please circle the number of the response which most nearly indicates your thought regarding that item. All extreme negative responses are on the far LEFT, and extreme positive responses are on the far RIGHT.

As a member of the community, it is important to...	Not Important				Very Important
1. share information regarding my occupation with students.	1	2	3	4	5
2. provide study trips for students to explore the working world.	1	2	3	4	5
3. provide internships, shadowing experiences, and work exploration for students to explore the world of work.	1	2	3	4	5
4. provide training opportunities for students either prior to or after high school.	1	2	3	4	5
5. share information regarding job opportunities in my area.	1	2	3	4	5
6. reflect my work in a positive manner.	1	2	3	4	5
7. assist students in forming work values and setting priorities.	1	2	3	4	5
8. assist students in determining interests and skills in terms of specific jobs.	1	2	3	4	5
9. assist in presenting greater career awareness in the educational program of our schools.	1	2	3	4	5
10. assist in relating academic courses to the working world.	1	2	3	4	5
11. assist in providing resources for career resource centers or library media centers.	1	2	3	4	5
12. assist students in being prepared with basic skills that can be used in many work settings since change is inevitable.	1	2	3	4	5

COMMUNITY INTEREST SURVEY (Continued)

As a member of the community, it is important to...	Not Important				Very Important
13. assist students in determining a realistic assessment of their abilities and aptitudes.	1	2	3	4	5
14. assist students in determining how their leisure contributes to their total career development.	1	2	3	4	5

NEEDS ASSESSMENT SAMPLE

The following instrument was taken from the Trainers Guide for Life Centered Career Education edited by Donn Brolin.

School: _____
(Baseline Data)

Please complete the following information:

Your position: _____ Grade level(s):_____

Major area of subject speciality: _____

Definition: Career education is all of education systematically coordinating all school, family, and community components to facilitate each individual's potential for economic, social, and personal fulfillment. It is an effort to more fully prepare an individual to maximize self potential in the domains of daily living skills, occupational guidance and preparation, and personal-social skills.

Prior to becoming involved in the Life Centered Career Education staff development training program and/or implementation of the career education plan, certain program needs must be appraised. This is to determine the discrepancy between the existing program and desired program status which will provide improved educational services for educable mentally retarded students. The needs assessment should provide the rationale from which program goals/objectives and ultimate learning activities are developed for these students.

Directions: Listed on the following pages are possible needs which relate to the career education curriculum for educable mentally etarded students and other handicapped learners in your school district. For each **need statement** do the following:

1. Rank each of the 28 items on the first scale at the right side of the page in terms of how important the **need** is to you. Use the following key aand circle the appropriate response for each item.

   Key: 1 = low need
   2 = moderate need
   3 = high need

2. Then, rank the **status** for the items on the second scale provided for each item. This ranking indicates how well you believe the school district is currently accomplishing the need. Use the following values and circle the appropriate response for each item.

   Key: 1 = not accomplished
   2 = partially accomplished
   3 = accomplished

3. Remember:
   A. The **first** response line represents the importance of **need.**
   B. The **second** response line represents the **status** (degree) of accomplishments in your school district.

Example:

Need to provide career education to all students.	Need	1 2 3
	Status	1 2 3

We, as educators, in an effort to offer quality career educational services to handicapped students:

Need Statement	Descriptor	Response
1. Need to integrate these students into regular classes.	Need	1 2 3
	Status	1 2 3
2. Need to implement more career education curricula in our school system.	Need	1 2 3
	Status	1 2 3
3. Need to have written career education goals/objectives in the school curriculum.	Need	1 2 3
	Status	1 2 3
4. Need to establish a faculty career education steering committee.	Need	1 2 3
	Status	1 2 3
5. Need to establish a career education competency based curriculum.	Need	1 2 3
	Status	1 2 3
6. Need to provide career education decision-making experiences in the classroom.	Need	1 2 3
	Status	1 2 3
7. Need to involve all family members in the career education process.	Need	1 2 3
	Status	1 2 3
8. Need to more fully involve available resources in the community.	Need	1 2 3
	Status	1 2 3
9. Need to become knowledgeable about the nature of handicapping conditions in an effort to increase positive teacher attitudes.	Need	1 2 3
	Status	1 2 3
10. Need to identify appropriate educational assistance/ techniques/services that will enhance student learning and integration.	Need	1 2 3
	Status	1 2 3
11. Need to learn specific instructional techniques for teaching a competency based career education curriculum.	Need	1 2 3
	Status	1 2 3
12. Need to identify major sources of instructional materials/ media to provide career development experiences.	Need	1 2 3
	Status	1 2 3

13.	Need to use a variety of appraisal techniques to accurately evaluate attained student compentency level.	Need Status	1 2 3 1 2 3
14.	Need to establish communication among students, teachers, parents, business/industry, government, and community social agencies.	Need Status	1 2 3 1 2 3
15.	Need to develop a systematic comprehensive career education implementation plan.	Need Status	1 2 3 1 2 3
16.	Need to learn how to effectively evaluate and monitor a functioning career education program.	Need Status	1 2 3 1 2 3
17.	Need to gain knowledge about the changing role of the special educator in a career education program for these integrated students.	Need Status	1 2 3 1 2 3
18.	Need to gain student, school, parent, and community support for a competency based career education program.	Need Status	1 2 3 1 2 3
19.	Need to emphasize the career implications of competency based subject matter.	Need Status	1 2 3 1 2 3
20.	Need to have school staff involved in developing a career education plan.	Need Status	1 2 3 1 2 3
21.	Need to establish specific roles regarding which teachers will teach specific career competencies to these students.	Need Status	1 2 3 1 2 3
22.	Need to have a formal education orientation program and inservice provision for upgrading school staff.	Need Status	1 2 3 1 2 3
23.	Need to identify the major career education implementation barriers and solutions for eliminating these barriers.	Need Status	1 2 3 1 2 3
24.	Need to identify the necessary tools, materials, and equipment required to implement a career education program.	Need Status	1 2 3 1 2 3
25.	Need to assist these students in acquiring daily living skills, occupational guidance and preparation, and personal-social skills.	Need Status	1 2 3 1 2 3
26.	Need to infuse career information into the subject content taught in every classroom.	Need Status	1 2 3 1 2 3
27.	Need to identify any concerns which teachers may have about integrating handicapped students into regular classes.	Need Status	1 2 3 1 2 3
28.	Need to identify various ways regular classroom teaachers can use special education teachers to assist in teaching career education competencies.	Need Status	1 2 3 1 2 3

List of decisions

The following questions begin to outline the decisions that need to be made by a district. The list is by no means all inclusive, however, it will be a place to start. Hopefully, this list will provide some structure to your decision-making process.

Who will make the decisions and the timeline for making those decisions is something that should be made early in the planning stages. The list of decisions is organized by chapter to assist districts with understanding the content of each section of the guide.

Chapter III First Steps

*What is your policy on the involvement of each of the following:
- Board of education
- Educational administrators and supervisors
- Parents
- Students
- Career Education Coordinator
- Curriculum Specialists
- Teachers
- Counseling and guidance personnel
- Media specialists/librarians
- Advisory committee
- Business/labor/industry
- Community service organizations
- College faculty?

*Who will have the role and authority to encourage the implementation of the career education plan?
*What process will be used to establish the career education coordinator?
*What process will be used to establish the career education committee, who will be on the committee and how long will they serve on the committee?
*How did you rate on the checklist for the development of a career education plan?
*What will be used for the project checklist to insure the project is running smoothly?
*Who will be responsible for the project checklist?
*What needs assessments are currently being used?
*When was the last time your district did a needs assessment?
*What groups do you plan to address with the needs assessment?
*How will the results of the needs assessments be utilized?
*What is the function of your curriculum committee?
*What community resources are available to your district?
*What would be the best use of the community resources?
*How do you plan to identify priority objectives?
*What relationship do priority objectives have to the local plan?
*What process will be used to make the necessary changes in the career education plan?

CHAPTER 4

Strategies of Instruction

'If only we knew what we were about, perhaps we could go about it better.'

- Abraham Lincoln

THOUGHTS FOR CHAPTER 4

"It is by acts and not by ideas that people live."

- Anatole France

* *

"The test and the use of man's education is that he finds pleasure in the exercise of his mind."

- Jacques Marten Borgen

* *

"Experience is a hard teacher because she gives the test first, the lesson afterwards."

- Vernon Sanders Law

* *

"The mind is like the stomach. It is not how much you put into it that counts but how much it digests."

- Albert Jay Wock

* *

"The best defense is a good offense."

- Knute Rockney

* *

"I must do something" will always solve more problems than "Something must be done."

- Anonymous

* *

"Since writing is communication, clarity can only be a virtue. And although there is no substitute for merit in writing, clarity comes closest to being one."

- E. B. White

* *

STRATEGIES FOR IMPLEMENTATION OF CAREER EDUCATION INTO THE ACADEMICS

Career Education, as it is presently envisioned, is a much broader concept than the name immediately suggests. Not only is career education concerned with preparation for wise career choices, it also emphasizes the development of self-concept, interpersonal relations, citizenship and other sociological/psychological considerations deemed important to living a rich life.

Through the development of the Iowa Career Education Model and later the Iowa Career Education Inventory, Iowa educators are supporting a thrust for the development of a K-12 career development process. The development of a system that requires administrators, teachers and the community to work together makes for a framework that will allow a much needed, more sophisticated educational process to evolve.

The Iowa Career Education Model attempts to define the need for "development". This process formalizes and suggests a systematic approach of "how to" in respect to consciously dealing with the topics via the seven career education domains.

We are aware of the fact that a lot of career education is taking place in instructional programs; however, it does not qualify as career education until it is dealt with consciously and systematically.

Our goal in this chapter is to look at the current curriculum within the academic areas with a perpective of what "should be", as outlined by professionals in each academic area. The career education strands (detailed in Chapter 2) can then be matched to the proposed academic instructional strands. The process continues by designing/modifying a series of activities which address the mutual concerns of career education and each academic area. Hopefully, through this phase, "ongoing" activities currently in place will be identified and strengthened/modified/refined as needed. The last part of the chapter will hopefully stretch your minds into thinking about and planning for K-12 articulation of the career education and instructional objectives.

The term "infusion", as it is used here, refers to the incorporation of career eduction concepts, goals and objectives into the mainstream of all subject matter areas. Infusion activities in all academic classes must satisfy two criteria. First, the activity must promote legitimate academic objectives in a meaningful way. They cannot be superficial to the subject matter. Secondly, the activity must address career education concepts in a direct way so that career education is fostered deliberately rather than by chance.

The infusion process is also two fold. The first phase is to examine what one is teaching and to note the Career Education emphasis and to improve it as logic and sense dictate. The second phase will be to create quality activities that advance the level of sophistication or expand upon the normal ongoing program. Those objectives for program improvement and a matching Career Education objective can provide a basis for identifying and writing these activities.

Career Education and the thrust for more sophisticated instructional programs are both in their infancy in respect to dealing with the complexities created in our shrinking world and rapid technology advances. Articulation and determining how much of "it" is needed will have to be built into assessment and evaluation as an ongoing facet of the career eduction plan. The Iowa Career Education Inventory is a beginning in the curriculum assessment/evaluation process and is capable of determining to a significant degree how well students are grasping the concepts - and repeated, it will be able to show progress in respect to program effectiveness. In the beginning, articulation, how much and where, will be hard to define. This will have to be done on the basis of informed judgment as well as determining just how much is possible to do in the time available. Most importantly is that articulation is addressed and judgments made - and experience captured as the efforts continue.

SUMMARY INFUSION

1. Determine and idealize what happens in a discipline and note the strands that flow through the instructional program. Determine scope and sequence to be used, or being used.

2. Determine what career education objectives are being addressed and where by levels. List activities. Add, modify, refine activities relating to discipline content and career education domains/strands.

3. Match effective domain and application objectives needed in the discipline to career education domains/strands and design quality activities for implementation.

4. Map the total curriculum and make judgments as to voids, greater emphasis needed in this or that domain, then balance and adjust - articulate. Use inventory results and other assessments in the process.

5. The grade level teacher is going to have different problems than will the discipline teacher and will have to prioritize differently. Team work with other teachers is important in both categories however.

6. It seems logical that the four levels of career education may be addressed separately and the program handled in four parts once the discipline scope and sequences are in place - at least in the initial stages. Communications between the groups must be maintained. The objectives for a discipline or for career education become very complex with the realization that we need to deal with them at three levels, e.g., as content, skill, and effective domain.

The series of pages to follow outline the instructional strands/topics of each of the following academic areas:

Agriculture
Art
Business Education
Health
Home Economics
Industrial Education
Language Arts
Mathematics
Physical Education
Science
Social Studies
(See Chapter 5 for areas serving Special Populations)

All differences in space allotted to academic areas is simply a result of the amount of information collected. For some areas the timing was right and good summaries were easily accessible, for others we hope to incorporate more data in the final publication. For all areas we hope the "painted" picture is clear enough to begin to understand the mutual goals of the academic area and career education.

AGRICULTURE AND AGRIBUSINESS EDUCATION

Agriculture and agribusiness education efforts at all levels of instruction in Iowa are concerned with the total agriculture situation in the United States and the world. Such education should not be limited to the development of specific skills and technical knowledge. This means that somewhere in the program, three functions must be performed. First, there is the function of educating individuals for employment in the field of agriculture and agribusiness (occupational awareness, exploration and preparation). Secondly, there is a need at all educational levels for avocational agricultural coursework so that other students and adults may take courses of interest to them. Thirdly, in view of the crucial importance of food, it is essential that insofar as the resources permit, instruction be given in the significance of agriculture, food, and food production. This instruction would not have to be given exclusively by the agricultural instructor, but it may well be given by the other educational personnel who have or can acquire the competence for such teaching. However, agricultural education personnel must be committed to these goals and must provide the necessary leadership in agriculture and agribusiness education for all students, including the non-vocational students throughout the school.

Materials providing an integrated approach to Agriculture and Agribusiness eduction have been developed for the elementary school as a part of the Project 2000 curriculum development effort. These materials incorporate the concepts of career education in a very direct fashion as can be seen in the following listing of concept titles. These materials are formated with a statement of concept, statement of situation, points to cover, learner needs, references and instructional materials, example learning activities and educational outcomes.

Elementary Curriculum Guide

-Work includes various types of activities
-Organization of the world of work in agriculture
-One's physical capabilities and their influence on the selection of occupational alternatives
-One's personal interests and their role in selecting work alternatives
-Components of the agricultural industry
-Occupations in the agricultural industry
-Skills and understandings common and unique to employment in agriculture occupations
-Importance of oral need for goals in one's life
-Benefits resulting from participation in avocational activities
-Basic component of one's lifestyle
-Personal interests and goals and how they relate to personal lifestyles
-Agricultural activities that contribute to the development of one's lifestyle based on personal interests
-Requirements for becoming involved in avocational agricultural pursuits
-Role of agriculture in meeting the nutritional needs of humans
-Agriculturally related businesses present in the community
-Crops and livestock commonly grown in the local community
-Realize the extent of world food storages
-Factors contributing to abundant agricultural production
-Agricultural industries that (a) provide services, (b) process products, or (c) market products for use in other parts of the agricultural industry

-Processing and marketing of agricultural products
-Major consumer trends in the selection, purchasing, and utilization of food products
-Changes that have taken place in rural and urban ways of life
-Environmental components necessary for efficient growth of crops and livestock
-Impact of harmful environmental conditions affect the growth and development of plants and animals

Junior High Curriculum Guide

-Social value of working in agricultural occupations
-Economic importance of work
-Occupational categories in the agricultural industry
-Skills and understandings requisite to employment in agricultural occupations
-Entry level skills requisite to employment in various segments of the agricultural industry
-Establish tentative agricultural occupational goals
-Occupational choices that would lead to satisfying occupational goals
-Outcomes one might expect from participation in avocational activities
-Requirements for becoming involved in avocational agricultural pursuits
-Increased efficiency in agricultural production through agricultural mechanization
-Role of agriculture/agribusiness in the economy of Iowa
-Important relationships of Iowa agriculture to national and international economics
-Major areas of production for specific kinds of livestock and crops throughout the United States
-Relationship of how efficiency in agricultural production is related to the U.S. standard of living
-Importance of agriculture to the standard of living in countries of the world
-Major areas of production for specific kinds of livestock and crops throughout the world
-Contributions of the agricultural industry to nonagricultural industries of Iowa
-Agricultural production and technology in areas of food shortages
-Agricultural technology in areas of abundant agricultural production
-Food delivery systems from areas of abundant production to areas of lower food production
-Importance of agricultural products to various segments of society
-Products and services provided by nonagricultural industries used in producing agricultural products
-Identify specific marketing and processing techniques implemented to meet consumer demands
-Important agricultural events and developments that contributed to major changes in the standard of living
-Growth of agricultural industry since 1900
-Impact the agricultural industry has had on the environment of the community, state and nation
-Long-range impact of current agricultural practices on the environment

Vocational Agriculture

A comprehensive program for a vocational agriculture program begins with an exploratory course of at least nine weeks in length in the eighth grade. Suggested topics of instruction include agricultural careers, parliamentary procedure, germination and photosynthesis, soil sampling, terrariums, landscaping, care of young livestock, selection of livestock, meat cuts, concrete, telephone use, check writing, farm and tractor safety, painting, soil and water conservation, gardening—fruit and vegetables, and computers in agriculture.

Ninth grade agriculture science (year in duration) includes units of basic instruction in agribusiness, production agriculture, horticulture, agriculture mechanics, supervised occupational experience (SOE), and Future Farmers of America (FFA).

Instruction in grades ten through twelve provides specialized education in one of four areas for the student (or a special program of study that may utilize courses from these four areas). These areas are agribusiness, production agriculture, agriculutre mechanics and horticulture.

Integrating Agriculture and Agribusiness Curriculum Materials Into Present Course(s) of Study

After reviewing these curriculum materials it will become apparent to each member of the faculty that the first task centers on integrating these materials into the current instructional program. Teachers within each instructional level will need to review the list of objectives developed for their level of instruction (elementary, junior high, and senior high) and decide which concepts they can teach through their instructional program. As decisiions are made concerning which concept each teacher will take responsibility for implementing, consideration should be given to (1) how and where three concepts can best be integrated into his or her course(s) of study and (2) which concept best lend themselves to meeting the students' interest and needs. In some school systems, student needs may dictate that all concepts be included in the instructional program at each grade level, while in other systems these needs can be met by integrating only part of the concepts into the instructional program at each grade level. The decision as to which concepts should be included in the instructional program at each level and in each course of study must rest with the teacher. It is important, however, that all concepts for a given instructional level be included at one of the grade levels within each instructional level.

After the teachers within each instructional level have made their decisions concerning which concepts will be implemeented in their instructional program, each teacher must decide where the agricultural concepts can most logically be built into his/her course(s) of study. This will require a thorough review and analysis of the present course(s) of study to determine (1) the overall purpose and content of the course(s), (2) whether student needs are being met through the course(s), (3) what changes are needed in the courses(s) to better meet student needs, and (4) how the objectives and units of instruction of the course(s) can be altered to include the concepts inherent in the agricultural and agribusiness curriculum materials. Caution should be exercised to avoid changing the emphasis of the course(s). Integration of the agricultural concepts would support the development of those skills being emphasized in the course(s), and at the same time stress the agricultural concepts.

Remarks

The curriculum engineering that is necessary for satisfying career education needs and for teaching an understanding of agriculture and the importance of agriculture appears to be done via the "Project 2000" materials. These materials provide the major instructional content needed for K-12 instructional programs for any or all school districts rather vocational agriculture exists at the high school level or not. All students in Iowa need to understand the role of agriculture in life and living. To address this need in conjunction with K-12 career education programming is, indeed, appropriate. Where vocational agriculture programs do exist the instructor can play a leadership role as a part of his/her responsibility in a K-12 career education program by helping other teachers infuse agriculture instruction into their courses. In districts without a vocational agriculture program a teacher with a strong background and interest in this area should be identified to promote this need, particularly at thee elementary and junior high levels.

Students interested in pursuing a career in agriculture should be afforded the opportunity to study agriculture. High school vocational agricultural programs have been most successful in providing students with technical knowledge, skill development and leadership training. Schools which do nto now offer vocational agriculture may want to explore the possibility of adding it to their curriculum. The Department of Public Instruction offers consultive services to schools who want to establish vocational agriculture programs.

3.1.B. ROLE OF AGRICULTURE IN MEETING THE CLOTHING NEEDS OF HUMANS

Situation: Identify a situation which is familiar to class members that is directly related to this concept. Discuss, demonstrate, or describe details of the situation. Relate learning activities to the situation and concept.

POINTS TO COVER RELATED TO CONCEPT

Agricultural products used for fibrous clothing material (e.g., cotton, wool, silk, linen, etc.) and non-fibrous materials (e.g., leathers, furs, etc.).

Comparison of synthetic and naturally produced materials.

Basic procedures used in processing agricultural materials into clothing materials.

Clothing customs of people from various cultures.

Clothing requirements of people from various climates.

LEARNER NEEDS

Many learner needs could be met as a result of instruction related to this concept. However, emphasis should be placed on meeting the need:

for an ever-expanding environment.

to share ideas with others.

to relate past experiences.

awareness of socio-geographical relationships.

REFERENCES AND INSTRUCTIONAL MATERIALS

"Leather Word Puzzle." Cooperative Extension Service, Iowa State University, 32 Curtiss Hall, Ames, Iowa, 50011, 4H-634-D.

Learning and Fun Book About Pigs and Cows. DeKalb County Farm Bureau, 215 North 6th Street, DeKalb, Illinois, 60115.

"Wool: Farm to Fabric, Naturally", a teaching unit. Wool Education Center, 200 Clayton Street, Denver, Colorado, 80206.

EXAMPLE LEARNING ACTIVITIES

1. Prepare a display using natural and synthetic fibers. Identify and label those fibers that come from agricultural sources.

2. Prepare a display of clothing requirements for people from at least two different climates.

3. Study the labels on clothing items and record the natural fiber content. List the different fibers and sources of those fibers on the chalkboard.

4. Obtain "Wool: Farm to Fabric, Naturally", a teaching unit from the American Wool Council, Wool Education Center, 200 Clayton Street, Denver, Co. 80206. Read materials, display posters, view filmstrip, and discuss how wool helps to meet our clothing needs. Use "Wool from Fleece to Fabric" chart to help show the processing of wool to fabric. It is available from the same source mentioned above.

5. Prepare a poster matching types of clothing materials to the agricultural raw products from which they come (e.g., wool, cotton, leather, linen, etc.).

6. Study the clothing customs of another country and share your findings with other members of the class.

7. Visit a mill (e.g., woolen, cotton, etc.) to observe basic processing procedures. Collect samples at each major step in material processing. Prepare a display using those samples to describe the processing procedures.

8. List the types of clothing worn at different seasons of the year in your own community. Explain the qualities of those materials as they relate to usefulness for different seasons of the year.

9. Invite a senior citizen into the classroom to discuss changes they have observed in types and sources of clothing materials.

10. Using the Learning and Fun Book about Cows and Pigs, read Unit V and use Activity Masters 17 and 18 to help you understand the many products that come from these animals.

EDUCATIONAL OUTCOMES

As a result of instruction related to this objective, students should be better able to:

1. describe the effects of culture and climate on clothing requirements.

2. appreciate the role of agriculture in providing materials used to meet clothing needs.

3. identify major steps in processing agricultural materials into clothing products.

4. relate clothing products to the agricultural sources from which they came.

ART

CURRICULUM AIMS

The following information was taken from the 1984 DPI guide: The Visual Arts in Iowa Schools.

To help students understand the past, participate creatively in the present, and adapt to the future, the following four aims are proposed as fundamental guidelines for educating young people in the visual arts. These aims are based on the preceeding rationale; a review of various authors in the field of art education, the study of current state guides from around the nation, and the collected views of art teachers in Iowa. As curriculum aims, these four statements are intended to serve the interest of both individual and society.

Aim One

Guiding Students to Perceive, Comprehend, and Evaluate the Visual World

Student Goals

A. Develops concepts and values about natural and created environments.
B. Learns about and evaluates humanmade symbols.

Aim Two

Helping Students Acquire an Ability to Look at and Understand the Visual Arts

Student Goals

A. Develops abilities to look at and respond to works of art.
B. Is aware of styles of individual artists, particular movements, and historical periods.

Aim Three

Motivating Students to Develop and Communicate Imaginative and Inventive Ideas

Student Goals

A. Experiments by manipulating images, media, objects, and concepts to express personal ideas in visual forms.
B. Understands and uses visual language.
C. Develops an awareness of problem solving as basic to the artistic/design process.

Aim Four

Assisting Students in the Making of Art

Student Goals

A. Uses own environment, experiences, and feelings as a source for ideas in artwork.
B. Gains confidence in the use of media and tools for personal expression.
C. Uses evaluation as a learning experience.

The aims are written as action statements describing activities of the art teacher, who guides, helps, motivates and assists students. In a quality program these actions stimulate students to perceive, comprehend and respond to the visual world and the visual arts. Various opportunities are provided to promote inventive thinking while developing skills. Students learn to channel their feelings and ideas through creative processes into expressive works of art.

It is generally the case in school art programs for the curriculum to be built around media. This guide for visual arts education is an attempt to design a balanced approach to visual understanding of natural and humanmade images, objects and environments, knowledge about art and in society, in addition to making art. Together these curriculum aims represent the body of knowledge known as the visual arts which can assist all students in becoming productive members of a complex and dynamic world.

Learning in art occurs in the same manner that learning occurs in other areas. It is sequential and cumulative. A program which fails to recognize and build upon a student's prior learning in art fails the student. Vertical articulation is a necessity. Accordingly there must be systemwide planning, kindergarten through 12th grade, of the art curriculum to provide both scope and sequence.

These four aims for visual arts education are elaborated upon in terms of goals and objectives. The goals are components of each aim. The objectives further detail each goal. While the aims are so delineated, they are interdependent and in practice are interwoven. They are separated here soley for the purpose of definition and explanation.

In the next section, the objectives are organized according to three levels which represent different abilities and the maturity of students. These levels are cumulative; the fundamentals learned in Level I continue to be applied while the student is developing at Level II. Similarly, the fundamentals learned in Level I and II continue to be applied at Level III. The levels are designed for either group or individualized instruction.

Level I provides objectives for students with little knowledge and experience. Level II provides objectives for students with some experience and knowledge of the visual arts. Level III provides objectives for students who have had a variety of experiences dealing with art concepts, materials and techniques. These objectives are provided in this manner to account for schools without the benefit of an elementary art program (See section titled Program Recommendations), and to encourage diversity of instruction.

Remarks

Lastly, all of these statements are intended to be interdependent concepts which, if implemented, will continuously nurture the creative and mental growth of the learner. They have been organized in a developmental manner to account for indvidiual differences while at the same time responding to the need to analyze the instructional task for the purpose of creating, developing, selecting and organizing a viable art curriculum. The seven career education domains can relate closely to these four aims of art curriculum. The concept of self, self and society, decision-making, occupational knowledge and work attitudes and values interlock with the theme of assisting students to understand the past, participate in the present and adapt to the future.

The detailed information for aim one has been included as an example of the information available in the guide. Additional information in the guide relates to an extensive overview of career opportunities, community resources, evaluation and program recommendations. The areas of music, drama and dance have not been forgotten and will be addressed in a later edition of this guide.

COMMUNITY FINE ARTS DIRECTORY

MATERIALS/RESOURCES

Telephone Directories for Use of Yellow Pages

Newspaper Advertisements

Sample Newspaper Articles

Typewriter/Paper and Duplicating Supplies

Stamped Envelopes and School Stationery

DETAILS

LEVEL: Middle School/ Junior High

TYPE: Entire Class/ Individuals

TIME: Four to Six Weeks

INSTRUCTIONAL OBJECTIVE

Students will compile a directory of fine arts resources: people, places and organizations who are actively involved in fine arts careers in the community and the surrounding area.

PROCEDURES

PRIOR TO BEGINNING ACTIVITY

The teacher should have available in the classroom multiple copies of local telephone books, specifically the Yellow Pages. Any copies of community resource directories and or brochures that focus on the arts would be useful since these print materials will serve as a model for the Fine Arts Directory that the students will design as a result of this Instructional Activity.

The teacher may also wish to gather sample newspaper articles that give information to the general public about fine arts activities and programs within the community. Articles that give information about volunteer efforts related to the arts may also be helpful because they will serve as information about places and organizations that already support the arts in the given locality.

1. Begin activity by displaying a number of directories for students to study:

   - Telephone Directory
   - High School Handbook/Directory of School Services
   - Chamber of Commerce Directory
   - Professional Women's Club Directory
   - Hospital Directory (People and Services in the Health Field)
   - Town Report
   - Rotary Club Directory/any civic organizations
   - Welcome Wagon Directory (People and Services)

2. Point out to students that directories provide an information service to the general public. For the people living in any given area,

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information is also made available and serves in the same advertising capacity.

3. Explain that in order to acquaint the school population with opportunities for employment and enjoyment in the fine arts area, the class will design a fine arts directory. The directory will:

   - Place all fine arts related activities in one common publication.
   - Provide a directory of musicians and musical services for all students, parents and interested individuals.
   - Provide a directory of cultural institutions, artisans and specialized fine arts services and products for students, parents and interested individuals.

4. Develop with the class the categories that should be included in the directory.

   - Area music businesses
     - Stores
     - Manufacturers of musical products
     - Repair services for musical products
   - Area professional musicians/bands/ combos/orchestras
     - American Federation of Musicians
   - Area private music teachers: by instrument or area of specialization
   - Area music societies
     - Officers and executive boards
   - Area fine arts centers
     - Musical groups
     - Crafts
     - Drama classes
     - Movement classes
     - Photography studios
   - Area Concert Halls
     - Stage size
     - Seating capacity
     - Seasonal performances
   - Church musicians and societies
     - Directors
     - Executive boards
     - Special performances
   - Choral groups
     - Director
     - Area of specialization
   - Museums
   - Radio and television studios in local areas

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- Galleries
  - Area artists
  - Local artist studios
  - Special exhibits
- Guilds
  - Crafts people
  - Artists
  - Artisans
- Area art schools
  - Colleges
  - Community/evening classes (adult)
- Area arts teachers: by area of specialization

5. Divide the areas to be included in the directory among members of the class along with a team that will research newspaper articles for possible contacts of services or products related to the arts. Each team will be instructed to compile the following information for each section of the directory:

   - Area of specialization
   - Director or contact person
   - Street address
   - City, state, ZIP code
   - Telephone number
   - Brief paragraph of service rendered or product provided (made, repaired, etc.)

6. Instruct each team to prepare a letter informing the contacts of the compiling of the directory and asking permission to include the information in the final document. A sample letter and information form is provided on page 317 of this Instructional Activity.

7. Organize teams to prepare the other parts of the directory while waiting for responses:

   - Cover with appropriate design (A sample is provided for consideration by the instructor).
   - Dedication Page (perhaps to a fine arts instructor in the school setting, to a renowned citizen and patron of the arts).
   - Introduction (explaining purpose(s) of the directory.) There should be some mention that if a fine arts service or individual has been accidently eliminated, that information can be added on an annual basis.
   - Organization of Directory (grouping of services, i.e. music, art, drama, movement, businesses, organizations).
   - Editing Team (to make all information submitted consistent in style and format).
   - Proofreading Team (for spelling, grammar, punctuation).

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- Clarification Team (to contact any agencies or individuals who do not respond to the letter or who may need to be contacted for additional data).
- Press or Publication Team (to determine method of production including cost of materials, number of copies, size of directory, etc.) It may be that this team would wish to contact a fine arts patron to sponsor the directory project.
- Illustration or Photography Team (to determine the types of graphics or photos that would best deliver the information contained in the printed word).
- Distribution Team (to determine method of distribution).

8. Based on time allotted for entire directory production, have teams periodically report their progress. Any decisions that are of concern to the final document should be voted upon by the entire class. All decisions related to cost and methods of distribution should have the approval of the supervisor.

9. Encourage students to analyze their progress:

   - Number of returns or responses.
   - Number of new contacts or services available.
   - Ability to reach consensus on decisions related to the directory.

10. Continue production at the discretion of the supervisor. Encourage any new fine arts contacts to visit the school to share their talents and career choices.

11. Plan a "Production" Appreciation Occasion when the directory is completed and ready for distribution. Invite the media to record the event and the planning efforts of the students.

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PROCEDURES Continued

SAMPLE LETTER
Requesting Information for Inclusion in Directory
(School Stationery)

_____
(Date)

Dear _____:

The _____ class of _____ Middle/Junior High School is compiling a directory of fine arts activities, businesses and services in our community and immediate area. This Fine Arts Directory will provide information on all fine arts activities for interested students, parents and community members.

The Fine Arts Directory Committee would like to include your name and fine arts area of specialization in this document. There is no charge for you to have this information included in the directory.

Please complete the attached form and return it to the following address no later than _____.
(Date)

_____
(Fine Arts Directory Committee)

_____
(School Address)

_____
(Faculty Advisor)

==========

I give permission to the _____ class of _____ Middle/Junior High School to print information about my fine arts specialty and services to the community in its directory.

PLEASE PRINT

_____ _____
(Name) *(Name of Organization)*

_____ _____ _____
(Address) *(City/State/Zip)* *(Telephone)*

Area of specialization, brief paragraph of services rendered, special events connected with the services, clients, served:

_____

_____

_____

_____

(Signature) _____

(Date) _____

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SUPPLEMENTARY RESOURCES

TEACHER

Reid, William. Activities for Exploring Careers in Art. Portland, Maine: J. Weston Walch, Publisher, 1977.

Simmons, Kenneth. Activities for Examining Art In Your Community. Portland, Maine: J. Weston Walch, Publisher, 1979.

FOLLOW-UP ACTIVITIES

Students may wish to invite some of the people listed in the Community Fine Arts Directory to class to discuss their careers, lifestyles and work satisfactions.

If after the completion of the Directory, students are concerned with a lack of fine arts opportunities in their immediate locality, they may wish to form an organization that has its primary purpose that of being the promotion of the arts through school, community and civic activities. If the opportunities appear to be limited or if the opportunities focus on only one area of the arts or cater to a single age group, the students may wish to discuss ways that an appreciation and involvement in the arts can be fostered.

TEACHER'S NOTES

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AIM ONE:
GUIDING STUDENTS TO PERCEIVE, COMPREHEND AND EVALUATE THE VISUAL WORLD

The purpose of AIM ONE is to awaken students to the visual characteristics of the natural world and the world created by humans.

Fundamental to the creative process is sensory awareness. The human senses must be alert to the sights and sounds and other stimuli before any kind of organized response can occur. Our physical and intellectual well-being depends on our ability to notice and understand what we see, hear, smell, taste, and feel.

GOALS	LEVEL I OBJECTIVES	LEVEL II OBJECTIVES	LEVEL III OBJECTIVES
A. Develops concepts and values about natural and created environments.	1. Maintains curiosity and enjoyment of the natural environment.	1. Recognizes the impact that the environment and humans have on each other.	1. Develops value system and acts upon the quality of his/her environment.
	2. Recognizes that some person designed and created the objects in the environment.	2. Learns that design is an attempt to organize space, develop tools and create useful and decorative objects.	2. Learns to evaluate the quality of a form and its relationship to its function.
	3. Recognizes the need for harmony between the natural and created environment.	3. Understands how architecture, urban/rural planning, landscape architecture, industrial design and interior design have been used to form the environment.	3. Interprets how architecture, urban/rural planning, etc. reflect the aesthetic, social and political values of groups of people.
	4. Becomes aware that nature, technology, and art are related.	4. Understands the art applications of scientific and technological developments (photography, video, computers, etc.)	4. Analyzes and evaluates the scienticific and technological worth and uses of these developments as forms of artistic expression.
B. Learns about and evaluates humanmade symbols.	Recognizes that visual symbols are designed by humans and used to convey meaning often in conjunction with other modes of communication.	Interprets visual symbols that give meaning to abstract concepts.	Evaluates the symbols which influence human values and behaviors. (advertising, graphic communications, propaganda, stereotyping, etc.)

BUSINESS EDUCATION

The following information is from the Education For Business in Iowa Curriculum and Reference Guide from the Department of Public Instruction.

Historically, business education came into existence to provide occupational and career education. Increasingly it has attempted to meet the career needs and economic understanding needs of individuals and in turn meet the needs of the nation. Business education has a major responsibility to complement other fields of occupational education in serving the needs of society. It also has a responsibility to assist general educators in developing ways to help children and youth explore the world of work.

The major responsibilities are:

- -Discover and analyze the manpower needs and employment status of the nation's work force.
- -Plan programs in cooperation with educational personnel concerned with agriculture, distribution, home economics, trade and industry, health, technical, and newly emerging occupations.
- -Participate in providing common experiences for vocational students through a group of coordinated youth organizations or a united organization.
- -Participate in planning common programs of teacher education.
- -Participate in the development of a common program of administration and supervision of vocational education.
- -Participate in the assessment and evaluation of a total vocational education program.
- -Join other vocational services in promoting interests of the total field of vocational education.
- -Participate with other vocational fields in educational research and development.
- -Assist in planning a total program of career information and guidance.
- -Cooperate with educational personnel in the private sector--schools, industry, and nonpublic organizations.
- -Assist in developing effective instructional media and materials to enhance the total vocational program.

Because of the rapid changes in society today as evidenced in technological advances which influence business activity and personal living, business educators have an expanding leadership and planning role in educational circles. Business teachers are increasingly involved in curriculum planning, inservice education programs, team teaching, and other educational endeavors. Many business teachers are working with other teachers in joint efforts for general education. Today the accomplishment of educational objectives appears to be more important than "what belongs in this subject" or "who teaches it".

In the past, business teachers were primarily concerned with young people of secondary school age. Today they should be concerned with all levels of learners--elementary, secondary, and postsecondary--and with all phases of their growth and development.

Individuals play three important economic roles in life. They contribute to the production of goods and services as workers, use the results of production as consumers, and make economic decisions as voting citizens. Business education is concerned with the preparation of individuals for all three roles. This policy statement, however, is limited to the preparation of individuals to to function effectively as consumers.

A public relations program that is concerned with public attitudes and identifies the policies, procedures, and methodology of business education in terms of public interest is one of the major factors in a successful program in business education. Business educators must accept responsibility for developing sound, positive, and well-planned programs of public relations which interpret the many facets of business education in developing social values, economic literacy, and occupational competency.

Education in the basic skills of reading, writing, and computation is essential for individuals to function effectively in our competitive, democratic society. Application of these basic skills to life situations enhances effective consumership, economic survival, and quality of life. These basic skills are the foundation of economic, vocational, and academic proficiency.

A national concern is that schools must do a more effective job in teaching reading, writing, and computation. Many school districts and states have recently established minimum high school graduation requirements relative to basic skills. Busines education has both an opportunity and an obligation to continue to support the development of these competencies.

General education objectives, including these basic skills are an important and integral part of the business curriculum. Business educators are uniquely positioned to contribute to the teaching and application of basic skills.

We believe that business education courses and programs, because of their unique purposes, content, and design, make significant contributions toward student mastery of basic skills and their application to life situations.

Technologies are merging. Information processing is emerging from data processing and word procesing and becoming a part of a total integrated communications network, which continues to advance with telecommunications technology. The benefit of information processing is in the decreased length of time from the conception of an idea until the delivery of the finished product, which is the measured productivity of an individual.

The key challenge of office systems is the recognition that the growing trend toward the interconnection of technologies through telecommunications imposes a requirement for coordinating educational planning. As the primary purpose of office technology is to increase productivity of office personnel, they need to learn not one but a number of technologies, at least on a conceptual level. A major challenge to business education is the development of a curriculum to reflect the rapidly changing technology and its impact on society.

From a practical viewpoint, information processing can be thought of as performing two functions: (1) It provides management information for decision making (i.e., sales, production, and financial records and reports), and (2) it furnishes a mechanism for processing and communicating transactions.

These functions occur in an office. Technology speeds the process and makes the processing of words and data more efficient than was heretofore possible.

A distributed information processing system in an automated office represents a confluence of technologies. These may include interconnecting networks of microcomputers, intelligent terminals, and central computers.

The major thrust in business education is curriculum improvement in all of the major areas to ensure busines education programs include the most current information and activities. These areas are: basic business, secretarial administrative support, information processing, marketing and accounting. A sampling of the courses include: accounting, business communication, introduction to business, introduction to computers, keyboarding and typing.

Remarks

The strong linkage between the major thrust of business education and career education become evident as we think and talk about technological advances, the role of economics to consumers, functioning effectivelly in a competitive, democratic society and information processing.

SO YOU WANT TO START YOUR OWN BUSINESS

DECISION MAKING

MATERIALS/RESOURCES

"Examining Your Suitability As An Entrepreneur" Activity Sheet

"How To Start A New Business" Activity Sheet

"Advertising The New Business" Activity Sheet

"Becoming Familiar With Small Business Operations" Activity Sheet

Small Business Owners in Immediate Locality

DETAILS

LEVEL: Middle School/ Junior High

TYPE: Entire Class Small Groups

TIME: Three Class Periods On-Going

INSTRUCTIONAL OBJECTIVE

Students will be introduced to the concept of entrepreneurship by participating in a group activity in order to analyze the types of small business enterprises, the personal characteristics needed by a small business entrepreneur and the marketing and advertising skills needed to provide quality goods and services to clients.

PROCEDURES

PRIOR TO BEGINNING ACTIVITY

The teacher should contact community resource people from any of the following areas:

- Small Business Administration Offices
- General Business Services Offices
- Better Business Bureau
- Chambers of Commerce
- Junior Achievement, Inc.
- National Alliance of Businessmen
- Any other business organization within immediate area

All of these community resource people are engaged in activities related to the business world. Their expertise in discussing all phases of business ownership will be useful as middle school/junior high students are introduced to the concept of entrepreneurship.

It is also important to contact people who are presently engaged in small business operations.

- People who have purchased an existing business or company
- People who have started a business enterprise from scratch
- People who have purchased a franchise
- People who have taken over a family business operation

These people provide the reality base of what owning and operating a small business is all about.

ECONOMIC APPLICATION

PROCEDURES Continued

A display of products (can of dog food, automobile hub caps, picture frames, carpeting, bird houses, pizza) as well as signs, menus or business cards that denote businesses that provide goods and services can be displayed. This type of display helps students to better appreciate the diversity of goods and services that are used by the public as a result of business enterprises.

1. Begin the Instructional Activity by asking students to recall any type of business venture in which they have been engaged. Most students will respond in terms of the times whey they have been "employed" either for a single task or over a period of time. The following list of jobs that may be mentioned by the group are:

PET CARE

Feeding animals
Exercising animals
Grooming animals

LANDSCAPE WORK

Mowing lawns
Clipping hedges
Planting flowers
Raking and weeding
Watering gardens

HOME MAINTENANCE

Painting
Washing windows
Maintaining property

NEIGHBORHOOD JOBS

House/pet setting
Conducting garage/yard sales
Collecting for organizations

BABY SITTING

Caring for siblings
Caring for other children
Assisting in Day Care Center
Assisting in Head Start Program

MUSICAL JOBS

Playing an instrument
Repairing instruments
Performing in musical group
Demonstrating electronic equipment

MECHANICAL JOBS

Repairing bicycles
Servicing autos
Repairing clocks
Working with tools

NEWSPAPER DELIVERY

Delivering papers
Collecting payments
Soliciting new customers

CAR CARE

Washing cars
Cleaning car interiors
Changing tires
Cleaning trunk
Changing oil and filter

HOME CHORES

Cleaning
Doing laundry
Preparing meals

SOCIAL SERVICE JOBS

Working in political campaign
Polling citizens on issues
Conducting historical tours

SECRETARIAL JOBS

Answering telephone
Acting as receptionist
Filing materials
Typing correspondence

HEALTH RELATED JOBS

Working as an olderly in hospital
Conducting social activities
Working in a hospital gift shop
Assisting in a pharmacy/dentist office

FOOD SERVICE JOBS

Serving customers
Stocking shelves
Bundling groceries
Working at farm stands

ECONOMIC APPLICATION

CRAFT JOBS	SPORTS JOBS
Designing greeting cards	Collecting tickets at events
Making puppets	Caring for athletic equipment
Creating seasonal gifts	Writing articles for events
Illustrating for school paper	Cheerleading

2. Point out that most of the jobs mentioned can be classified in the "services". In most instances the individual has a skill, talent or interest in a particular type of "employment", lets others know of that skill, talent or interest and then performs a service for the customer/consumer for which he/she receives payment.

3. Explain to students that the economy is made up of people who PERFORM SERVICES as mentioned in procedure # 1 as well as the providing of many other additional services not mentioned here. In addition, the economy is also composed of people who PRODUCE GOODS. When either of these two objectives are considered by individuals for the purpose of making a profit, a SMALL BUSINESS is being created. A classic example is the lemonade stand.

   - There is a need for a product.
   - People share their skills to produce the product.
   - The product is sold to the customer.
   - Hopefully a profit is made.

   The lemonade stand is a very simplistic example. There are naturally many more steps involved in the process such as obtaining the materials, deciding upon a marketing and advertising strategy and then making decisions about who will make the lemonade and who will sell it (management and labor). But the example is one that most students can relate to because they may have either set up their own "lemonade stand" or bought lemonade from others.

4. Guide students to understand that large corporations exist in our country and around the world. These large enterprises handle vast sums of money and employ vast numbers of workers. However, many small businesses provide goods and services to these large corporations. The large corporation relies on the expertise of the small business enterprise to provide it with the things in needs to operate. A pictorial example is given below. This example shows a movement from the large automobile manufacturing corporation to the service station that will eventually be closest to the consumer in servicing and maintaining the life of the automobile.

GENERAL MOTORS

AUTO DEALERSHIP

TIRE STORE

AUTO ACCESSORY STORE

SERVICE STATION

5. Explain to students that certain countries and parts of the world are recognized by the distinguishing characteristics of their economy.

ECONOMIC APPLICATION

PROCEDURES Continued

JAPAN	An economy based on electronic technology
ENGLAND	An economy based on an appreciation of historic sites
CARIBBEAN	An economy based on tourism
AMERICA	An economy based on the opportunity to own and operate small business enterprises or corporate ventures

NOTE TO TEACHER: Make sure that the students do not get a limiting view of different parts of the world but rather stress that the opportunity for people in America to buy, own and operate any small business or enterprise exists. This person who chooses this as their career is called an ENTREPRENEUR.

6. Point out that when they have been providing goods or services as indicated in procedure # 1 and receiving payment for same that they have been operating, to a degree, as an entrepreneur.

7. Explain to the class that this Instructional Activity is designed to give them an introduction to owning their own business.

8. Divide the class into small groups. Explain that each group is going to be asked to consider some aspect of entrepreneurship. Make sure that each group chooses a facilitator or group leader and also a scribe to record group ideas and decisions. Point out that in order for all groups to be focusing on the production of a product, the performing of a service or both, the class must first choose a single business enterprise for discussion purposes.

   Sample ideas are listed below:

ANTIQUES	Collection/Sales/Repair	Dealer
AUTOMOBILES	Sales and Service	Mechanic
BEAUTY SALONS	Sales and Service	Hairdresser
BOOK/CARD/TOY SHOP	Sales	Buyer
COMPUTER PRODUCTS	Sales and Service	Programmer
CRAFTS/HOBBY SHOP	Design/Production/Sales	Salesperson
FASHION SERVICES	Sales and Service	Modeling Instructor
FOODS	Sales and Service	Caterer
GARDENING	Planting/Harvesting/Selling	Nursery Owner
HEALTH AIDES	Sales and Service	Registered Nurse
HOSPITALITY	Service	Motel Manager
INTERIOR DESIGN	Sales and Service	Interior Decorator
LANDSCAPE	Service	Lawn Worker
LEARNING AIDES	Service	Educator
PRINTING	Sales and Service	Proofreader

ECONOMIC APPLICATION

SPORTS EQUIPMENT	Sales and Service	Retail Store Owner
TRAVEL	Sales and Service	Travel Agent

9. Distribute the Activity Sheets entitled "Examining Your Suitability As An Entrepreneur", "How To Start A New Business" and "Advertising The New Business". Explain to students that their responsibility will be to discuss, research and create solutions or positions regarding their small group business topic.

10. Make provisions for people from established small businesses in the community to act as "consultants" and sources of information for the small groups. These people should represent small businesses whose circumstances are outlined in this Instructional Activity:

    - Buying an existing business
    - Starting a business from scratch
    - Buying a franchise

11. Arrange for the community resource person to begin the series of small group meetings (number of meetings to be determined by the interest and background of the students) by sharing his/her experiences in small business enterprises.

12. Provide the small business owner with a series of questions that will serve as the basis for opening remarks in working with the small groups. A list of questions are provided in the Activity Sheet entitled "Becoming Familiar With Small Business Operations".

13. Encourage the small business owners who visit the classes to bring in samples of their products and advertising/promotional materials to share with the small groups.

14. Act as a facilitator for each group session making sure that the groups are able to gain enough information to address the topics provided on their Student Activity Sheets. There will be more information provided by the "consultant" than what has been addressed in the content of this Instructional Activity but that is to the advantage of the students. Some groups will probably get to a point where they will be discussing start-up costs and continuing costs. Some groups may even begin to draw up a financial plan with their "consultant". All this type of extension of the material provided here is to be encouraged.

15. Culminate by having each group report to the entire class with the assistance and support of their "group consultant". Arrangements should be made to record all decisions reached on tape or via video cassette recordings.

ECONOMIC APPLICATION

STUDENT ACTIVITY SHEET

BECOMING FAMILIAR WITH SMALL BUSINESS OPERATIONS

Our class is beginning an introductory study to the concept of entrepreneurship. We are learning about the various considerations necessary for a person who wishes to make his/her career in small business enterprises.

As you visit our class and share your business experiences with us, the following questions are those which would be useful to us as we plan for our own "business". Answers to these questions would be very much appreciated.

- What were among the deciding factors that caused you to become a small business owner?
- What is the type of product or service that you provide for the public?
- How long have you been operating your own business?
- Where is your business located? Are you satisfied with your location? What affect do you think location has on successful business practices?
- Did you work for a corporation or company prior to owning your own business? If so, what type of work did you do and why did you decide to go into business for yourself?
- What do you consider to be the greatest advantages in owning your own small business?
- What drawbacks do you find in small business ownership?
- What advice do you have for young people who hope someday to continue a family business enterprise?
- What are some of the advantages in buying a franchise?
- What drawbacks can sometimes arise when owning a franchise?
- Have you employed others to assist you in your business operation? If so, how many and what tasks do they perform?
- What is your opinion of a business partnership?
- What types of qualities do you think a person should consider when choosing a business partner?
- How do the services of bankers, attorneys and manufacturers affect the small business owner?
- Describe the services provided to the owner by the Small Business Administration.
- What do you think the future economy holds for a small business owner?
- What types of products and services do you feel will be needed for life in the 21st century?
- What advice do you have for young people who may be considering a career in small business as the world approaches the 21st century?
- If a person owned a seasonal small business, how would you recommend that he/she spend the time given in the "off" season? Take another job, refurbish the property, create new products etc?
- What types of educational skills are imperative for success in a small business?
- How does small business ownership affect retirement?

ECONOMIC APPLICATION

DEVELOPED BY PROJECT BICEP, BARNSTABLE PUBLIC SCHOOLS

BECOMING FAMILIAR WITH SMALL BUSINESS OPERATIONS - CONTINUED

- How does small business ownership affect a person's leisure time?
- What types of situations should be avoided at all costs when operating a small business?
- What type of advertising have you found to be most successful in your business and why?
- How does the national economy affect the small business owner?
- How does the state or federal government affect the small business owner?

ECONOMIC APPLICATION

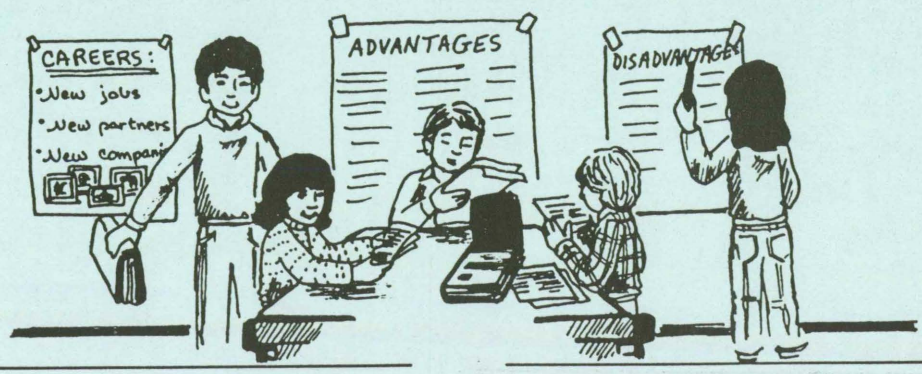
STUDENT ACTIVITY SHEET

EXAMINING YOUR SUITABILITY AS AN ENTREPRENEUR

Everyone who goes in business for him/herself must realize that there are both advantages and disadvantages in working for yourself.

Based on your research list below the advantages and disadvantages associated with starting your own business.

ADVANTAGES	DISADVANTAGES



ECONOMIC APPLICATION

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STUDENT ACTIVITY SHEET

EXAMINING YOUR SUITABILITY AS AN ENTREPRENEUR - CONTINUED

Consider your assets as a group. Are you...

CHARACTERISTICS	MOST OF THE TIME	OCCASIONALLY	SELDOM
Confident in your ability to make the business successful?			
Creative with ideas so you could make an ordinary product or service into a sales success?			
Willing to work hard and persevere in being successful?			
Able to follow through on ideas and actions?			
Able to weigh all sides of an issue and then take a risk based on your goals?			
Knowledgeable enough to explain your product or service to others with confidence and credibility?			
Able to interact effectively with others?			
Knowledgeable about the financial obligations associated with opening your own business?			

ECONOMIC APPLICATION

STUDENT ACTIVITY SHEET

EXAMINING YOUR SUITABILITY AS AN ENTREPRENEUR - SUGGESTED RESPONSES

Everyone who goes in business for him/herself must realize that there are both advantages and disadvantages in working for yourself.

Based on your research list below the advantages and disadvantages associated with starting your own business.

ADVANTAGES

An entrepreneur can find a lot of personal satisfaction in doing something that is enjoyable and where he/she can be successful.

An entrepreneur can be independent. He/she makes "all the rules". His/her judgments are made without having to seek the approval of others.

An entrepreneur can realize a profit from the business. Naturally the more effort expended the greater the income.

An entrepreneur can usually enjoy more job security than when working for someone else.

Layoffs, transfers and firing doesn't occur for an entrepreneur or owner.

Entrepreneurs who are hard working honest people are usually well respected in their own line of work and in the community.

DISADVANTAGES

There is always the risk of financial failure if the business doesn't move in the direction for which it was intended.

Frequently there are "slow" periods financially. A worker who is employed by a company or agency can rely on a regular salary. This is not always the case in a small business. One frequently has to work harder "to make ends meet" , particularly when first starting out.

Owning your own business means working longer hours since there may be limited capital to hire additional workers. A regular business person can usually count on a specified number of work hours for the day and week.

Owning your own business requires a person who can perform both labor and management type tasks. Paper work, billing, taking inventory and marketing the product or service are just some of the many tasks.

STUDENT ACTIVITY SHEET

HOW TO START A NEW BUSINESS

There are several ways to begin a business enterprise, all of which require a business plan. The plan should consider the following:

- source of capital
- location of business
- products of business
- competition
- management skills
- personnel needed

As you begin your new business determine how much capital you will need.

Where will you obtain the needed capital?

What will the money be used for?

- Buying an already existing business
- Starting a business from scratch
- Buying a franchise

Determine whether those costs are one time or continuing costs:

Expense	Start Up Cost	Continuing Cost
Inventory/Equipment		
Materials For Products or Services		
Rent or Mortgage Payments		
Utility Expenses		
Licenses/Permits		
Advertising, Sales, Distribution Costs		
Unexpected Costs		
Taxes		
Salary, Wages For Personnel		
Repairs and Maintenance Costs		

ECONOMIC APPLICATION

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STUDENT ACTIVITY SHEET

HOW TO START A NEW BUSINESS - SUGGESTED RESPONSES

APPROACH	ADVANTAGE	DISADVANTAGE
Buying An Existing Business	Customers are already familiar with the goods and services provided. A record of past sales, expenses and profits is available to the new owner. This information helps in planning for improved goods and services or helps in eliminating waste or non-profitable actions. The location (building, shelving, utilities, parking facilities, advertising signs, etc.) have already been established. This saves the new owner the time and effort usually expended in determining an appropriate location and outfitting that site for business operations. Financial institutions in the community already have knowledge of the enterprise. This facilitates a greater ease for business transactions by the new owner. In some businesses there are already established employees. These people can be helpful to the new owner as he/she does not need to train new people at the outset.	There may have been some problems (financial or in the delivery of goods and services) with the previous owner. The previous owner may be selling because of proposed or real competition from other similar enterprises in the area. The location may be major stumbling block to profit making. Traffic congestion, parking meters, isolation from other thriving enterprises can all affect sales. The site may be in need of repair. Stock may be depleted or be affected by weather conditions, aging or careless management.
Starting A Business From Scratch	The challenge of creating an idea, planning for its implementation and working toward a successful enterprise is rewarding for a person with drive, know-how and initiative.	There is no already established business to aid in making decisions about future directions for the enterprise.

ECONOMIC APPLICATION

STUDENT ACTIVITY SHEET

HOW TO START A NEW BUSINESS - SUGGESTED RESPONSES

APPROACH	ADVANTAGE	DISADVANTAGE
	Starting a new business from scratch allows the new owner to make all the decisions and thereby create the business according to his/her own image and goals. Decisions regarding: Location Layout of facility Personnel Capital	All decisions regarding sales, inventory and profits must be estimates because no prior records exist. New accounts and customers must be established through innovative advertising and promotional strategies. There could be problems in obtaining sufficient capital for operating costs. All tasks related to establishing a new business take time!
Buying A Franchise	A definite advantage is the authorization to use an established brand name, image (logo). The owner of the franchise provides management training for the new owner and his/her company. Favorable credit opportunities are common because of the established reputation of the franchisor. Franchised businesses have usually been established over an extensive period of time. The advice given and the operating procedures provided are the result of trial and error and a continuing desire to provide goods and services.	There can be image problems especially if the franchisor has not been successful. Also many similar types of businesses are franchised such as fast food operations. As new ones appear on the consumer horizon, more established business enterprises can either maintain the credibility with the customer or can be placed in a lesser position by a newcomer. Control limitation such as the hours that the business can remain open, the types of products sold or the services rendered and limitations of image all can make the new owner feel that he/she is not working for himself. Fees for using the names and logos may be prohibitive.

ECONOMIC APPLICATION

STUDENT ACTIVITY SHEET

ADVERTISING THE NEW BUSINESS

The need to market your business and promote a favorable image as well as build goodwill within the business community is one of the most important considerations for being a successful entrepreneur. Advertising is the key to sales and sales result in profits.

As a group your task is to choose two items from those provided and design samples that will advertise your product. Keep in mind that you want to provide the most innovative advertisement possible but also keep within a reasonable budget while reaching your intended audience.

Business Card

Advertisement in Business/Classified Section of the Telephone Book

Brochure Explaining Products and Services

Distribution/Delivery Vehicle Design With Logo

Open House Flier

Booth Design For Trade Show (including free sample handouts)

Full Page Grand Opening Announcement in Newspaper or Magazine

Television or Radio Commercial

Consider the following items as you plan your sample designs.

Choice of Graphic Designer (Advertising Team)

Cost for Designer Services

Audience To Be Reached by Advertisement

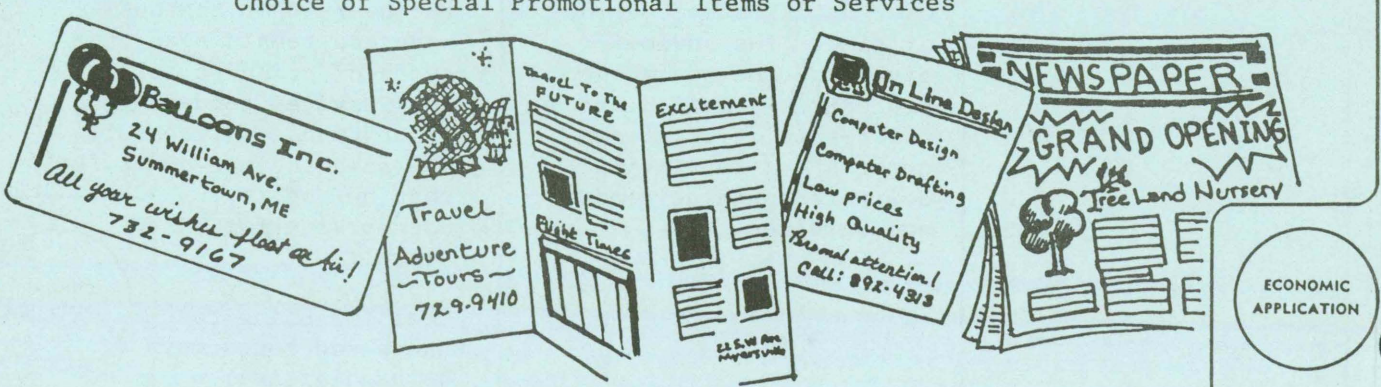
Costs for Mailing Printed Advertisement

Costs for Distribution of Printed Advertisement

Choice of Paper/Lettering Style/Color/Illustrations or Photography

Copy for Printed Advertisement

Choice of Special Promotional Items or Services



ECONOMIC APPLICATION

SUPPLEMENTARY RESOURCES

TEACHER

Brown, Deaver. The Entrepreneur's Guide. New York, NY: MacMillan Publishing Company, Inc., 1980.

What's It Like To Work In The Business World? Fairfield, CT: General Electric Company, Communications Department.

STUDENT

Petteruto, Ray. How To Open and Operate A Restaurant. New York, NY: Van Nostrand Reinhold Company, 1979.

Sullivan, George. How Do They Package It? Philadelphia, PA: The Westminster Press, 1976.

Ullman, James. How To Hold A Garage Sale. New York, NY: Charles Scribner's Sons, 1973.

FOLLOW-UP ACTIVITIES

Students from the small groups may be invited by the "group consultant" to visit his/her small business operation. Such invitations should be considered by the instructor as they will help to recall learnings and provide another viable career alternative for some students.

Students may wish to establish their own small business. Working in conjunction with the Business and Accounting Departments within the school, the Visual Arts Department, Math and Industrial Technology instructors, a group of students could plan and execute a small business operation. These types of activities are frequently supported by such enterprises as Project Business and Junior Achievement. Also Rotary International is a civic organization that is very willing to offer assistance in such a learning experience. School personnel and interested students may wish to seek their support.

TEACHER'S NOTES

ECONOMIC APPLICATION

HEALTH

The following information on health has been abstracted from the 1982 DPI guide: A Tool for Assessing and Designing Comprehensive School Health Education.

Comprehensive school health education is a continuous process which enables the student to assume individual responsibility for developing and maintaining personal attitudes and behaviors which promote total wellness.

Health education consists of two primary components, namely health and education. Health is not a fact, but a unified, generalized, and comprehensive concept with physical, mental, cultural, spiritual values, emotional, and social dimensions. It is a continuum from high level wellness to illness and death. It encompasses knowledge, attitudes, feelings, and practices concerning interaction among individuals, the family, peers, the school, and the community. Education is fundamental for wise decision making in all fields of human endeavor; however, with increasing numbers of social and cultural forces, options, and persuasive influences affecting the quality of life, its importance in matters pertaining to personal well-being is more apparent. Health education is therefore a vital part of every school program. Personal and social goals of modern society, as well as the wise use of human resources, depend upon the linkage of health and education for the well-being of persons and their communities.

It is important to develop a program which helps students to: a) identify which personal and community health goals are appropriate in their communities; b) learn to make decisions about matters affecting their health; and c) act upon their decisions. A health education program based on these concepts is student-centered rather than content-centered.

Comprehensive school health education should:

- -consider ways of preventing individual physical, emotional, and social health problems while concentrating on wellness for all;
- -be designed to promote and develop positive attitudes and practices toward the solution of public health problems;
- -include instruction in the major areas of physical health, social health, mental health, environmental and community health, and education for life skills;
- -be developed and evaluated through cooperative planning by educators, students, parents, and other community members;
- -be based upon current and scientifically accurate health information;
- -provide the link between health information and health practices;
- -be a carefully planned and coordinated K-12 program including direct and correlated instruction in the total school offering;
- -focus on the positive aspects of wellness and not be totally centered on the study of health problems;
- -facilitate the exploration and use of innovative and creative instructional methods which actively involve students in the achievement of established objectives.

Three process goals are directed toward the fostering of skills that promote optimal growth of learners. They provide opportunties for self-actualization and motivate the student to develop values. The local comprehensive health education program should be planned and evaluated to enable students to grow in self-awareness, to develop skills for effective decision-making, and to grow in coping behavior.

1. Self-awareness. The students should be provided opportunities to develop a positive sense of identity and self-esteem.
2. Effective decision-making skills. Such process skills involve the ability to recognize and clarify problems, to reason critically and creatively in developing and evaluating alternative solutions, and to choose and affirm solutions based on a system of values.
3. Coping behavior. Coping behavior has to do with the ability of the individual to get along effectively in the world. To cope effectively means not only to possess the competencies to deal positively and creatively with life situations, but also to be open or accepting of new experiences, to interact in resolving problems including actively seeking professional advice and assistance, and to participate through social action in the planning of new environments.

A comprehensive school health education curriculum should be based on clearly identified student outcomes in each of the following content areas.

1. personal health
2. food and nutrition
3. environmental health
4. safety and survival skills
5. consumer health
6. family life
7. substance use and abuse
8. emotional and social health
9. prevention and control of desire
10. health resources and careers

Remarks

After reviewing the major thrust of health and the seven career education domains, it is very hard to separate these areas, due to the fact that self-concept, interpersonal relations, decision-making, work attitudes and values, and the role of self and society are heavily impacted by a person's health and most health related issues.

SMART SNACKS

MATERIALS/RESOURCES

Variety of Nutritional Snacks

Bulletin Board Space

"Smart Snacks" Chart

Paper Products

Plastic Eating Utensils

Toothpicks

DETAILS

LEVEL: Intermediate

TYPE: Entire Class
Small Group

TIME: Three Class Periods

INSTRUCTIONAL OBJECTIVE

Students will begin to understand the differences between junk food and nutritious food and learn to make proper snack choices.

PROCEDURES

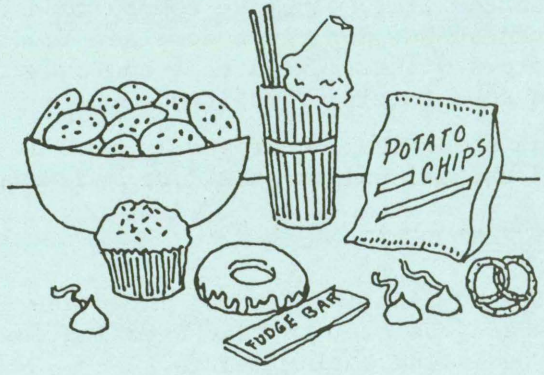
PRIOR TO BEGINNING ACTIVITY

A section of the classroom should be reserved for snack food packages and pictures. This may require a bulletin board space and accompanying shelf or table. The teacher may wish to put up a caption which invites students to bring in empty packages from things they most enjoy as snack foods. If students frequent fast food restaurants for snacks, sample menus could also be brought in and displayed on the bulletin board. At this point, no distinction should be made about nutritional value of foods chosen. Encourage all students (including the teacher) to bring in sample packages or pictures. When a sufficient number have been accumulated, the teacher is then ready to begin the lesson.

FIRST CLASS PERIOD

1. Explain to students that they are going to be asked to keep a record of all the snacks they eat over a period of two weeks (including weekends) using the "Smart Snacks" Chart (see Student Activity Sheet).

2. Distribute chart to class. Instruct students to begin recording snack foods on the day of instruction, thereby



NUTRIT.

establishing the pattern which will continue over a two-week period. Students should indicate quantities eaten whenever possible (two chocolate chip cookies or one box of popcorn). Remind students to place chart in a convenient spot for recording information.

PRIOR TO SECOND CLASS PERIOD

Teacher should make arrangements to have a classroom speaker. Choices to enhance this activity could include:

- School food service manager
- County extension service nutritionist
- School nurse
- Pediatrician
- Registered dietary consultant

Emphasis of the speaker's remarks should be that of discussing with the class the definition of junk food: food that lacks proper vitamins and nutritional value to make your body grow and stay healthy.

Examples of "junk food" snacks might include:

- candy bars
- sugar coated cereals
- potato chips
- ice cream
- doughnuts
- cookies

The speaker could also be asked to present alternative choices for nutritious snacks; for example, low fat yogurt instead of ice cream, whole grain cereals that are not sugar coated, cheese, fruit, nuts, raw vegetable sticks, homemade cookies or cakes made with whole grains, skim milk powder and decreased amounts of sweeteners.

SECOND CLASS PERIOD

3. Host speaker that is selected. Allow students to ask questions. Encourage a discussion about sample packages and pictures that have been on display in the classroom. Share student "snack" chart assignments with the speaker.

PRIOR TO THIRD CLASS PERIOD

Make arrangements for a snack tasting party. The classroom resource speaker may wish to assist in this process as well as the school food service manager. Parents may also be asked to donate a small amount of food for the occasion. Time arrangements for the party should be at the discretion of the teacher, making sure that cafeteria meals do not conflict. Include common foods, such as raw vegetables and fruits, low fat cheeses, but introduce some new foods, such as whole grain crackers or breads, popcorn without extra salt and butter, less familiar nuts, fruits, vegetables and perhaps some foreign food items.

Finger foods should be encouraged as much as possible for ease of serving. Ingredients for new and unusual snacks should be made available to students.

THIRD CLASS PERIOD

4. Conduct snack tasting party. Encourage students to sample as many unfamiliar choices as possible, thereby breaking down barriers associated with already existing eating habits.

5. Discuss the advantages of the food choices presented at the tasting party: low fat, sugar and salt levels, whole grains for bulk in diet,

NUTRIT.

STUDENT ACTIVITY SHEET

SMART SNACKS

	FIRST WEEK	SECOND WEEK	
SUN.			SUN.
MON.			MON.
TUES.			TUES.
WED.			WED.
THURS.			THURS.
FRI.			FRI.
SAT.			SAT.

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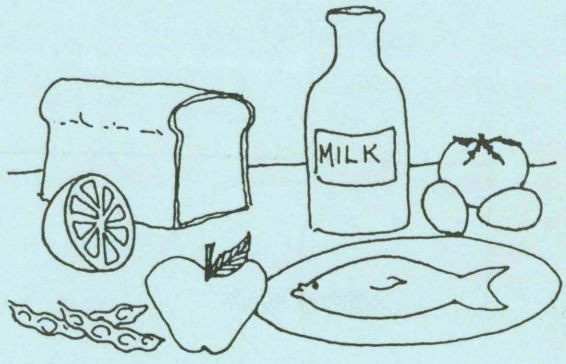
PROCEDURES Continued

raw fruits and vegetables give good exercise for teeth and gums and have, generally, more vitamins than when cooked. Relate the items sampled to the packages and pictures brought in several days earlier. Allow students to reach personal conclusions rather than forcing new eating patterns on them.

6. Ask students to bring from home their "Snack Charts" at the end of the two week period. Encourage students to bring in any sample packages of new snack foods. Names do not need to be recorded on charts unless student desires it to be there.



7. Allow students to anonymously substitute snack packages and pictures if improvement is evident in choice of food. No student should be put in an uncomfortable situation because of food choices.

8. Arrange for those students who desire to share changes that are evidenced through the chart with their classmates.

SUPPLEMENTARY RESOURCES

TEACHER

Health and Physical Education: Who Needs It? Philadelphia, PA: Counselor Films, Inc., (BICEP 4029E).

Nutrition Action Pack. Oak Brook, IL: McDonald's Corporation, 1977 (BICEP 3155).

Nutrition. Newark, Delaware Career Education Program, Grade 5, 1976, pp. 190-198. (BICEP 1040).

What's A Body To Do? Basic Skills Activity Cards: Reading, Writing & Fitness. Shurr, Sandra. Nashville, Tenn: Incentive Publications, Inc., 1979 (BICEP 3328).

TEACHER AND STUDENT

Adventures in Reading, Writing and Eating. Bloomfield Hills, MI: Sandra Schurr Publications, 1977 (BICEP 9216).

FOLLOW-UP ACTIVITIES

Students might survey snack items served in school cafeteria and discuss the possibility of eliminating those least nutritious.

Students' snack choices and diet charts might be displayed for the entire school and a tasting party might include other classes.

Students might wish to record times of day when most of their snacks are eaten.

Individual students may wish to interview people in the community who counsel others in matters of diet control.

TEACHER'S NOTES

NUTRIT.

HOME ECONOMICS

Home economics has identified instructional strands that carry through all of its content areas. They are: human development and relationships, management and consumerism, and employability. Currently a home economics curriculum cadre is examining indepth these instructional strands in relation to the suggested home economics curriculum.

The following chart outlines three programs of instruction which lead to an employable skill. The chart will also provide a skeleton of the suggested courses in food service, child care and human relations and interior decoration and home furnishings.

After reviewing the course titles in the chart, it can be easily identified that here again the seven career education domains have countless ties with home economics. For example, how do you discuss and learn about children without giving consideration to self, interpersonal relations and decision making. The area of Foods Service has lots of implications for economics and occupational knowledge. In interior decoration and home furnishing you begin to see how we project our feelings about self and express our work attitudes and values.

EXAMPLE

Grade	Food Service	Child Care & Human Service	Inter. Decoration/Home Furn.
13 & 14	Immediate Employment or Post-Secondary Ed. or University	Immediate Employment or 120 hour short term Adult Homemaker Home Health Aide Services Course, then Employment. or Post Secondary Ed. or University	Immediate Employment or 2 Yr. Post Secondary Ed. (Survey of Interiors I, II, III; Home Furnishings I, II; Textiles; El. Drawing; Window Treatments, Kitchen & Bath Plan.; Color in Interiors; Interior Analysis & Design; Decorative Access.; Design Relations; Business Internship & Seminar) or University
12	Commercial Foods & Related Instruction Work Exper. and Home Economics Elective or World Foods, Gourmet Foods, & Special Diets	Human Care Ser. and Related Instruction & Work Exper. and Home Economics Elective or Family Living & Parenthood or Basic Aspects of Aging	Home Furnishings and Related Instruction & Work Exper. and Home Economics Elective or Housing & the Environment or Advanced Home Furnishings
11	Advanced Foods and World Foods, Gourmet Food & Special Diets or Home Economics Elective	Chid Development and Family Living & Parenthood or Basic Aspects of Aging or Home Economics Elective	Home Furnishings and Housing & the Environment or Home Economics Elective
10	and Basic Foods & Nutrition	Consumer Economics and Management and Basic Foods & Nutrition	and Basic Textiles & Clothing
9	Comprehensive Home Economics (semester or year) and/or Personal Development and the World of Work (Interpersonal relationships; management of time, money, energy and other resources; careers; decision-making; employability qualities and skills) (semester or year)		

SUPERMARKET SHOPPING TIPS

MATERIALS/RESOURCES

Twelve Pieces of Construction Paper
Magazines, Two Rings
Magic Markers
Slides or Pictures of Supermarket
Three Boxes Macaroni and Cheese
Three Packages Paper Towels
Three Cans of Corn
Paper Plates
Appliances and Utensils in Foods Lab
"Supermarket Shopping Tips" Activity Sheet
"Comparison Shopping Chart" Activity Sheet
"Shopping Survival Kit" Activity Sheets

DETAILS

LEVEL: Middle School/ Junior High

TYPE: Entire Class

TIME: Two Class Periods

INSTRUCTIONAL OBJECTIVE

Having discussed supermarket sales and advertising techniques and the role of the consumer, each student will be able to make better informed consumer decisions when food shopping.

PROCEDURES

PRIOR TO BEGINNING ACTIVITY

Teacher will prepare a Flip Chart illustrating supermarket shopping tips. The two major topics that it will illustrate are "How to Shop" and "How to Cut Costs". (See Student Activity Sheets.) It is suggested that the teacher take slides of a familiar supermarket, illustrating the layout and techniques that entice the consumer to buy certain products.

1. Begin activity by a general discussion about food shopping. Pose such questions as:

   - Who has the responsibility for food shopping in your family?

   - Where do your family members do the greater amount of their shopping?

     Convenience Store
     Supermarket
     Farm Stand
     Specialty Shops
     Other (elicit response)

   - Is the food shopping in your family done on a weekly, daily or as needs demand basis? Why?

   - Does your family have a food budget?

   - What changes in eating habits have occurred in your family due to increased food costs?

CONSUMER EDUCATION

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PROCEDURES Continued

- What changes in shopping habits have occurred in your family due to increased food costs?

NOTE TO TEACHER: Make sure that a discussion of this nature does not cause embarrassment to any student. Let responses be general enough to allow the privacy of the family to be honored and do not expect all students to respond.

2. Point out that rising food costs are a concern of all people in a 1980's economy. Mention how the media has tried to aid, inform and educate young and old to be better informed consumers.

   - Television time spots featuring best buys in meat, produce, seasonal foods
   - Nutrition tips for elder citizens in local and syndicated columns
   - Nutritional foods featured in weight loss programs, school curriculums and specialty stores
   - Consumer education tips in magazines and newspapers
   - Weekly print supplements in newspapers featuring "best buys", coupon redemption offers and specialty items.

3. Explain to students that the purpose of this activity is to introduce some alternatives that can assist them as well as their families in making better decisions when food shopping.

4. Distribute "Supermarket Shopping Tips" Worksheet. Discuss and read orally the introductory paragraph. Instruct students that their job is to summarize the information provided in their "Shopping Survival Kit" Packet and record on their student activity sheet.

   The following teacher discussion questions will aid in the discussion and summarization process:

HOW TO SHOP

	Discussion Questions
MAKE A SHOPPING LIST	- Does your family make a shopping list? - How do they go about it? - Why do people make shopping lists? - What unexpected things can happen when one does not make a list?
CHECK NEWSPAPERS FOR SALES AND COUPONS	- What is meant by double coupons? - Do you check the newspapers for sale items? - How do coupons entice the consumer? - How do supermarkets determine what will be a coupon item? - What shopping pitfalls can occur when one is a coupon clipper?

CONSUMER EDUCATION

HOME CANNING

- What skills does home canning require?
- What additional items have to be purchased in order to be a home canner?
- What are the benefits of home canning?
- What are some drawbacks with home canning?

5. Continue activity by showing slides of a supermarket operation. Do not draw any conclusions about the viewing except to suggest that students respond orally when a slide depicts a sales or advertising technique designed specifically to encourage consumer sales. Make sure the slides include some of the following situations:

   - Sales signs on store windows
   - Raffle items being displays
   - Brochures in a "giveaway" section
   - Stocking of shelves
   - Tasting tables
   - Manager greeting customers
   - Senior citizens baggers
   - Courtesy booth

6. Focus now on the differences between No Name, Brand Name and Store Name Products by discussing appearance, taste, labels and prices.

7. Conclude this portion of the activity with a discussion of a supermarket manager's point of view. Discuss the goals of a manager as well as the employment levels and the type of people that will work effectively in this setting.

PRIOR TO SECOND CLASS PERIOD

The teacher will buy three packages of macaroni and cheese. One should be a Brand Name (Kraft), another a Store Name (Ann Page), and lastly a No Name product. Also, the teacher needs to purchase three cans of corn and three packages of paper towels. (Please purchase same as macaroni, one of each brand.)

8. Divide the class into three lab units in the Foods Lab. One lab unit will receive all the "Brand Name" products. The second unit will receive all the "Store Name" products. The third unit will receive the "No Name" products. The macaroni and corn will be prepared as directed on the package. Each student will taste each product. The students will receive the "Comparison Shopping" Activity Sheet to compare taste, price, appearance, and nutritional value. After looking over their charts, the students will be able to choose a canned corn and macaroni and cheese that best fits the needs of their families.

   Each unit will test all three types of paper towels for strength. On the basis of strength and price, the students will choose a paper towel that they would buy in a store.

CONSUMER EDUCATION

PROCEDURES Continued

- Can people actually economize by saving coupons?

DON'T SHOP WHEN TIRED AND HUNGRY

- Have you ever gone shopping when you were hungry or tired?
- What happened?
- What types of situations can occur if people shop when they are tired or hungry?
- How do these situations affect nutritional purchases?
- How do these situations affect food budgets?

LEAVE CHILDREN AT HOME

- Why should young children be trained to be good consumers?
- What happens when young children are allowed to pick any items they want off the shelf and place them in the grocery cart?
- Why are some "popular kid foods" placed on lower level shelves in the grocery store or supermarket?

HOW TO CUT COSTS

BUY CHEAPER CUTS OF MEAT

- Are cheaper cuts of meat as nutritional for a person?
- Are cheaper cuts more frequently on sale?
- How can a single cut of meat be used in a variety of ways?
- What can you do to tenderize a cheaper cut of meat?

PREPARED VS. HOMEMADE

- Which is more expensive, homemade items or packaged items?
- Which tastes better (in your opinion)?
- Do people have the time to prepare homemade food items?
- Why do you think there is a greater emphasis on packaged items?
- Does the convenience of having bundle persons increase the overall prices of items at a supermarket?

BUY FRUITS AND VEGETABLES IN SEASON

- Is there apt to be a difference in taste of fresh fruits and vegetables?
- Why are some fruits and vegetables more costly at one season of the year versus another?

CONSUMER EDUCATION

PROCEDURES Continued

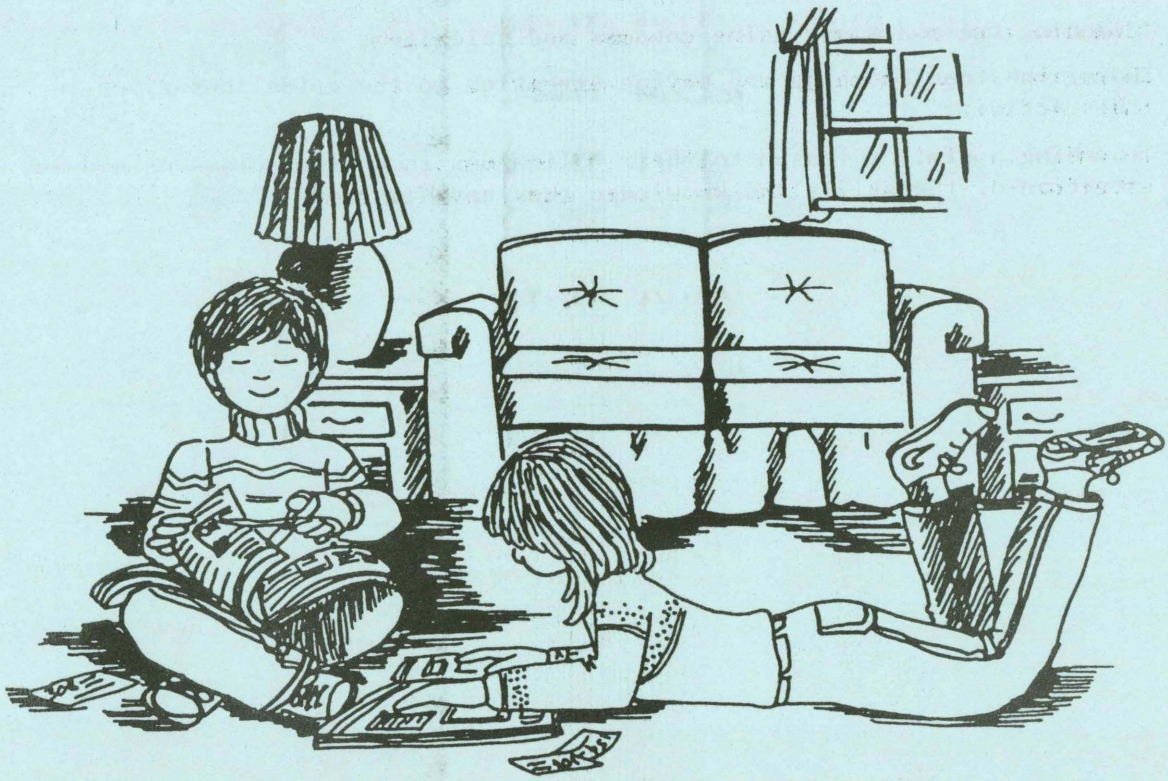
NOTE TO TEACHER: A way to evaluate the objective of this Instructional Activity would be to have each student control the food budget for a week's time either at home or in the home economics classroom by:

- Planning the meals and using coupons and sale items
- Doing the food shopping and paying attention to the guidelines given in this Activity.
- Teaching a similar lesson to their colleagues in another class as a demonstration of the skills and knowledge they have learned.

CONSUMER EDUCATION

STUDENT ACTIVITY SHEET

SUPERMARKET SHOPPING TIPS



Eating is more than a necessity. It is also one of life's pleasures. But today's high food costs can make shopping a chore, a burden and a costly experience. When food costs rise, it can create havoc with a budget because so much of the family income is spent at the supermarket. With a family at home that needs and demands meals that are nourishing and attractively prepared, it's a discouraging problem for the shopper. What can you do to become a more economical shopper? List below some pointers that were discussed in class.

HOW TO SHOP

HOW TO CUT COSTS

CONSUMER EDUCATION

DEVELOPED BY PROJECT BICEP, BARNSTABLE PUBLIC SCHOOLS

STUDENT ACTIVITY SHEET

COMPARISON SHOPPING CHART

DIRECTIONS: After looking, tasting and reviewing price and nutritional labeling on each of the food products, mark the following boxes labeled APPEARANCE, TASTE and NUTRITIONAL VALUE with #1 - Excellent, #2 - Good, #3 - Fair. Also include PRICE.

	APPEARANCE	TASTE	NUTRITIONAL VALUE	PRICE
MACARONI AND CHEESE				
KRAFT				
ANN PAGE				
NO NAME				
CORN				
GREEN GIANT				
ANN PAGE				
NO NAME				

DIRECTIONS: Mark the boxes below for price and strength using the #1 as excellent, #2 as good and #3 as fair. Also include price.

	PRICE	STRENGTH
PAPER TOWEL		
BOUNTY		
ANN PAGE		
NO NAME		

Now list the three products you would choose for your own family:

MACARONI AND CHEESE _____ CORN _____ PAPER TOWEL _____

CONSUMER EDUCATION

DEVELOPED BY PROJECT BICEP, BARNSTABLE PUBLIC SCHOOLS

SUPPLEMENTARY RESOURCES

TEACHER

Food Dollars and Sense. Prospect Heights, Illinois: Money Management Institute, Household International, 1981.

Hello World! A Careers Exploration Program, Food and Lodging Services. Palo Alto, California: Field Educational Publications, Inc., 1973 (BICEP 9152).

Nelson, Jo. Looking Forward To A Career in Home Economics. Minneapolis, Minnesota: Dillon Press, Inc., 1970 (BICEP 9106).

Planning To Eat? A Guide to Saving Time, Money and Energy. Orlando, Florida: Tupperware Educational Services, Dart Industries, Inc., 1979.

FOLLOW-UP ACTIVITIES

The teacher may wish to accompany a group of students to a supermarket to compare "no name, store name and brand name products".

The students may wish to cut out coupons that can be used by their parents for a two to three week period and keep an account of the money saved by using the coupons. It should be noted, however, that the coupons should only reflect items that the family actually uses, not random coupons that would not be normally purchased by family members.

TEACHER'S NOTES

CONSUMER EDUCATION

INDUSTRIAL TECHNOLOGY, K-12

Establishing the Basis for Instructional Technology on the Various Operational Levels (Elementary, Junior High/Middle School, High School)

Here attention is directed toward the needs that are common to certain groups within the school. These groups are referred to as subpopulations, and may be defined on the basis of age, maturity, occupational goals, special abilities, and interests.

Curriculum organization follows the school operational levels of elementary, junior high, and senior high school in order to more effectively meet the needs of these subgroups.

For these subpopulations, industrial technology plays a different role regarding cultural, technological, recreational, avocational, social and occupational functions. By identifying the needs of students in the various subgroups, one is led to develop a rationale that will meet those needs.

For example, on the elementary level it may be concluded that construction activities are needed to vitalize certain concepts in science or social science, or to acquaint students with types of work in certain career fields. The elementary teacher may incorporate construction activities in which these concepts must be applied and/or which give students experiences similar to those of workers in an industrial-technological career field. These are operational level goals that form the basis for further technological and career development.

As students mature, they need to explore and try their abilities in a variety of technological activities. They need to investigate interests and abilities, and test their self-concepts with respect to possible roles in the adult world. A well-designed industrial technology program provides exposure to a vast number of technical concepts, techniques, and occupations. it is for this reason that comprehensive exploration goals are recommended for industrial arts on the junior high school level.

Some students in the senior high school are ready to prepare for an occupation; others wish to continue to explore certain industrial-technical concepts in more depth; and still others need outlets for constructive and avocational interests. Selecting program goals for this level demands consideration of both breadth and depth of study in special industrial-technological fields.

"The Iowa Guide for Curriculum Improvement in Industrial Arts, K-12", provides a list of recommended goals for each operational level. Examples of expected outcomes are also presented to further define the goals and make them action oriented. The operational goals selected must be consistent with the general goals identified for the total program.

Elementary Industrial Technology needs to be infused into elementary curriculum. Thsi can be easily accommodated into any number of discipline areas. These activities should relate directly to the concepts of career education. In Chapter 7 a publication (Activities Incorporating Industrial Arts and Career Education Into The Elementary Curriculum) is listed that contains ninety activities and shows how they may be used in conjunction with other subjects and concepts taught in those areas.

"Suggested Programs of Instruction for Industrial Education", provides an overview of a logical sequence of organization relating to the cluster areas of manufacturing, construction, energy and power, transportation and communications covering grades six through twelve.

Industrial Technology Junior High/Middle School

Exploratory Industrial Technology courses will be offered at this level that will provide students with general knowledge and experience in the broad Industrial Technological systems of production, energy and power, and communications. This knowledge and experience will include but not be limited to: industrial organization, the enterprise system, materials and processing, basic computer applications and career and consumer education. The courses at this level may vary in length from 6-18 weeks and may be required of all students or elective depending upon the curriculum design of each school district.

Industrial Technology High School

Introductory and indepth exploratory courses will be offered at this level that will provide students with specific knowledge and experience in the five industrial clusters. This specific knowledge and experience will include but not be limited to an introductory and indepth understanding of: material processing and testing, computer requirements and application, research and development, secondary and postsecondary career opportunities, and the purchasing, use and repair of various products produced by industry. The courses may vary in length from 9-36 weeks and be required or elective depending upon the curriculum design of each school district.

Trade and Industrial Vocational Education High School

Vocational education courses will be offered at this level that will provide students with knowledge and skills in an occupational area within the five industrial clusters. These knowledge and skills will include but not be limited to: the understanding of the application of the related basic academic skills, entry level job skills, employability skills, actual on-the-job work experiences and an introduction to postsecondary vocational/technical programs. The elective vocational courses offered at this level may vary in length from one to three years. Some courses may be less than one year in length that includes teaching adequate skills for employment.

Remarks

Postsecondary plays a vital role in respect to careers in industrial technology and needs to be consciously kept in mind by secondary industrial educators wishing to contribute significantly to the K-12 career education program. A logical contribution that an industrial technology instructor may desire to make to the career education effort would be in addressing the domain of occupational knowledge followed by helping students determine the "right" program of courses to prepare for a specific career in industrial technology. A large number of students do not have a career goal in mind - and therefore, a serious program of study has not been determined. Teachers working with guidance counselors and the administration can create processes which could help students become more aware of careers and the preparation needed to obtain entry into these careers.

Another suggestion where a strong contribution can be made by an industrial technology teacher might be to assist elementary teachers in implementing activities which will help their students learn about technology and gain awareness of jobs in industry and insights into how industries function.

AN INVENTORS' CONVENTION

ATTITUDES TOWARD DIGNITY OF WORK

MATERIALS/RESOURCES

Microphones
Tape Recorder - Cassette
American History Textbooks
Reference Materials on Inventors
Inventors' Chart
3" x 8" Index Cards

DETAILS

LEVEL: Middle School/ Junior High

TYPE: Entire Class/ Individual

TIME: Three Class Periods Ongoing

INSTRUCTIONAL OBJECTIVE

Students will realize how American inventors worked to advance United States society by simulating an inventors' convention.

PROCEDURES

1. Begin activity by discussing the fascination associated with inventions:
   - People are creative enough to invent or devise new things.
   - The world around us is constantly changing due to technological inventions.
   - Usually an inventor is instantly thrust into a world of fame when he/she has created something new and useful.
   - Many inventions have "movable parts" which are a natural curiosity.
   - Inventors can come from every walk of life (science, music, medicine, education, etc.).
2. Brainstorm with the students for new inventions that have been created in their lifetime:
   - computer games
   - transistor radios
   - non-flammable clothing
   - cures for diseases
3. Indicate how this invention has changed their lives. Make a chart to resemble the following on the chalkboard.

FAMOUS PEOPLE

Invention	Inventor	Purpose of Invention	Change That Has Occurred Due To Invention

Have students provide oral responses to complete this chart. Note that the chart can be left on the chalkboard over a period of time so that information can be added.

4. Point out to the class that often times we take inventions or new ideas for granted in our everyday life, but somebody had to actually originate the idea or design.

   Point out to class the imagination needed to come up with sometimes seemingly simple inventions to very complex inventions that have completely changed people's lives. How exciting it would be to actually speak to the inventors and ask them questions about their ideas! How did they come up with the idea? How long did it take to design the idea or item? Was it successful right away? What obstacles had to be overcome?

5. Explain to class that during this activity they will actually talk with the inventors through the magical technology of communication. The classroom will be transformed into an American Inventors Convention. Roving reporters will be present to get on-the-air interviews with the inventors. Some of the questions that may be asked will be what the class just discussed. Most of the students will be the inventors preparing to answer the questions asked by the reporters.

6. Draw from students a list of inventors with whom they are familiar. Record list on the chalkboard while simultaneously encouraging students to add to the list by finding out about other creative minds that have added to our lifestyle, comfort, adaptability and provided an end to some menial chores or tasks.

7. Assign an inventor to each student or team of students for the purpose of researching additional information about the person.

8. Review note-taking skills in order to do research. Distribute 5"x8" index cards having students record the categories of information needed to be found out about the inventor. The categories are as follows:

   Birth Date and Place

   Education

   Mentors

   Invention

   Process of Discovery

   Society's Need for Discovery

   Society's Acceptance of Discovery

   Personal Qualities

9. Explain the process of interviewing inventors. Each student will represent a separate inventor. A 5"x8" index card will designate each inventor. Reporters (two or three students at one time) will visit the inventor's booth.* The classroom will be set up as a Convention Hall. A narrator will welcome all inventors and reporters. Each inventor will be interviewed by a roving reporter. Tape recorders and microphones will make the interviewing process more realistic (as on televised news programs) but they are not absolutely necessary.

10. Stress the need for thorough research in order that the "inventor" be able to answer all questions with clarity and accuracy.

11. Invite other classes to attend the "Convention". Also encourage students to produce or create their own inventions as well as playing the role of someone who has already become famous.

VARIATIONS

Create a newspaper/magazine of inventions that have advanced American life. Include interviews, information about the inventions, and pictures.

List all the occupations that are associated with the inventions being researched. A sample list could include:

INVENTION	INVENTOR	RELATED OCCUPATIONS
Salk Vaccine	Jonas Salk	Laboratory Technician Nurse Doctor Hypodermic Needle Manufacturer Federal Food and Drug Inspectors Printer for Prescription Pads
Electric Light	Thomas Edison	Electrician Lamp Maker Paper Package (for placing bulbs in stores)

*The booth should contain as much support material as possible. Illustrations or charts of the invention will lend credibility to the setting. Books or articles about the inventor and invention can also be on display. Encourage creative displays as are often set up at conventions and exhibits.

SUPPLEMENTARY RESOURCES

TEACHER AND STUDENT

Feldman, Anthony and Gunston, Bill. Technology At Work. New York, NY: Facts on File, Inc., 1980 (BHS).

Manchester, Harland. Trail Blazers of Technology, The Story of Nine Inventors. New York, NY: Charles Scribner's Sons, 1962 (BHS).

FOLLOW-UP ACTIVITIES

Students are to design their own invention and are able to explain why it is needed to advance society.

Students are to list all the inventions that are in their homes and compare them in class.

Students are to name their three most important inventions and explain why they're so important to them. A comparison could be made with their parents. Analyze if there are any sex roles based upon favorite inventions.

Invite an inventor into the classroom to tell about his/her accomplishments.

Invite people in jobs associated with inventions in to discuss jobs.

Have students name the "worst inventions" and tell why they consider it that way (harmful to society).

TEACHER'S NOTES

FAMOUS PEOPLE

LANGUAGE ARTS

The technology created in todays communications revolution will be used by people, and it is the education of these individuals that commands attention. Language—written and spoken, heard and read—is central to that education. Competence in language serves a variety of purposes: accomplishing the business of daily life, communicating attitudes and ideas, expanding thought, and informing the imagination.

Because language skills are interrelated, it is not possible to isolate them in practice, even though here they are outlined separately. Moreover, while this statement includes outcomes in reading, writing, speaking and listening and observing as part of the study of language arts, it is evident that such abilities are important to and should be developed in every subject. Although literature, language, and composition may be the special province of language arts, competence in writing, for example, pertains to all academic disciplines. Thus, skill in writing should be developed in other subjects as well as in language arts.

OBSERVATION

The language arts skill of observing or inspecting through directed analytical attention needs to be consciously and deliberately taught. The act of observing assists students in identifying real and unreal situations and enable students to become increasingly independent. Good observation skills help students expore facts, make inferences and form judgments through casual and critical viewing. Observing is a key skill essential in all disciplines especially for reading, writing, speaking and listening and language development.

READING

The ability to identify and comprehend the main and subordinate ideas in written work and to summarize the ideas in one's own words.

The ability to recognize different purposes and methods of writing, to identify a writer's point of view and tone, and to interpret a writer's meaning inferentially as well as literally.

The ability to separate one's personal opinions and assumptions from a writer's.

The ability to vary one's reading speed and method (survey, skim, review question, and master) according to the type of material and one's purpose for reading.

The ability to use the features of books and other reference materials, such as table of contents, preface, introduction, titles and subtitles, index, glossary, appendix, bibliography.

The ability to define unfamiliar words by decoding, using contextual clues, or by using a dictionary.

WRITING

The ability to conceive ideas about a topic for the purpose of writing.

The ability to organize, select, and relate ideas and to outline and develop them into coherent paragraphs.

The ability to write Standard English sentences with correct:

-sentence structure;
-verb forms;
-punctuation, capitalization, possessives, plural forms, and other matters of mechanics;
-word choice and spelling.

The ability to vary one's writing style, including vocabulary and sentence structure, for different readers and purposes.

The ability to improve one's own writing by restructuring, correcting errors, and rewriting.

The ability to gather information from primary and secondary sources; to write a report using this research; to quote, paraphase, and summarize accurately; and to cite sources properly.

SPEAKING AND LISTENING

The ability to engage critically and constructively in the exchange of ideas, particularly during class discussion and conferences with instructors.

The ability to answer and ask questions coherently and concisely, and to follow spoken instructions.

The ability to identify and comprehend the main and subordinate ideas in lectures and discussions, and to report accurately what others have said.

The ability to conceive and develop ideas about a topic for the purpose of speaking to a group; to choose and organize related ideas; to present them clearly in Standard English; and to evaluate similar presentations by others.

The ability to vary one's use of spoken language to suit different situations.

LANGUAGE

College entrants will also need to understand in some depth the following principles concerning the English langugage.

English, like every other language, operates according to grammatical systems and patterns of usage.
English continues to undergo change.
English is influenced by other languages, both ancient and modern.
English has several levels of usage, and consequently the language appropriate in some situations may not be appropriate in others.
English has many dialects.
English words, like those of other languages, gather meaning from their context and carry connotation.

Based on data from the College Board, 1983, Academic Preparation In College, What Students Need to Know and Be Able to Do.

The following chart is a suggested sequence for giving instruction in written composition. It is included as an example to provide teachers and administrators a view of one possible K-12 instructional sequence.

Hopefully, after reviewing this chart, you will begin to see some of the possiblities for joint thrust between writing and career education. For example, it would be appropriate to have students develop statements on their own likes and dislikes; to write a description of what their parents do for a career; to compose conversation between individuals who feel differently about a particular topic; developing their opinions of the best method to use when making decisions; to describe the differences between consumers and producers to their parents and to their peers; to compare a resume of their work experience for potential employers and the list could go on and on.

It is our intention to begin the expansion of ideas for teachers to use daily in the classrooms and in the development of the activities and assignments prepared. Perhaps language arts instructors will encourage other faculty to require students to do more writing in class and/or on exams. Maybe a language arts person could provide suggestions for a variety of class activities that would assist the student in building confidence in communicating orally and in writing.

INSTRUCTIONAL SEQUENCE IN WRITTEN COMPOSITION

GRADE	INSTRUCTIONAL MINIMUMS IN STRUCTURES OF WRITING	INSTRUCTIONAL MINIMUMS IN FORMS OF DISCOURSE
K	Dictating sentences and stories for the teacher to write	Drawing Picture Stories
1	Drawing picture stories with sequence and writing simple descriptive, narrative, expositive, persuasive sentences	Writing simple stories guided by the teacher and review of picture stories
2	Writing sentences Emphasis on sentence expansion	Review of picture stories and written stories guided by the teacher
3	Writing sentences Emphasis on sentences vs expansion	Writing description
4	Writing sentences Review of sentences vs fragments	Writing description
5	Writing sentences Emphasis on expanding and varying sentences and revision as well as sentence vs fragments	Writing narration and conservation Review writing description
6	Writing sentences Emphasis on various kinds of sentences and groups of sentences developing a single topic (paragraph)	Review writing description and narration
7	Writing paragraphs Emphasis on topic sentence, unity, purpose, audience and revision	Writing opinions (exposition) Review writing description and narration

INSTRUCTIONAL SEQUENCE IN WRITTEN COMPOSITION
page 2

GRADE	INSTRUCTIONAL MINIMUMS IN STRUCTURES OF WRITING	INSTRUCTIONAL MINIMUMS IN FORMS OF DISCOURSE
8	Writing paragraphs Emphasis on developing topic ideas in various ways for various audiences and purposes	Writing exposition Review writing description and narration
9	Writing paragraphs Emphasis on unity, coherence, revision and on various types of paragraph organization (examples, definition, comparison and contrast, facts, reasons, etc.)	Review writing exposition, narration, description review of picture stories Writing persuasion
10	Writing compositions Emphasis on 3-5 paragraphs with beginning, middle, end, transition, and revision	Review writing exposition, persuasion, description, and narration Writing argumentation
11	Writing compositions Emphasis on the 5 forms of discourse and combinations of them in short essays	Review 5 forms of discourse: description, narration, exposition, persuasion, and argumentation
12	Writing compositions Emphasis on longer papers, critical reviews, reports, and research paper	Review exposition, persuasion, and argumentation

SOUND AND SENSE

MATERIALS/RESOURCES

A variety of scrap materials: glue, tape, wire, string, styrofoam, tin cans, empty glue containers, etc.

DETAILS

LEVEL: Primary

TYPE: Small Groups

TIME: One Class Period

INSTRUCTIONAL OBJECTIVE

Students will be asked to explore the importance of communication by completing a group task without access to verbal or written communication.

PROCEDURES

1. Divide students into groups of three to four.

2. Have students together construct a free-standing structure with a variety of scrap materials, without using verbal or written communication. A time limit should be set (15 min.). See NOTE below.

3. Discuss the following questions with the group when the time is up:

   Was it frustrating not to talk?

   How did you communicate?

   Do you know how deaf people communicate?

   How many ways might you feel "left out" if you could not hear or speak normally?

NOTE: The students may need an explanation of what it means to work together without using verbal or written communication (talking or writing). They should understand they are being given a task to do with specific directions. They will have an opportunity to discuss their reactions after the task is completed.

COMP.

SUPPLEMENTARY RESOURCES

TEACHER

Barnes, Ellen et al. What's The Difference? Teaching Positive Attitudes Toward People With Disabilities. Syracuse, New York: Human Policy Press, 1978 (BICEP 3085).

STUDENTS

Caccamise, Frank and Norris, Carolyn. Community In Signs. Eureka, Calif.: Alinda Press, 1974 (BICEP 3179).

Charlip, Remy et al. Handtalk, An ABC of Finger Spelling and Sign Language. New York, N.Y.: Parents' Magazine Press, 1974 (BICEP 3160).

Johnson, Spencer and Donegan, Ann. Determination, The Story of Helen Keller. LaJolla, Calif.: Values Communications, Inc., 1976 (BICEP 9026).

FOLLOW-UP ACTIVITIES

This activity is a natural for introducing sign language as a communication device for the deaf or hearing impaired. Students can be introduced to the Manual Alphabet as well as begin to learn some "lip-reading techniques".

There can also be a further discussion of work roles which require verbal communication as opposed to those which require little verbal interaction. Examples may include the following:

Verbal	Non-Verbal
Pilot	Artist
Receptionist	Aerialist
Telephone Operator	Deep Sea Diver
Psychiatrist	Jockey
Astronaut	
Clergyperson	

TEACHER'S NOTES

COMP.

MATHEMATICS

The following information was abstracted for the Iowa Department of Public Instruction Guide: A Commitment to Excellence Directions of Mathematics Education in Iowa Schools for the 1980's.

A STIMULUS FOR EDUCATING STUDENTS IN MATHEMATICS

In planning and identifying mathematics programs for today's students, the individuals involved with the educational process have the responsibility to be knowledgeable about the directions and trends for mathematics as identified by—

1. data resulting from various assessments or evaluations including the local district's evaluation program;
2. data collected through various surveys and studies; and
3. leaders who have--
   a. the ability to interpret and synthesize the meanings of these assessments and surveys with respect to mathematics from a broad, global perspective, and
   b. the foresight to anticipate and project the impact of outside forces on the mathematics curriculum.

By being informed, one is in a better position to recognize and understand the strengths and weaknesses of a mathematics program and subsequently address problems in mathematics education and not the symptoms to the problems. In addition, one can better realize the impact of outside forces such as technology and the technological age, the conservative mood and attitude of the general public, and reduced budgets and the world economy.

Educators thus have the responsibility to make decisions with respect to the mathematics curriculum by using a broad-base of information which presents the total picture--not a slanted, biased viewpoint. As a result of identifying directions and trends in mathematics education, there is one area of study which needs to receive more emphasis--mathemtical problem solving.

AN AGENDA FOR ACTION*

Recommendations for
School Mathematics of the 1980's

The National Council of Teachers recommends that—

1. problem solving be the focus of school mathematics in the 1980's;
2. basic skills in mathematics be defined to encompass more than computational facility;
3. mathematics programs take full advantage of the power of calculators and computers at all grade levels;
4. stringent standards of both effectiveness and efficiency be applied to the teaching of mathematics;

* National Council of Teachers of Mathematics, 1906 Association Drive, Reston, Virginia 22091, 1980, page 1

5. the success of mathematics programs and student learning be evaluated by a wider range of measures than conventional testing;
6. more mathematics study be required for all students and a flexible curriculum with a greater range of options be designed to accommodate the diverse needs of the student population;
7. mathematics teachers demand of themselves and their colleagues a high level of professionalism;
8. public support for mathematics instruction be raised to a level to commensurate with the importance of mathematical understanding to individuals and society.

The following mathematical basic skills areas were taken from a paper from the National Council of Supervisors of Mathematics Position Paper on Basic Mathematical Skills.

TEN BASIC SKILL AREAS OF MATHEMATICS

PROBLEM SOLVING

Learning to solve problems is the principle reason for studying mathematics. Problem solving is the process of applying previously acquired knowledge to new and unfamiliar situations. Solving word problems in texts is one form of problem solving, but students also should be faced with non-textbook problems. Problem-solving strategies involve posing questions, analyzing situations, translating results, illustrating results, drawing diagrams, and using trial and error. In solving problems, students need to be able to apply the rules of logic necessary to arrive at valid conclusions. They must be able to determine which facts are relevant. They should be unfearful of arriving at tentative conclusions and they must be willing to subject these conclusions to scrutiny.

APPLYING MATHEMATICS TO EVERYDAY SITUATIONS

The use of mathematics is interrelated with all computation activities. Students should be encouraged to take everyday situtations, translate them into mathematical expressions, solve the mathematics, and interpret the results in light of the initital situation.

ALTERNESS TO THE REASONABLENESS OF RESULTS

Due to arithmetic errors or other mistakes, results of mathematical work are sometimes wrong. Students should learn to inspect all results and to check for reasonableness in terms of the original problem. With the increase in the use of calculating devices in society, this skill is essential.

ESTIMATION AND APPROXIMATION

Students should be able to carry out rapid approximate calculations by first rounding off numbers. They should acquire some simple techniques for estimating quantity, length, distance, weight, etc. It is also necessary to decide when a particular result is precise enough for the purpose at hand.

APPROPRIATE COMPUTATIONAL SKILLS

Students should gain facility with addition, subtraction, multiplication, and division with whole numbers and decimals. Today it must be recognized that long, complicated computations will usually be done with a calculator. Knowledge of

single-digit number facts is essential and mental arithmetic is a valuable skill. Moreover, there are everyday situations which demand recognition of, and simple computation with, common fractions. Because consumers continually deal with many situations that involve percentage, the ability to recognize and use percents should be developed and maintained.

GEOMETRY

Students should learn the geometric concepts they will need to function effectively in the 3-dimensional world. They should have knowledge of concepts such as point, line, plane, parallel, and perpendicular. They should know basic priorities of simple geometric figures, particularly those properties which relate to measurement and problem-solving skills. They also must be able to recognize similarities and differences among objects.

MEASUREMENT

As a minimum skill, students should be able to measure distance, weight, time, capacity, and temperature. Measurement of angles and calculations of simple areas and volumes are also essential. Students should be able to perform measurement in both metric and customary systems using the appropriate tools.

READING, INTERPRETING, AND CONSTRUCTING TABLES, CHARTS, AND GRAPHS

Students should know how to read and draw conclusions from simple tables, maps, charts, and graphs. They should be able to condense numerical information into more manageable to meaningful terms by setting up simple tables, charts, and graphs.

USING MATHEMATICS TO PREDICT

Students should learn how elementary notions of probability are used to determine the likelihood of future events. They should learn to identify situations where immediate past experience does not affect the likelihood of future events. They should become familiar with how mathematics is used to help make predictions such as election forecasts.

COMPUTER LITERACY

It is important for all citizens to understand what computers can and cannot do. Students should be aware of many uses of computers in society, such as their use in teaching/learning, financial transactions, and information storage and retrieval. The "mystique" surrounding computers is disturbing and can put persons with no understanding of computers at a disadvantage. The increasing use of computers by government, industry, and business demands an awareness of computer uses and limitations.

The National Council of Mathematics Supervisor's position paper (1976) incudes an interesting interpretation relating to basic skills, "anyone adopting a definition of basic skills should consider the 'door-opening/door-closing' implications of the list'.

Minimal Skills--limited opportunities unemployment likely.
Potential generally limited to low-level jobs.

Basic Skills--Employment very likely, employment opportunities are predictable. Doors to further education opportunities are open.

Expanded Skills--Potential leaders, employment and educational opportunities will continue to increase as mathematical skills continue to grow.

There has been research that implies that a background in mathematics is the "critical filter" into many colleges and careers. Also, many traditional vocational areas require mathematics in their programs and careers. Several of the research projects reflect the relationship of not having an adequate mathematics background to women; however, all the evidence implies it would also be just as restrictive for anyone not having an adequate mathematics preparation.

Remarks

Leaders in the profession recommend the mathematics curriculum focus be on problem solving where computational skills and other algorithmic manipulations are applied. In addition, mathematical applications, estimation skills and mental calculations, statistics and data analysis along with the use of technology--calculators and microcomputers--should be integrated into the existing curriculum. Progress is being made toward the implementation of these and other recommendations into the present-day mathematics curriculum.

Another recommendation is to provide learning experiences that assist the students to relate how the mathematics theyy are learning wil be used throughout their lifetime. This thrust along with more emphasis on problem solving and a flexible curriculum all tie in with major career education strands. To function successfully in the society and the world of work requires almost daily practical use of mathematics. In providing a flexible curriculum for students, they will be better enabled to address their individual needs, differences and interests in a positive way.

INVESTING FOR THE FUTURE

MATERIALS/RESOURCES

Pencils

Paper

Newspaper Ads of Investment, i.e., Saving Certificates, Stocks, Money Market Funds

"Thinking About My Future" Activity Sheet

"Personal Investment Chart" Activity Sheet

DETAILS

LEVEL: Middle School/ Junior High

TYPE: Individual/ Small Group

TIME: One-Three Class Periods/ Ongoing

INSTRUCTIONAL OBJECTIVE

Students will practice economic skills needed to plan, organize, implement and evaluate a task involving a real life money investment situation.

PROCEDURES

PRIOR TO BEGINNING ACTIVITY

The teacher should have a general knowledge of financial investment plans, i.e., banks, money markets, stockmarket.

FIRST CLASS PERIOD

1. Begin the class by displaying the largest denomination bill that you have. If your funds are low and the only denomination you have is a dollar bill, borrow a larger one such as a five, ten, or twenty dollar bill from another colleague. Students will immediately recognize money but will now be asked to determine what money represents. If no one responds, explain that money represents a means of exchanging goods and has replaced bartering. Refer to the BICEP K-6 Career Awareness Curriculum Model - Mathematics, "$$ Talks", pp. 145-152, for a more complete explanation of bartering. Explain to students that the amount people make as individuals even results in the rating of countries world wide. Explain that a country, unless it is ravaged by high inflation such as Argentina, whose people make a decent weekly wage usually have a high standard of living.

2. List on the board at least five countries with recognized high standards of living, i.e.:

Japan	West Germany	Sweden
United States	Canada	

CONSUMER EDUCATION

PROCEDURES Continued

Point out that the list is not necessarily in order as well as noting that other countries may also be recognized as having a high standard of living.

3. Continue the discussion by explaining that most people want money to enjoy their leisure time but only after people purchase and provide for their basic needs of life (food, shelter, clothing). Unfortunately there are recessions and have been depressions. Define these with an easy to understand definition such as:

   Recession: A moderate and temporary decline in economic activity.

4. Point out that in difficult economic times, people's jobs and accompanying job security and advancement are frequently threatened. Encourage students to relate accurate impressions and information on this idea that they may have gained about this concept from personal family situations, news reports or reading media analyses of a troubled economy.

   - Parents, friends and relatives may not be able to find employment.
   - Parents, friends, relatives and large numbers of people in both industrial and rural areas may be laid off from their present employment.
   - Prices of goods (food stuffs, building supplies, automobiles, clothing, etc.) may be drastically increased thereby causing a high inflation rate.
   - The stock market may fluctuate drastically due to economic highs and lows.
   - Legislators may constantly be searching for ways to curtail unnecessary spending while still trying to maintain positions of strength in governmental programs.
   - The opportunity to advance in one's job may be minimized due to technological advances that cause fewer people to do the work that can now be done by machines.
   - Education needed to perform certain jobs and gain proficient skills may be more costly (college tuitions, lack of financial aid funds, etc.)
   - Jobs that people are presently trained for in schools and technical vocational programs may not be needed in the employment market upon completion of formal training.

5. Lead students to the realization that as they get older and make career choices that they also will be faced with good and bad economic times. They will have to develop job getting and job holding skills. They will also have to become knowledgeable about job changing skills. If layoffs occur or there is a lesser need for certain types of occupations, finding other suitable career choices that are both economically sound and personally satisfying will be essential.

6. Distribute the Activity Sheet entitled "Thinking About My Future". Go over the directions and give students at least an overnight assignment to complete the Activity Sheet.

CONSUMER EDUCATION

PROCEDURES Continued

SECOND CLASS PERIOD

1. Ask students to discuss any ideas they have about retirement. Some responses may include the following:

   - In some careers there is a mandatory age for retirement; in other careers retirement age is by personal choice.
   - Retired people are more apt to live on a fixed income. This requires many financial adjustments.
   - There are retirement villages in many areas that cater to the physical, social, emotional and financial needs of their clients.
   - One's retirement years can be very productive and satisfying if a person has interests and pursues them in moderation.
   - One's retirement years can also create emotional and physical problems, particularly if the productive working years are aborted suddenly.
   - Some retirees change their living location because of financial cutbacks.
   - Retirees can be excellent role mentors for young people because they have the wisdom of years and experience to offer to youth.
   - Many banks and financial institutions employ people who counsel young and old on how to effectively plan for their retirement years (from a financial perspective).

2. Point out that planning for one's financial security in retirement is a worthwhile activity as soon as one is gainfully employed and can allocate some portion of wages for investment purposes.

3. Focus now on the basic premise of wise investment plans. Refer back to the basic premise of needing money for basic needs and wants. Explain that the activity will be on going for a three day period at which time students will research and interview parents, friends and investment advisors (stock brokers, bankers, investment counselors) as to legitimate ways they can invest a fictitious amount of money. Students will be instructed to plan, organize, implement and evaluate an investment procedure that will increase their initial $1,000 investment.

4. Explain to students that the amount they earn will be based upon the period of investment. For example, if you invest $1,000 into a Certificate of Deposit at a local bank, you would have to divide the interest you made over the entire term by the number of months. See the following example:

   Ⓐ $1,000 invested for 2-yr. at 10% per/yr. [(N.B.) use simple interest]

   Ⓑ First year $1,000 = $1,100.00

   Ⓒ Divide $1,100.00 by 12.

   Ⓓ At the end of the first month you would have $1,009.16

   Ⓔ By the week this would equal $2.29

CONSUMER EDUCATION

PROCEDURES Continued

11. Introduce at this time some general investment tools such as:

Bank Services	Savings Accounts Certificates of Deposit
Money Market	Buying a bond that pays very high interest rates
Stock Market	Purchasing stocks in companies to anticipate an increase in price

12. Invite a community resource person who works with these investment tools to the classroom to explain their job roles as well as the advantages and disadvantages of each investment option.

13. Conclude by distributing the Activity Sheet entitled "Personal Investment Chart". Instruct students to make an "imaginary" investment in a tool of their choice. Have them use local newspapers and bank references to record the financial status of their investment over a four week period.

CONSUMER EDUCATION

STUDENT ACTIVITY SHEET

THINKING ABOUT THE FUTURE

DIRECTIONS:

Think about your own future and all the types of career possibilities there are for a person with your interests, abilities and personality. Project yourself into the future, choose one occupation that is of interest to you and answer the questions included on this Activity Sheet. Use any resources available to you to respond to the questions (parents, relatives, career mentors, teachers, guidance counselors and printed materials).

The future is before you. Even though you may not be sure of what career you will pursue, there are probably some jobs that interest you more than others. Decide upon one that appears interesting to you and write the job title below.

_____
OCCUPATION

Now consider if this were your/my occupation and I had to work now, I would need some education and training. I would need _____ years of high school, _____ years of college, _____ years beyond college or _____ I could be employed without formal schooling.

In order to be hired in my occupation and then to advance and retain my position, especially during difficult economic times, the skills that I will need are (list these skills below):

_____

_____

_____

_____

_____

I would probably live in the _____ part of the United States. The demand for my work and skills would be _____

CONSUMER EDUCATION

DEVELOPED BY PROJECT BICEP, BARNSTABLE PUBLIC SCHOOLS

STUDENT ACTIVITY SHEET

PERSONAL INVESTMENT CHART

DIRECTIONS: Plot your "imaginary" investment over a four week period. Use local newspapers, stock market reports, banking interest rates and other sources to determine the financial status of your investment. You may wish to make two investment of $1,000 apiece to compare which one is more financially beneficial.

INVESTMENT	FRIDAY WEEK I	FRIDAY WEEK II	FRIDAY WEEK III	FRIDAY WEEK IV
Bank Savings Certificate from Our Town Bank	My $1,000 is $1,002.29	My $1,000 is $1,004.58	My $1,000 is $1,006.87	My $1,000 is $1,009.16
General Electric Stock 20 shares at $50 a share	My 20 shares are equal to $1,020.00	My 20 shares are equal to $1,040.00	My 20 shares are equal to $1,010.00	My 20 shares are equal to $1,000.00

CONSUMER EDUCATION

SUPPLEMENTARY RESOURCES

TEACHER

Barrons (weekly newspaper)

Consumer Digest (monthly publication)

IRA's (published by Money Magazine)

Money Maker Magazine (published by Arthur Weber, Publisher, Des Moines, Iowa)

Money Magazine (monthly publication published by Time, Inc., Los Angeles, CA)

Stocks and Bonds. New York, NY: Franklin Watts, Inc. (BICEP 9159).

Wall Street Journal (daily newspaper)

Sokoloff, Kiril et al. Investing For The Future. Garden City, NY: Doubleday and Company, Inc., 1982 (BHS).

FOLLOW-UP ACTIVITIES

Invite guest lecturers into the class to talk about banking procedures and protection regulations for their customers. Compare today's banking procedures to those in the 1930's.

Invite a local investment counselor or stock broker to discuss stocks and the value of same.

Cooperatively plan with the math teacher in explaining interest and ways to increase one's investments.

Invite a retired person into your class to talk about retirement and its effects monetarily as well as psychologically.

TEACHER'S NOTES

CONSUMER EDUCATION

PHYSICAL EDUCATION

Physical education is that integral part of the curriculum which, through human movement, concentrates on the development of individuals' maximal physical potential and their related social, emotional, and intellectual growth.

The discipline's primary purpose is to assist the learner in developing: (1) total fitness and a lasting desire to maintain it; (2) movement abilities ranging from functional life skills to those needed for successful participation in leisure activities of their choice; (3) a sense of self-worth and dignity; (4) social competencies; (5) safety awareness; and (6) an appreciation and understanding of specific sports and dances, including their origins, cultural impact, and aesthetic values.

To achieve this broad purpose, physical education draws predominantly from the fields of biology, physiology, anatomy, sociology, and psychology to complement its own body of knowledge.

THE PHYSICAL EDUCATION CURRICULUM

The physical education curriculum must be consistent with the subject area's goals; take into account the varying needs, interests, and abilities of children; and respond both to current social concerns and those anticipated in the future. Such a curriculum includes:

Physical and Movement Components

- -Fitness programs and appropriate conditioning activities on a regular basis for all students;
- -An emphasis on developmental, creative, rhythmical, and perceptual motor experiences for the primary level;
- -A wide variety of individual and group games or sports, outdoor recreational activities, gymnastics and self-testing tasks, dance, and aquatic experiences throughout all grade levels.

Understandings

- -Principles of efficient movement and concepts related to fitness appropriate for the age group;
- -Safety information, rules, and strategies for the varied program activities.

Social and Emotional Components

- -Opportunities to develop a more positive attitude toward one's own body and its potential, to recognize movement capabilities of all, and to practice cooperative interactions and teamwork;
- -Planned experiences which encourage the development of values favoring an active and healthy lifestyle.

For desired outcomes to be attained, learning activities must be selected or adapted with consideration of such factors as the maturity, skill, and fitness levels of the individual participants. Units must also be evaluated to determine student progress and the effectiveness of instruction.

Physical education, like many discipline areas can be reinforced by several of the school and community personnel such as the school nurse, science and home economics instructors and persons of various recreational facilities in the community. The increased number of community education courses/programs in physical education reinforces the need and desire by many for lifetime carry over sports.

The following performance expectations suggest parts of a K-12 instructional thrust. Here again, it is easily recognized that many of the career education domains and objectives could be jointly addressed.

Performance Expectations

Grade 3	Grade 6	Grade 8
Demonstrates respect from others by confining movements to one's personal space.	Demonstrates respect for game rules when participating in physical activities.	Helps self and others improve skill and enjoy participation in physical activities.
Demonstrates cooperation by working with others in movement activities.	Explains the importance of body movements in daily living.	Describes the contributions of physical activities to the quality of daily life.
Cites examples of what one's body can do.	Selects appropriate activities to raise own level of physical fitness.	Describes possible hazards to safety when participaing in physical activities.
Demonstrates awareness of the need to exercise and perform basic body movements to keep the body fit.	Uses preventive approaches to safety practices when participating in physical activities.	Performs in a program for audience.
Follows safety precautions and rules when participating in physical activities.	Makes use of physical attributes in the performance of games and dances.	
Performs simple games and dances to one's own satisfaction.		

Grade 10	Grade 12
Involves self and others when considering changes for the mutual benefit of the team.	Seeks alternatives to improve the team effort.
Performs in a solo performance of a physical activity to one's own satisfaction.	Knows own movement capabilities and participates in appropriate physical activities.
Explains the benefits derived from own participation in a program of physical fitness.	Plans and follows a personalized conditioning program to improve physical fitness.
Describes actions to be taken in the event of accidents occurring during participation in physical activities.	Includes safety considerations when planning a personalized program for the maintenance of physical well-being.
Evaluates and selects appropriate lifetime recreational sports activities to meet own needs, interests and abilities.	Identifies and describes emotional and social characteristics improved by participating in lifetime recreational sports activities.
Refines movement sequences for effective self expression.	Participates in physical activities designed to develop and improve own creative potential.
	Pursues courses related to physical education to gain work-related experiences.

A curriculum committee is developing the necessary information and a state curriculum guide for physical education is scheduled for the fall of 1985.

Remarks

Physical education and career education share the common interest of self concept of the student. Both areas appreciate the relationship between individual interests and feelings and the physical characteristics of students. When you talk about physical fitness, you can easily discuss an individual's perception of how they fit into society. The relationship between being physically fit and having a positive attitude and being able to make clear decisions are all directly related. With the major thrust on being fit in America today that has major implications for the occupations of the future.

RUN FOR YOUR HEALTH

ATTITUDES TOWARD DIGNITY OF WORK

MATERIALS/RESOURCES

Starting Gun/Whistle
Lime
Line Marker
Pedometer/Bicycle Odometer
Warm Up Exercises
Run For Your Health Parent Letter
Run For Your Health Certificate
Running Shoes
Refreshments (juice)

DETAILS

LEVEL: Primary/ Intermediate

TYPE: Entire Class

TIME: Ongoing

INSTRUCTIONAL OBJECTIVE

Having discussed the advantages of being physically fit, the students will participate in a one month physical fitness training program to complete a designated distance run.

PROCEDURES

1. Discuss the advantages and disadvantages of being in good physical condition.
   - How can you keep in good physical condition?
   - Is exercise important? Why?
   - What types of foods supply your body with necessary nutrients?
   - Do "junk foods" help your body grow?

2. Introduce the "Run For Your Health" program to the students. This is a physical fitness running program that encourages the children to develop stamina, coordination and muscle tone by allowing students approximately one month to train and exercise towards a pre-determined goal. Suggested goals:
   - K-2 Levels 1/4 mile or more
   - 3-4 Levels 1/2 mile or more
   - 5-6 Levels 1 mile or more

3. Explain to the students that the purpose of the program is to finish the course without stopping. The run is NOT timed and there is no special recognition given to the winner of the run. The only competition is within yourself to see if you can train yourself to run the course at your own speed without stopping. It is very helpful if the teacher, principal and parents can participate with the students at their speed. Stressing goal setting and the pride that comes with achievement is an important mental health aspect of this physical health program.

HEALTH HABITS

4. Begin the program with warmup exercises such as leg stretches, jumping jacks, toe touches, running in place, deep knee bends, pushups and other appropriate activities. (See Warmup Exercises.)

5. Distribute parent letters to the students following the exercises and explanation of the program. The letter should have the tentative date of the Run For Your Health Program and the name of the teacher filled in. Instruct the students to bring the letter home to their parents and to encourage their parents' involvement in the program, either as participants or spectators. Also, have the students return the completed parent permission form (see Run For Your Health Parent Letter).

6. Take the students around the designated course, after exercising. Stress not to run the entire goal the first week of training; rather a combination of running and walking is best. Building toward the goal slowly will develop tolerance and stamina.

7. Practice as a class at least two to three times a week. Encourage students to use recess time and train at home with their parents for additional practice.

8. Allow the students time to record their daily progress on a class chart.

9. Prepare for the actual "Run For Your Health" day by marking off the course, preferably around the playground. Certificates should be prepared ahead of time for all students and parents who are expected to run (see Certificates). Have the principal sign all the certificates. Prepare a small number of blank "participation" certificates for those students and parents who are unable to complete the course without stopping. These certificates should be identical to the regular certificate, except that the word "completed" is changed to "participated."

10. Assign a person to start the run, plus station several officials along the course to help the runners follow the course and to encourage them to keep running. Also, officials will be needed at the finish line to record the runners who complete the course.

11. Assemble the students and parents ten minutes before the run and do the warmup exercises as a group. Lead group exercises for primary students. Intermediate students can have class members lead the exercises. Briefly explain the course and the purpose of the program to students and parents as they are assembled at the starting line.

12. Gather all participants in the cafeteria for juice and awards following the completion of the run. Have the principal present certificates to all students, teachers and parents who completed/participated in the run. The entire "Run For Your Health" day should require about 40 minutes, including warmup, running and awards program.

HEALTH HABITS

RUN FOR YOUR HEALTH

WARMUP EXERCISES

Encourage students to do exercises slowly and easily.

1. Leg Pullovers

   Sit on the floor with legs extended. Roll back and lift legs over the head as far as you can. Hold in this position for five seconds and then return to original position. Repeat three times.

2. Contract and Relax Leg Muscles

   Again in sitting position, have back of right knee touch the ground by contracting the leg muscles in the right leg. Hold for five seconds and relax muscles. Repeat with left leg. Do four repetitions for each leg, alternating right and left legs.

3. Bicycle Exercise

   From sitting position, rock back on shoulders and lift legs in the air. Slowly move legs in a bicycle motion. Do for fifteen seconds and resume original position. Do exercise two times. Hands under back may be used to help support legs.

4. Trunk Bouncing

   Standing with legs spread wider than shoulder width, slowly bend over and try to touch ground with fingers or hands. While bent over, bounce (touch) three separate times and stand back up. Repeat four times.

5. Alternate Toe Touching

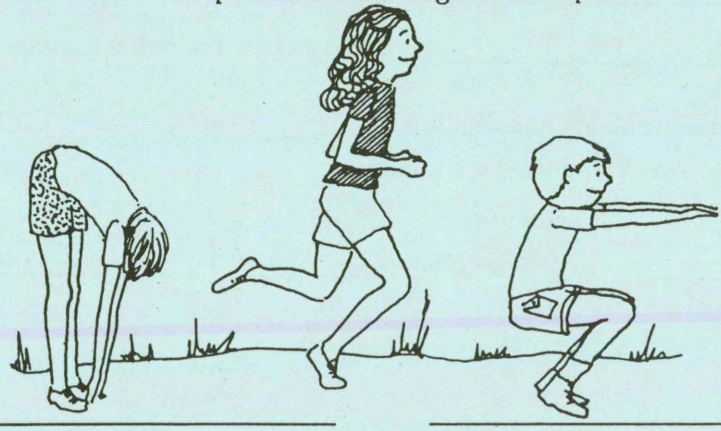
   Same position as trunk bounding, only arms outstretched. Bend and touch right hand to left foot. Stand and touch left hand to right foot. Repeat ten times.

6. Jumping Jacks

   Do ten jumping jacks slowly.

7. Hurdlers Stretch

   Sitting on ground, put one leg in front of you and the other leg bent and to the side. Slowly lean forward toward knee of outstretched leg. Reach several times, then reverse position of legs and repeat.



HEALTH HABITS

RUN FOR YOUR HEALTH

Date:

Dear Parents:

The purpose of this letter is to enlist your support and participation in the Run For Your Health program. This program is a three-week training course that will prepare your child and perhaps you to run a one-half mile course without stopping. In school the program will consist of several parts:

- Teaching the children stretching and loosening exercises.
- Several training sessions conducted by the teacher to prepare the students to run a half mile.
- Marking out a half-mile course on the playground.
- Recess opportunities for the students to run part or all of the course as their abilities increase.

At the conclusion of the training period a Run For Your Health Day will be conducted. The students will attempt to complete a half mile course. The run will not be timed; the object is solely to complete the course without stopping or walking. Any students in the upper grades who are sufficiently prepared may choose to keep running and complete a mile without stopping. Tentatively the run will be scheduled for (date) at (time). If the students are not sufficiently prepared by this date, we will change it accordingly and notify you of any change.

Active parental involvement will also be a part of the program. Please complete and return the slip at the bottom of this letter giving your child permission to participate in the program. Beyond this, we ask you to give your child as much support and encouragement as possible. Please attend the Run For Your Health program and cheer your child on in person. Finally, if you are physically capable, we urge you to participate in the program and to run with your child at his/her pace. If you do decide to run, make sure that you also have prepared to run a half mile.

At the conclusion of the Run For Your Health Day, there will be a juice party in the cafeteria. At this time all students and parents who have successfully completed the course will receive certificates. We expect every student will be successful.

If you have any questions concerning this program, please contact (coordinator).

Sincerely,

I give my child, _____, permission to participate in the Run For Your Health Program.

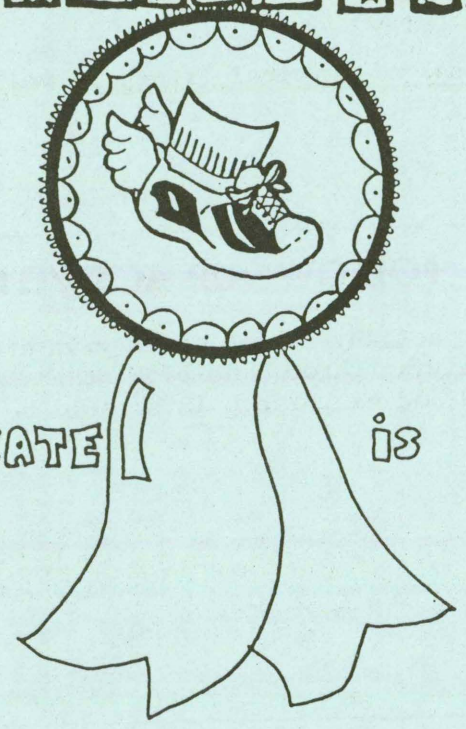
I will attend the Run For Your Health Event: _____ yes _____ no

I will run in the Run For Your Health Event: _____ yes _____ no

Date _____ Signature _____

HEALTH HABITS

STUDENT ACTIVITY SHEET



THIS CERTIFICATE IS AWARDED TO:

_____

for completion of the

"RUN FOR YOUR HEALTH"

PROGRAM

SCHOOL : _____

DATE : _____ DISTANCE : _____

SIGNATURE : _____

HEALTH HABITS

DEVELOPED BY PROJECT BICEP, BARNSTABLE PUBLIC SCHOOLS

SUPPLEMENTARY RESOURCES

STUDENT

May, Julian, Sports Series: Mankato, Minn.: Creative Education, 1975 (BICEP).

The World Series
The Indianapolis 500
The Stanley Cup
The U. S. Open
Wimbledon
The Masters
The N.B.A. Playoffs
The Olympic Games
The Kentucky Derby

Walsh, John. The First Book of Physical Fitness. New York, NY: Franklin Watts, 1961.

FOLLOW-UP ACTIVITIES

A visit to a health spa or a figure salon would give students a better understanding of how people make their living through helping others achieve a healthy balance between good nutritious food and exercise. This could be done through a mini-course situation.

TEACHER'S NOTES

HEALTH HABITS

SCIENCE

The need for relating instruction to the practicalities of life and living are certainly evident in the direction being taken by the science discipline. A Tool for Assessing and Revising the Science Curriculum, available via Department of Pubilc Instruction, states in its philosophy statement--"Science education is the link between science and society. Its ultimate goal is to DEVELOP SCIENTIFICALLY LITERATE CITIZENS who use and understand the impact, knowledge and processes of science". More, "A new generation of scientifically literate citizens is needed to cope with a future characterized by rapid change and a complex set of technical and ethical questions. Accordingly, it is recommended that all students receive an approriate education in science to develop the intellectual skills that are basic to critical observation, problem resolution, decision-making and valuing".

Skills that relate to employability as well as normal living that are promoted in the publication include observing, classifying, measuring, recording, predicting, inferring, hypothesizing, investigating, experimenting, decision-making and valuing. The publication also includes knowledge skills which, perhaps, denotes where most of the traditional approach has been.

Impact application topics, like the basic learning objectives, clearly relate to teaching students the effects of science and technology on the individual and society. Some examples of impact/application topics are energy distribution, securing appropriate jobs and careers, natural resource use and management, maintaining balanced populations, changing methods of transportation, genetic engineering, chemical abuse and disposal, technological/computer shock resulting in information explosion and invasion of privacy, aesthetic developments of humankind, ethics of scientific decisions, energy efficient housing, ventures in space and aging, death and dying.

TO APPLY SCIENCE PROCESSES AS A PART OF BASIC LEARNING.

1. To develop a student's observing skills. (Observing means using the senses to obtain information or data about objects and events.)
2. To develop a student's classifying skills. (Classifying is the process used to impose order on collections of objects and events to show similarities, differences, and interrelationships.)
3. To develop a student's measuring skills. (Measuring is the process of using number and equipment to quantify observations.)
4. To develop a student's recording skills. (Recording is the process of logical quantification and manipulation of data.)
5. To develop a student's exploring skills. (Exploring is the process of looking into new and unknown. Situations to determine variables included.)
6. To develop a student's predicting skills. (Predicting is the process of formulating a specific forecast based on observations, measurements and relationships between variables.)
7. To develop a student's inferring skills. (Inferring is the process of using logic to draw conclusions from data.)
8. To develop a student's hypothesizing skills. (Hypothesizing is the process of formulating testable scientific genralizations.)
9. To develop a student's investigating skills. (Investigating is the process of applying logical reasoning to solve new or unique problems.)

10. To develop a student's experimenting skills. (Experimenting is the process of using all the scientific processes in conducting a controlled test of specific scientific hypothesis.)
*11. To develop a student's decision-making skills. (Decision-making is the logical process of making a choice from alternatives.)
*12. To develop a student's valuing skills. (Valuing is the process of developing a position of commitment for personal actions.)

*These topics are health related.

COMMUNICATE KNOWLEDGE OF NATURAL PHENOMENIA OF THE UNIVERSE SUCH AS:

1. Matter/energy relationships.
2. The dynamic universe and solar system.
3. The interaction and interdependence of living things with their environment.
4. That living things are in contlinuous change (evolution).
5. That living organisms are the products of their heredity and environment.
6. That all physical matter consists of units.
7. The personal aspects of physical, mental and community health and safety.
8. The interaction of people with natural ecological systems.
9. Fundamental organic chemistry.
10. Fundamental inorganic chemistry.
11. The principles of magnetism, electricity, light and sound.
12. The principles of energy origin, use, and alternatives (i.e., hydro, wind, geothermic, nuclear, etc.).
13. The principles of atomic theory.
14. Laboratory equipment, procedures and safety.
15. The periodic table.
16. The principles of continental drift.
17. The principles of basic geology (i.e., rocks, minerals, fossils, dating, land farms, etc.)
18. The principles of radioactive and physical dating.
19. The principles of geologic record.
20. The importance of the water and other mineral cycles.
21. The principles of weather.
22. Earth science map construction and interpretation (i.e., weather, geologic, stars, etc.).
23. The finite nature of natural resources.
24. The characteristics of living organisms.
25. The cell as the basic unit of living organisms.
26. The essential role of plants to all living things.
27. The principles of anatomy and physiology, including reproduction, circulatory, respiratory, nervous, skeletal, muscular, endocrine, and digestive systems.
28. The diversity of living things.
29. The functioning of simple machines.

TO USE SCIENTIFIC KNOWLEDGE IN COMPREHENDING THE IMPACT APPLICATION OF SCIENCE AND TECHNOLOGY ON THE INDIVIDUAL, AND SOCIETY, SUCH AS:

1. Energy distribution, conservation and cost.
2. Maintaining personal health and well-being.
3. Securing appropriate jobs and careers.

4. Natural resource use and management.
5. Maintaining balanced populations.
6. Changing methods of transportation.
7. Weather modification.
8. Genetic engineering.
9. Chemical abuse and disposal (i.e., pesticides, insecticides, fertilizers, food additives).
10. Technological/computer shock resulting in information explosion and invasion of privacy.
11. Methods of electronic communication.
12. The amount, control and recycling of pollution products.
13. Appreciation for aesthetic developments of humankind.
14. Living organisms' reaction to stress.
15. Use and/or misuse of drugs.
16. Ethics of scientific decisions.
17. Energy efficient housing.
18. Food production and distribution.
19. Use and/or misuse of land.
20. Science advances resulting in increased amounts of leisure time.
21. Ventures in space.
22. Euthanasia or mercy killing.
23. The ability of species to survive in an environment manipulated by humankind.
24. Artificially induced life.
25. Prosthetics or artificial body parts.
26. Aging, death and dying of all living organisms.

Remarks

There are 9 life science, 4 earth science, 6 physical science and 7 multictegory topics in this section.

Clearly in the science basic learning objectives a relationship can be seen to the career education domains of Self, developing mental and creative abilities; Self and Society, the interaction of social change and developing technology, that role change with shifts in resources and technology, that technology and changes in technology influence daily life and values; Decision-Making, that choices/decisions must be made actively, being aware of or cultivating the abilities necessary in the decision-making processes. Also, Occupational Knowledge, by examining clusters of occupations, some occupations become obsolete because of progress in technology.

Career education concepts (domains/the working world) provide a viable context to demonstrate application for science objectives addressing basic learning, knowledge and impact.

PLANNING A PLANET COMMUNITY

MATERIALS/RESOURCES

Mural Paper and/or Drawing Paper

Construction Paper, Cardboard, Wood Scraps and Various Materials for Models

"Engineers" Data Sheet

Pencils

Magic Markers

DETAILS

LEVEL: Intermediate

TYPE: Entire Class
Small Groups

TIME: Four Class Periods
Ongoing

INSTRUCTIONAL OBJECTIVE

In order to increase their awareness of the various areas of specialization in the engineering career field, students will design "adequate" living conditions on a planet of their choice.

PROCEDURES

1. Center a discussion around which planets are most nearly like the Earth, after studying the solar system (particularly the individual planets and their specific characteristics). Background teacher information for this discussion is provided below:

   The Terrestial Planets, so called because they have characteristics in common with Earth, are Mercury, Venus, Earth and Mars. Compared to the other planets, these planets have a relatively long day or period of rotation, fast orbital speed, small diameter, small mass, high density and few moons. Mars is most nearly like the Earth as it has an atmosphere containing water vapors and oxygen and seasons similar to Earth. Mercury is the hottest planet, as it is closest to the sun. Pluto is the coldest, as it's the farthest away.

2. Encourage students to speculate as to whether life could or could not exist on any of these planets.
   - Could life exist on any of these planets?
   - Do you think that if life were found on these planets, it would be like life on the Earth? Why or why not?
   - Would you like to live on another planet?
   - What living conditions that you take for granted on earth would be missing in the planet setting?
   - Would you be able to find a job on another planet?
   - What would be your major source of food? Heat? Shelter?

TECH.

Background information for Procedure #2 includes:

On Mars, if the polar caps are ice, there may be water to support life. Jupiter's atmosphere contains ammonia and methane, the same gases in the Earth's atmosphere when life began.

3. Discuss the possibility that life on these planets would most likely be different because living things would have to adapt to the environment or environmental conditions would have to be changed to allow for life to exist.

4. Divide the class into groups of 5-6. Discuss the question, "What is an engineer?" An engineer uses science and math to solve problems. An engineer knows how to use the materials and forces of nature to meet human needs. An engineer is a creative individual. Give each group a list of the different types of engineers.

5. Ask the groups to pretend they are a group of engineers and they are to design "living space" on another planet. What planet would they choose? What problems must they solve? Things to consider in designing their living space or community will include:

   - What will the buildings, bridges, roads, airports look like? (Architectural and Civil Engineers)
   - What sources of energy will be used to heat and cool the area? How will this energy be controlled? (Mechanical and Electrical Engineers)
   - What types of natural resources will be used? Will they be found on your planet or must they be shipped to the planet in some manner? (Mining and Metallurgical Engineers)
   - What type of land, air, water vehicles will be used? (Transportation and Aerospace Engineers) How did you get there?
   - What type of factories will be found on the planet? What kinds of materials and/or products will be produced to send back to earth? (Industrial Engineers)
   - What ways will be developed to feed the community? How will they plant and harvest crops? What kinds of food will be eaten? (Agricultural Engineers)

6. Provide books/multi-media materials, etc., obtained from school and community libraries for students to use when collecting the information necessary for problem solving. It may also be useful at this time to invite an architect or an engineer in any one of the fields mentioned on the list provided for the students to the class to discuss their career choice. A Peace Corps or VISTA (Volunteers In Service To America) volunteer would also be a valuable guest if such a person were available because they would be able to talk about the types of problems that arise in developing new work or people communities. The architect or engineer could discuss design, layout and blueprints. They could also mention unexpected problems that arise which "student community planners" might overlook. A field trip to a planetarium would also be useful because it would reinforce existing conditions on the planets and provide up-to-date information on the latest studies related to life in outer space.

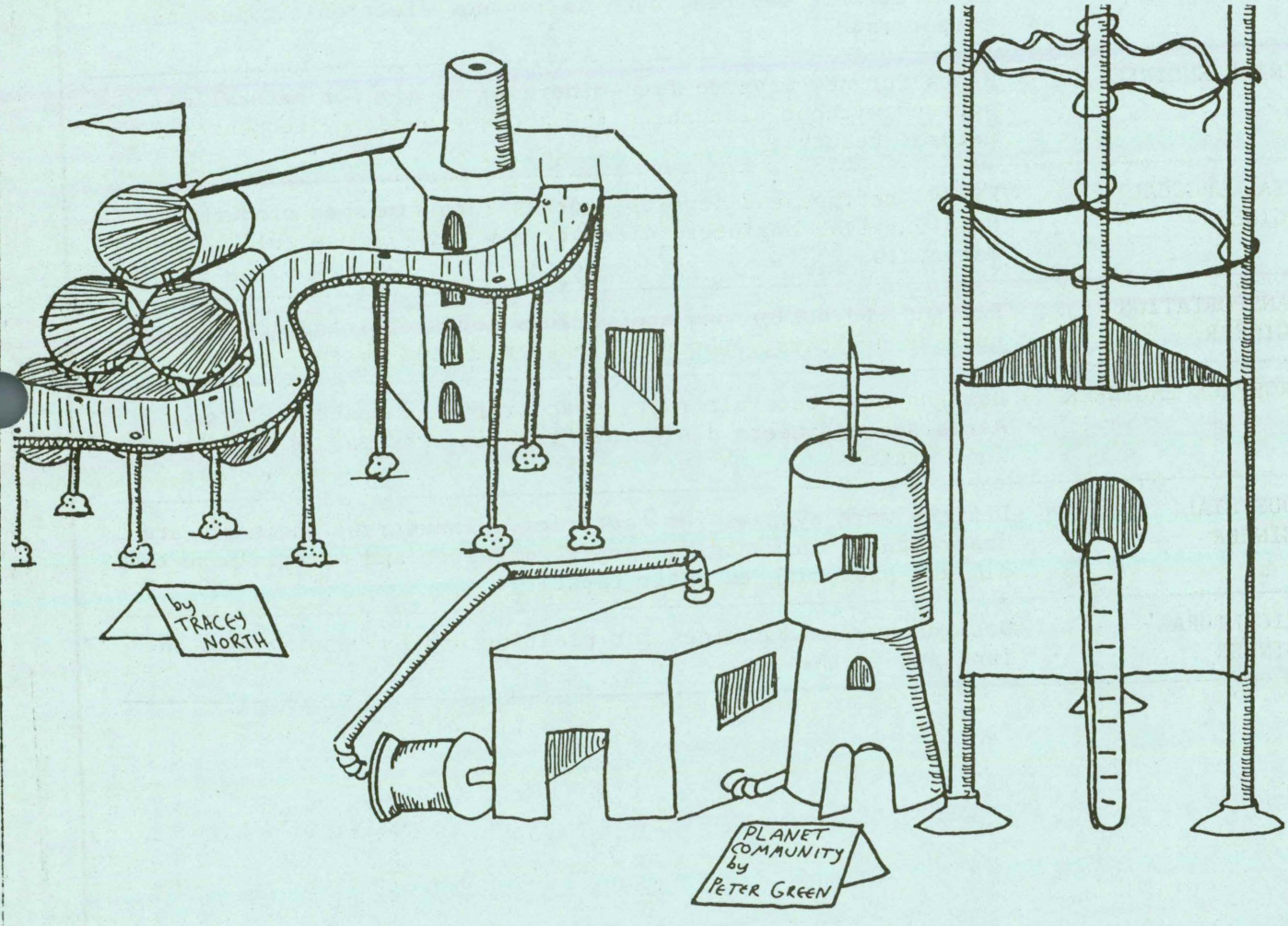
7. Explain to students that each small group can display their "planet community" in whatever way they choose. It can be a three dimensional model, a blueprint, a mural, a homemade filmstrip or any other way their creative thoughts decide.

TECH.

PROCEDURES Continued

8. Provide materials and encourage groups to bring other materials form home as needed. Contacting the art department for additional supplies is also recommended.

9. Plan for a "showing" of the model planet communities at the completion of the activity. They could also be displayed in local business establishments or libraries. Student "engineers" could be on hand to explain their creations.



TECH.

ENGINEERS' DATA SHEET

CIVIL ENGINEER	Designs and builds bridges, roads, airports, sewer systems, skyscrapers. The civil engineer is concerned with making new designs prepared by an architectural engineer practical.
ARCHITECTURAL ENGINEER	Designs creative new buildings based on people's needs and existing environmental conditions.
MECHANICAL ENGINEER	Designs machines that produce power. Mechanical engineers use all forms of energy. The source of power is the most important aspect of their work.
ELECTRICAL ENGINEER	Designs and builds electrical systems, circuits and new types of electronic devices, such as the new electronic games and computers.
MINING ENGINEER	Hunts for new ways to find minerals; to dig for natural resources without disturbing the above-ground environment and natural beauty.
METALLURGICAL ENGINEER	Finds, refines and develops metals into finished products. Metallurgical engineers discover new ways to use "old" materials.
TRANSPORTATION ENGINEER	Designs and builds new and various modes of transportation, such as new cars, subway systems, elevated trains, etc.
AEROSPACE ENGINEER	Designs and tests aircraft, spacecraft and space shuttles. Aerospace engineers design air traffic systems, as well as fuel systems.
INDUSTRIAL ENGINEER	Designs work systems for factories. Industrial engineers are instrumental in managing people, machines and materials so that all are producing to their capacity.
AGRICULTURAL ENGINEER	Designs special machines for planting and harvesting food on land and in the sea.

TECH.

SUPPLEMENTARY RESOURCES

TEACHER AND STUDENT

Astronomers (f/c). Stamford, CT: Educational Dimensions Group, 1978 (BICEP 4033E).

Career World #1. "Engineers' Careers." Highwood, Ill.: Vol. 3, No. 3, Nov. 1979, pp. 3-10 (BICEP).

Career World #2. "The Engineering Team: Engineers/Technologists/Technicians." Highwood, Ill.: Vol. 8, No. 2, October 1979, pp. 3-14 (BICEP).

People Who Create Art: Industrial Designer. New York, NY: Guidance Associates, Inc. 1974 (BICEP 4011E)

STUDENT

Macaulay, David. City, A Story of Roman Planning and Construction. Boston, MA: Houghton Mifflin, 1974 (BICEP 9242).

Westman, Paul. Alan Shepherd - The First American In Space. Minneapolis, MN: Dillon Press Inc., 1979 (BICEP 9282).

FOLLOW-UP ACTIVITIES

Simulate life on a future planet.

- Set up rules and regulations to run a small society on this planet (Government).
- Decide on type of monetary system to be used (Economics).
- Decide on ways to spend leisure time.

TEACHER'S NOTES

TECH.

SOCIAL STUDIES

The National Council for the Social Studies in its April 1984 issue of Social Education outlines to its readers a preliminary position for analysis and discusses an illustrative K-12 social studies scope and sequence.

"The illustrative scope and sequence that follows deals with only one dimension of the social studies program; namely, the substantive content or subject matter . . . The material is presented for illustrative purposes and should not be construed as a model or ideal program . . . Local school district curriculum developers, teachers and lay persons should find the examples useful as a guide in building their own programs."[1]

Values and skills for the social studies are also identified in the April 1984 issue of Social Education, as well.

I. Illustrative Scope and Sequence -- Content[2]

Kindergarten -- Awareness of Self in a Social Setting

The major thrust of the kindergarten program should be to provide socialization experiences that will help children bridge their home life with the group life of the school. Learning about the physical and social environments of the school is a necessary component. Awareness of self should be developed through face-to-face relationships with others in social settings. Some structured experiences to sensitize children to a world of many people need to be included.

Grade I -- The Individual in Primary Social Groups: Understanding School and Family Life

The socialization to school begun in kindergarten should be continued and extended in first grade. Children can learn the specialized roles of school personnel as an example of division of labor. Family life and structure, including variations of family structures, should be included, as well as roles of family members. Essential activities of a family in meeting basic material and psychological needs should be stressed. Variations in the way families live need to be studied; e.g., urban, rural, self-employed, both parents employed, single-parent family arrangements, various housing options, etc. Dependence of family members on each other and of the family on other families should be stressed. The need for rules and laws should be taught as a natural extension of orderly group life. Studying family life in earlier times and in other cultures provides opportunities for comparing ways of living. The globe should be introduced along with simple maps. It is important that the program include some study contact with the world beyond the neighborhood.

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1 National Council for the Social Studies. "Illustrative Scope and Sequence -- Content," Social Education, April 1984, pp. 253-255.

2 Ibid.

Grade II — Meeting Basic Needs in Nearby Social Groups: The Neighborhood

Meeting basic requirements of living in nearby social groups should be the central theme in second grade. The study of social functions such as education, production, consumption, communication, and transportation in a neighborhood context is appropriate as children develop an understanding and appreciation of people in groups. The need for rules and laws should be stressed and illustrated by examples from the everyday lives of children. Geographic concepts relating to direction and physicl features of the landscape need to be included. A global perspective is important and can be sought through the study of life in another culture. Contrasting neighborhood life today with what it was in an earlier time should also be included.

Grade III — Sharing Earth-Space with Others: The Community

The community in a global setting is the focus of study at the third-grade level. The concept of community needs to be extended beyond the limits of the local neighborhood. Social functions such as production, transportation, communication, distribution, and government, including their international connections, should be stressed. The concepts of dependence and interdependence can be emphasized at the local, national, and international levels. Geographic concepts and skills should be extended to include the interactions of human beings with the environment.

Grade IV — Human Life in Varied Environments: The Region

The major emphasis in the fourth grade is the region, an area of the earth that is defined for a specific reason. Where state regulations require it, the home state may be studied as a political region. World geographic regions defined in terms of physical features, climate, agricultural production, industrial development, or economic level should be selected for study. Culture regions of the past and present may also be included. There should be some variation in the regions selected for study in order to illustrate the adaptability of human beings to varied environments. All of the basic map and globe reading skills should be included in the program.

Grade V — People of the Americas: The United States and Its Close Neighbors

The fifth grade program focuses on the development of the United States as a nation in the Western Hemisphere, with particular emphasis on developing affective attachments to those principles on which this nation was founded and that guided its development. The diverse cultural, ethnic, and racial origins of the American People should be stressed. Attention should be directed to specific individuals who have contributed to the political, social, economic, and cultural life of the nation. The fifth-grade program should familiarize learners with the history and geography of the closest neighbor nations of the United States: Canada and Mexico.

Grade VI — People and Cultures: The Eastern Hemisphere

The focus of the sixth-grade program is on selected people and cultures of the Eastern Hemisphere. The people and cultures should be respresentatives of (1) major geographical regions of the Eastern Hemisphere; (2) levels of economic development; (3) historical development; (4) political and value systems. The interdependence of nations should be a major theme. Instruction needs to be directed toward the understanding and appreciation of the lifeways of other people through the development of such concepts as language, technology, institutions, and belief systems.

Grade VII — A Changing World of Many Nations: A Global View

The seventh-grade program provides an opportunity to broaden the concept of humanity within a global of many different people who strive to deal with the forces that shape their lives. The search for--and the need for--peaceful relations among nations needs to be stressed. The content is international in scope (including the Western Hemisphere), with a major emphasis on basic concepts from geography--resource distribution, spatial interaction, area differentiation, global interdependence. The history of areas should be provided in order to illustrate changes through time. The aspirations, and problems of developing nations need to be stressed. Emphasis should be given to the many interconnections that exist between places and people in the modern world. This not only includes resources necessary to support technologically based societies but cultural interconnections as well--art, literature, communication, religion, music, and sports.

Chapter VIII — Building a Strong and Free Nation: The United States

The eighth-grade program is the study of the "Epic of America", the development of the united States as a strong and free nation. The primary emphasis at this level should be the social history and economic development of the country, including cultural and aesthetic dimensions of the American experience. Attention should be given to the history of ordinary people doing ordinary things to include family life, work, leisure, and medical care. The unique contribution of the men and women who built the heritage we share should be stressed. The presentation must be realistic and exciting to the early adolescent. This program should stress the important role played by the United States in global affairs and the need to secure peaceful relations with all nations.

(Note: Most students today complete high school and, therefore, take a full year of United States history in the eleventh grade. Consequently, some school districts have adopted course options such as those listed on page 256 at the eighth grade.)

Grade IX — Systems that Make a Democratic Society Work: Law, Justice, and Economics

The ninth-grade program focuses on the concepts social stability and social change and calls for one semester of study of the law and justice systems and one semester of economics. A functional knowledge of the law and justice systems, as well as a knowledge of the economic system — along with related skills and attitudes — are critical to the practice of citizenship. These courses should address issues that capitalize on the real-life problems of students. They should also provide many opportunities for developing critical thinking, problem solving, and social participation skills.

(Note: In states where the study of state history and government is required by legislative mandate, basic concepts from law, justice, and economics can be incorporated into such a course.)

Grade X — Origins of Major Cultures: A World History

The tenth-grade program should have students learn about the major cultures and societies in the contemporary world. The course stresses the diverse economic, political, religious, and social systems. Historical perspective should be provided on major world events and movements. Students should develop a knowledge of an appreciation for the contributions of many cultures to the collective wisdom of the

human race. The course should include attention to those historical differences among people that lead to conflict. The course is basically history and should include the development of tools of historical analysis. Nonetheless, it incorporates related concepts from other social science disciplines, especially anthropology, geography, political science, and economics.

Grade XI — The Maturing of America: United States History

The eleventh-grade program should be a comprehensive course in American history that is organized chronologically and serves as a capstone for the study of American history in the elementary and secondary schools. The forces that shaped and continue to shape political, economic, and social institutions should be studied. Changes in social and cultural values should also be included. The impact of growing international involvements and commitments must be stressed. The growth of the arts and literature, social reform movements, the extension of civil rights, the labor movement, and the growth of government should be included. The diversity of ethnic and racial origins of Americans and the impact of this diversity on the development of the nation should be emphasized.

Grade XII — One-year course or courses required; selection(s) to be made from the following:

Issues and Problems of Modern Society
Issues and problems of modern society should provide numerous opportunities for students to make a critical analysis of enduring social issues. The scope is broadened in order to emphasize the global dimensions of American problems and issues.

Introduction to the Social Sciences
This course should deal with the content and modes of inquiry of the social sciences.

The Arts in Human Societies
This course should allow students to learn about the cultures of the world through the arts and literature.

International Area Studies
As an in-depth cross-cultural study of selected areas of the world, the course focuses on the interaction of different cultures in a defined area of the world.

Social Science Elective Courses:
Anthropology, Economics, Government, Psychology, Sociology

Supervised Experience in Community Affairs

Local options

It is not possible to present a scope and sequence that would be appropraite for the many communities that comprise such a large and diverse nation as the United States.

Conclusion

The Scope and Sequence is extremely rich in terms of what career education concepts are all about. Social Studies seems to provide the stage upon which the human structure, function, systems, attitudes and values all interacting to form a world drama, alive and continuing. "Career" as a statement of what a person does with his life, upon this stage, appears to be a natural part of what Social Studies is all about. The content deals with self, family, neighborhood, country, world, and also, politics, economics, psychology, justice and the law, and current events. This area underlines the statement made earlier that it would be presumptuous to think that career education concepts are something new and foreign to the American school system. Career education provides a method for a comprehensive approach for the teaching of these attitudes, skills and knowledge deemed important for this time.

II. Developing Democratic Beliefs and Values[3]

(Note: for complete text of this section see reference note No. 1)

Education to Engender Beliefs and values, including variations called moral education, attitude education, developing personal integrity, or character education, has been a persistent theme in American education from early colonial schools to the present. Long before the scientific study of society developed such concepts as group cohesiveness and shared values, people knew from the experience of their forebears that individuals had to conduct themselves in ways consistent with a common set of beliefs and values if the behavior of individuals was to be predictable. Education in the home and in the school was designed to focus on those beliefs and values that translated into moral guidelines for citizens.

. . . Related democratic beliefs and values are an important part of all subject matter included in the social studies. All social studies teachers at every grade level share responsibility for teaching them. The chart that follows provides illustrations of ways of including the various democratic beliefs and values in the program of each of the grade levels. Some of the illustrations reflect life conditions in school, while others relate to the subject matter being studied. These are examples only and should not be construed as a recommended curriculum.

Research finds that youth who are most supportive of democratic principles are those who practice investigation of issues in an open-supportive environment in the classroom. Therefore, by encouraging inquiry into social issues, social studies teachers can build support for democratic values at the same time they develop skills needed by citizens in their local, national, and global communities. In studying the illustrative examples of applications of democratic values and beliefs that follow, the teacher can identify issues for inquiry and decision-making that are related to the subject matter studied that year and that are appropriate to the level of maturity of the children in the class.

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[3] IBID. pp. 256-258

Illustrative Examples of Applications of Democratic Beliefs and Values

Central Focus	Democratic Rights, Freedoms, Responsibilities, or Beliefs Addressed	Illustrations of Opportunities
Awareness of self in social setting.	1. Right to security	1. Explore how rules make a room safe for everyone.
	2. Right to equal opportunity	2. Schedule every child to be a leader for a day.
	3. Respect of others' rights	3. Emphasize that when someone speaks we should all listen.
	4. Honesty	4. As teacher, reinforce honesty as exhibited by children.
The individual in primary social groups	1. Impartiality	1. When an altercation is reported, the teacher tries to find out exactly what happened before taking action.
	2. Freedom of worship	2. Stress that each family decides whether or not or how to worship.
	3. Consideration for others	3. Make clear that everyone has a right to his/her turn.
Meeting basic needs in nearby social	1. Respect for property	1. Discuss vandalism in neighborhood.
	2. Respect for laws	2. Demonstrate how laws protect the safety of people.
	3. Values personal integrity	3. Explore the importance of keeping promises.
Sharing earthspace with others	1. Pursuing individual and group goals	1. Explain how goods are exchanged with other places in order to meet the needs of the people.
	2. Government works for common good	2. Discuss how government is concerned about the unemployed and works to reduce unemployment.

III. Skills in the Social Studies Curriculum[4]

(Note: for complete text of this section see reference No. 1)

To have a skill means that one is able to do something proficiently in repeated performances. Such things are done automatically, almost without thinking about them. Reading, knowing how to find a book in the library, participataing in a group discussion, and finding a place on a map are examples of a few skills important to the social studies. They are critical to achievement, because without them the student cannot meet the requirements and expectations of the social studies program. Skills, then, are important vehicles in learning concepts, searching for information, gaining insight into values and beliefs, and in learning other skills.

Skill learning requires sequential development, systematic instruction, and practice. Using and applying skills is the best form of practice, provided enough supervision is given to preclude practicing incorrect forms of the skill. In an appropriate instructional sequence, simple variants of the skill are introduced at early levels, with more sophisticated applications in the upper grades. The sequence in which skills are introduced, developed, and reinforced should be determined by conditions unique to particular school populations and, therefore, must be developed at the local level.

The Task Force has searched the literature and has selected those skills that are most relevant to the social studies with particular emphasis on a problem-solving sequence. The list begins with skills that have to do with acquiring information, moves to skills that help learners organize and use information, and progresses to skills needed for effective social participation. Each of these categories of skills should appear in some form in the curriculum of every grade, K-12. The list can be used by teachers, curriculum developers, and local education agencies and committees as a guide in developing their own programs.

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[4] IBID. pp. 259-261

Essential Skills for Social Studies

Suggested strength of instructional effort: a. Minimum or none b. Some c. Major d. Intense

I. Skills Related to Acquiring Information

A. Reading Skills

1. Comprehension

c. Read to get literal meanings
a. Use chapter and section headings, topic sentences, and summary sentences to select main ideas
a. Differentiate between main and subordinate ideas
a. Select passages that are pertinent to the topic being studied
a. Interpret what is read by drawing inferences
a. Detect cause and effect relationships

a. Distinguish between the fact and opinion; recognize propaganda
a. Recognize author bias
c. Use picture clues and picture captions to aid comprehension
a. Use literature to enrich meaning
a. Read for a variety of purposes: critically, analytically, to predict outcomes, to answer a question, to form an opinion, to skim for facts
a. Read various forms of printed material: books, magazines, newspapers, directories, schedules, journals

2. Vocabulary

d. Use usual word attack skills: slight recognition, phonetic analysis, structural analysis
a. Use context clues to gain meaning
a. Use appropriate sources to gain meaning of essential terms and vocabulary: glossary, dictionary, text, word lists
a. Recognize and understand an increasing number of social studies terms

3. Rate of Reading

a. Adjust speed of reading to suit purpose
a. Adjust rate of reading to difficulty of the material

B. Study Skills

1. Find Information

a. Use various parts of a book (index, table of contents, etc.)
a. Use key words, letters on volumes, index, and cross references to find information
a. Evaluate sources of information--print, visual, electronic
a. Use appropriate source of information
a. Use the community as a resource

2. Arrange Information in Usable Forms

a. Make outline of topic
a. Prepare summaries
a. Make timelines
a. Take notes
a. Keep records
a. Use italics, marginal notes, and footnotes
d. Listen for information
d. Follow directions
a. Write reports and research papers
a. Prepare a bibliography

C. Reference and Information-Search Skills

1. The Library

b. Use card catalog to locate books
a. Use Reader's Guide to Periodical Literature and other indexes

a. Use COMCATS (Computer Catalog Service)
a. Use public library telephone information service

2. Special References

a. Almanacs
b. Encyclopedias
b. Dictionaries
a. Indexes
a. Government publications
a. Microfiche
a. Periodicals
b. News sources: newspapers, news magazines, TV, radio, videotapes, artifacts

3. Maps, Globes, Graphics

Use map and globe reading skills

a. Orient a map and note directions
a. Locate places on map and globe
a. Use scale and compute distances
a. Interpret map symbols and visualize what they mean
a. Compare maps and make inferences
a. Express relative location
a. Interpret graphs
a. Detect bias in visual material
a. Interpret social and political messages of cartoons
a. Interpret history through artifacts

4. Community Resources

a. Use sources of information in the community
a. Conduct interviews of individuals in the community
a. Use community newspapers

D. Technical Skills Unique to Electronic Devices

1. Computer

a. Operate a computer using prepared instructional or reference programs
a. Operate a computer to enter and retrieve information gathered from a variety of sources

II. Skills Related to Organizing and Using Information

A. Intellectual Skills

1. Classify Information

a. Identify relevant factual material
a. Sense relationship between items of factual information
b. Group data in categories according to appropriate criteria

b. Place in proper sequence:
   1) order of occurrence
   2) order of importance
b. Place data in tabular form: charts, graphs, illustrations

2. Interpret Information

a. State relationships between categories of information
a. Note cause and effect relationships
a. Draw inferences from factual material
a. Predict likely outcomes based on factual information
a. Recognize the value dimension of interpreting factual material
a. Recognize instances in which more than one interpretation of factual material is valid

3. Analyze Information

a. Form a simple organization of key ideas related to a topic
a. Separate a topic into major components according to appropriate criteria
a. Examine critically the relationship between and among elements of a topic
a. Detect bias in data presented in various forms: graphics, tabular, visual, print
a. Compare and contrast credibility of differing accounts of the same event

4. Summarize Information

a. Extract significant ideas from supporting, illustrative details
a. Combine critical concepts into a statement of conclusions based on information
a. Restate major ideas of a complex topic in concise form
a. Form opinion based on critical examination of relevant information
a. State hypotheses for further study

5. Synthesize Information

a. Propose a new plan of operation, create a new system, or devise a futuristic scheme based on available information
a. Reinterpret events in terms of what might have happened, and show the likely effects on subsequent events
a. Present visually (chart, graph, diagram, model, etc.) information extracted from print
a. Prepare a research paper that requires a creative solution to a problem
b. Communicate orally and in writing

6. Evaluate Information

a. Determine whether or not the information is pertinent to the topic
a. Estimate the adequacy of the information
a. Test the validity of the information, using such criteria as source, objectivity, technical correctness, currency

B. Decision-Making Skills

a. Identify a situation in which a decision is required
a. Secure needed factual information relevant to the decision
a. Recognize the values implicit in the situation and the issues that flow from them
a. Identify alternative courses of action and predict likely consequences of each
b. Make the decision based on the data obtained
a. Take action to implement the decision

III. Skills Related to Interpersonal Relationships and Social Participation

A. Personal Skills

a. Express personal convictions
a. Communicate own beliefs, feelings, and convictions
a. Adjust own behavior to fit the dynamics of various groups and situations
c. Recognize the mutual relationship between human beings in satisfying each other's needs

B. Group Interaction Skills

a. Contribute to the development of a supportive climate in groups
c. Participate in making rules and guidelines for group life
c. Serve as a leader or follower
c. Assist in setting goals for the group
a. Participate in delegating duties, organizing, planing, making decisions, and taking action in a group setting
b. Participate in persuading, compromising, debating, and negotiating in the resolutions of conflicts and differences

C. Social and Political Participation Skills

a. Keep informed on issues that affect society
a. Identify situations in which social action is required
a. Work individually or with others to decide on an appropriate course of action
a. Work to influence those in positions of social power to strive for extensions of freedom, social justice, and human rights
a. Accept and fulfill social responsibilities associated with citizenship in a free society

General Statement:

Statements provided below attempt to identify and describe selected economic concepts and relationships which seem appropriate for career education programs for primary grade (1-3) children.

I. Wants--Income Gap of Households: (Consumer goods and services)

The set of concepts treated as part of the wants - income gap (scarcity, choice-making, trade-offs) introduce young people to the idea that their families obtain most of the goods and services they consume through purchases in the market place. They become aware that money income is required for such purchases and that family income is limited. Given limited family income, children recognize that families must decide what consumer goods and services will or will not be purchased, and that trade-offs are associated with the final choices.

A. Knowledge and Understandings

1. When asked, a student will be able to identify verbally whether a familiar item should be classified as a good or as a service.
2. When asked what "unlimited wants" means, the student will verbally respond with an appropriate definition.
3. The student will name at least five market places where he/she can purchase goods and/or services.
4. Given a list of stores, the student will be able to select an appropriate one for purchasing a given item.
5. Given a specific item (i.e., candy, jump rope, model, ice cream), the student will be able to tell where he/she would go to purchase that item (it would be wise to restrict the list of items to goods and services which the student has listed as one of his/her wants).
6. Given three choices, a student will be able to select the expected price one would have to pay for the item.
7. Given a specific item (i.e., candy bar, pencil, squirt gun, comic book), the student will be able to tell approximately how much it costs and where to buy it.
8. Having selected an item from a list of choices, the student will be able to identify the money cost of the item and the "opportunity cost" of his or her selection.

B. Feelings, Beliefs, Attitudes and Values

1. Without looking at a stimulus (page of a catalog, etc.), the student will be able to name at least five items he/she wants.
2. Students will generalize that they have many wants. For example, when talking about a certain item or when discussing a particular choice situation, students will indicate that they really want "a lot of things".
3. Given a list of items that could satisfy personal wants, a student will be able to identify which item he/she wants the most and tell why it is his/her first choice.

4. Given a list of items, the student will be able to indicate whether a baby would want the item, whether he/she would want it, whether a parent would want it, and/or whether a grandparent would want it.
5. The student will be able to identify at least one reason why each of the following critical situations could happen:

   * You go to a friend's house for dinner, and they don't have dessert.
   * A friend is going to summer camp, but your parents said you won't be able to go.
   * You want to buy a toy with your own money, but your parents won't let you.
   * A friend gets an allowance ($.24 a week), but you don't get anything.

II. Wants--Income Gap of Government: (Public goods and services)

This set of concepts focuses on the idea that families use part of their income to pay (taxes) for goods and services provided by government. Due to the limited income of households, choices must be made as to the amounts and kinds of goods and services to be provided by government. Again, students are exposed to the effects or trade-offs associated with such choices.

A. Knowledge and Understandings

1. The student will be able to verbally list five items that are often supplied by government to households and/or businesses.
2. The student will be able to name five items the government must purchase to supply fire protection (i.e., fire trucks, hoses, fire hydrants, hats, ladders, etc.).
3. The student will be able to identify a source of income used by government to purchase needed items.
4. The student will be able to identify why a city cannot hire all the workers it would like and/or cannot supply all the goods and services it would like.
5. The student will be able to identify a possible opportunity cost of hiring the garbage collector in the following situation: A city wants to hire another firefighter, another teacher and another garbage collector but only has enough income to hire one.

B. Feelings, Beliefs, Attitudes and Values

1. Students will be able to give two reasons why some people would want the city to provide sidewalks (i.e., safety for children, make it easier to walk places, etc.), and students will be able to give two reasons why some people would not want the city to provide sidewalks (i.e., cost too much, have to shovel snow off the sidewlak in winter, takes up garden space, encourages children to play in front of their house, etc.).
2. After the class generates a list of things their school needs to provide, the student will be able to select the item he/she thinks is the most important and support his/her choice with two specific reasons.
3. Given a list of services a city could supply and given a description of a person, the student will be able to identify which item the person would want the most and support his/her selection with a specific reason.

III. Wants—Resource Gap:

This generalization again focuses on the major concepts of scarcity, choice-making and trade-offs. However, in this case, scarcity refers to resources rather than income as a limiting factor or constraint. Young people are introduced to the idea that goods and services must be produced before they can be consumed and that their production involves the use of resources, including labor services. Because resources are scarce, choices must be made as to what goods and services will be produced. The trade-offs associated with such choices are examined.

A. Knowledge and Understandings

1. Given a list of words associated with a house, the student can identify the items which would be classified as resources needed to build the house.
2. The student can list three resources needed to build a stop sign (i.e., metal, paint, wood, labor, tools, time, etc.).
3. The student will be able to match the appropriate definition with the term "limited resources".
4. When asked why we have to make choices on how we use our resources, the student will respond with an appropriate explanation (limited resources combined with many wants force us to make choices).
5. The student will be able to identify exmaples of opportunity cost from a list of items related to the use of wood.

B. Feelings, Beliefs, Attitudes and Values

1. The student will verbalize that due to limited resources we have to consider alternatives (opportunity cost) carefully when we decide to make something.
2. Students will state their opinions/feelings as they decide how to use a limited resource.

IV. Labor Income as a Main Source of Household Income:

This generalization introduces students to the idea that the income of most families is dependent on the sale of their labor services. Children also become aware that there are many differnt occupations and that different incomes are associated with different occupations. The relationship between type of occupation, income earned, and ability to purchase consumer goods and services is developed.

A. Knowledge and Understandings

1. Students will be able to tell what their parents' main source of income is.
2. Students will be able to list at least five different jobs they could perform to earn money income.
3. The student will be able to list three different ways families can increase their income.
4. The student will be able to rank a set of five occupations according to the amount of money income they generally provide.
5. The student will be able to identify which occupation in a set of three takes the most skill to perform.

6. The student will be able to distinguish transfer payments provided by the government to supplement incomes from wages and salaries earned.
7. The student will be able to tell why certain types of transfer payments are given to some households.

B. Feelings, Beliefs, Attitudes and Values

1. Students will be able to tell why they think one job is more appealing than another.
2. The student will be able to name one job he/she would not want and tell why he/she would not want it.
3. The student will be able to give one reason why some people would rather have a given occupation as compared to another.
4. The student will be able to give one reason why some people think our government should supplement some households' income.
5. The student will be able to give one reason why some people do not think the government should supplement some households' income.

V. Specialization, Productivity and Interdependence: (Narrowing the Wants Gap)

This set of concepts is designed to help students understand how divisional labor and specialization can lead to increases in workers' productivity and income. Also developed is the relationship between increased specialization and increased interdependence among workers and between workers and consumers.

A. Knowledge and Understandings

1. The student will be able to list three different ways workers in public schools specialize.
2. The student will be able to name two specialized tasks used to produce a given product.
3. The student will be able to give two reasons why specialization increases and/orimproved output.
4. The student will be able to identify one reason why specialization leads to increased interdependence.

B. Feelings, Beliefs, Attitudes and Values

1. Students will show that they value specialization by suggesting cooperative ways to solve problems.
2. Students will tell how they would feel if another person they depended upon failed to do his/her job.

IMPROVING SOCIETY THROUGH INVENTIONS

MATERIALS/RESOURCES

Invention "Ingredients"

Construction Paper for Preliminary Design

Pencils

Space for Invention Construction

DETAILS

LEVEL: Middle School/ Junior High

TYPE: Entire Class
Small Groups

TIME: Three Class Periods

INSTRUCTIONAL OBJECTIVE

After analyzing reasons why people choose to be inventors, students will design an invention and make predictions about its present and future use.

PROCEDURES

PRIOR TO BEGINNING ACTIVITY

Teacher and students should set aside a place in the classroom to collect materials that can be used later on for "inventions." Items such as wood scraps, plastic cloth, doweling, brushes, paints, nuts, bolts, wire, springs, cardboard tubing, etc., should be collected. Specific invention "ingredients" will be added to the collection once the activity gets under way.

1. Brainstorm with students names of inventors who have improved our lives because of their genius, dedication and untiring pursuit of goals. Some names that will naturally emerge in the discussion are the following:

   Thomas Alva Edison
   Jonas Salk
   Robert Fulton
   Walter Reed
   Wright Brothers
   Luther Burbank
   Emory Land
   Henry Ford
   Leonardo daVinci
   Madame Curie
   Guglielmo Marconi
   Cyrus McCormick
   Eli Whitney
   Alexander Graham Bell

2. Discuss reasons why people choose to be inventors:

   - To satisfy a natural curiosity
   - To accept a challenge
   - To pursue a personal goal
   - To satisfy a need of society
   - To improve the standard of living
   - To become famous
   - To pursue a personal talent or skill

CAREERS

PROCEDURES Continued

3. Guide students to realize that some inventors are never fully appreciated during their lifetime. Their scientific breakthroughs are often just the beginning of new fields of study and exploration. Other inventors are not always accepted by their peers. Often their seemingly endless experiments are considered to be wasted time and frivolous folly.

4. Arrive at the conclusion that inventions, whether specifically intended to or not, fulfill the needs of people.

5. Explain to the students that they are going to be divided into small groups. Their first task will be to choose a group leader and a secretary. Next students will draw up a list of needs (as they perceive them based on present day problems). A group decision will then be reached as to an invention that could be designed to meet a particular need. Following that, the students will identify tasks that need to be accomplished in order to create the invention.

   - Make a preliminary design
   - Identify parts
   - Collect materials
   - Construct invention
   - Field test design
   - Revise or change working parts
   - Test again
   - Present invention to class
   - Predict present and future use of invention

6. Break students into small groups. If necessary, they might need to be guided to channel their initial discussions into certain broad areas:

   household inventions
   outer space inventions
   communications inventions
   health inventions
   environmental inventions
   leisure time inventions

7. Arrange at least one full class period when nothing but preliminary plans are worked on by the students. It is important that they work cooperatively and the interpersonal skills necessary to reach group decisions will be a gradual process.

8. Make materials/ingredients available, but allow small groups to bring in their own things as well.

9. Circulate from group to group helping students to solve problems. Assist in the construction process when needed.

10. Plan a special viewing of completed inventions as the activity culminates. Teacher should make special paper plaques giving recognition to the inventors. Parents may wish to view displays as well.

CAREERS

SUPPLEMENTARY RESOURCES

TEACHER

"Getting It Started, Technology for Children." New Brunswick, NJ, Curriculum Laboratory, 1974 (BICEP 3072).

STUDENT

Davidson, Margaret. Louis Braille, The Boy Who Invented for the Blind. New York: Hastings House, 1971 (Osterville).

Johnson, Ann Donegan, The Value of Foresight - Thomas Jefferson. LaJolla, CA: Values Communications, Inc., 1979 (BICEP 9257).

FOLLOW-UP ACTIVITIES

Students could investigate their immediate surroundings for someone who has invented something. This person could be invited to the classroom to discuss his/her invention and what this life style and work role entails.

The study of inventions can also lead to a study of the U. S. Patent Office and regulations to protect the creative talents of individuals.

Students might also wish to design a class chart of inventions that are presently being worked in relation to subjects studied in school; e.g., science - cure for cancer, social studies - formula for world peace.

TEACHER'S NOTES

CAREERS

ARTICULATION OF CAREER EDUCATION

During the past several years many school districts have implemented career education and attempted to fulfill the requirement of chapter 280, Code of Iowa. The implementers have taken a number of different approaches to career education, and the results have varied from highly successful to quite unsuccessful.

All educators involved have faced one problem in particular--the articulation of career education. The complexities with articulation can be seen in its definition which includes vertical, horizontal and instructional articulation--vertical articulation being the articulation between grade levels and phases of career development, horizontal articulation being articulation between the learning outcomes one to the other, and instruction articulation being articulation between subject areas at the same grade level.

A commonly accepted concept of career education is that the goals and objectives should be included and integrate into the regular school curriculum at all grade levels and in all subject areas rather than becoming a separate subject or being limited to certain grade levels. This position makes articulation of career education especially difficult. If career education is to be properly articulated, however, the goals must be accomplished through careful planned development and implementation.

The keys to successful career education efforts have been planning and implementation that reflects the purpose of career education. That is, the primary role of career education is to facilitate career development concepts, skills, and attitudes. Also, the role of career education is to make an academic subject matter more relevant and concrete. The first approach involves the process of "fusion" in which new objectives (i.e., learning outcomes) are facilitated via curricular and guidance methods and techniques. The second approach is often referred to as "infusion". This involves the use of career related instructional content and topics (i.e., "means") to facilitate existing subject matter knowledge and academic skills.

Articulation, vertical articulation, horizontal articulation, and instructional articulation are defined as follows:

> Articulation is the manner in which the classroom instruction, curricular activities and instructional services in the area of career education are interrelated and interdependent; the aim being to facilitate the continuous and efficient instructional program of the students.
>
> Vertical articulation allows a student to move from one grade level to another advancing the educational ladder, experiencing career awareness, accommodation, exploration and preparation as part of her/his development progress.
>
> Horizontal articulation refers to the efforts to relate the components of career development learning outcomes one to the other at the same instructional level.
>
> Instructional articulation refers to combining the unique career education objectives with the objectives of other curricular subjects into one curriculum with blends of a proper mix to meet the student's educational needs.

Thus, an articulated career education initiative is one in which each student participates in a sequence of planned educational experiences which result in his/her achieving the overall goals of career education upon completion of their educational program.

STEPS IN THE DEVELOPMENT AND IMPLEMENTATION OF AN ARTICULATED CAREER EDUCATION PROGRAM IN A LOCAL DISTRICT*

Specific steps for development of an articulated career education effort are presented below:

1. Review State Requirements

   The Code of Iowa and Iowa State Department of Public Instruction regulations require career education programs in all Iowa school districts.

2. Appoint an Ad Hoc Planning Committee

   The district administration should appoint a small ad hoc committee to plan the initial steps in the development of the career education initiative. That committee can be quite small (3-5 persons) but should include both elementary and secondary school representatives.

3. Designate a Local Ad Hoc Career Education Planning Coordinator

   Even though the planning committee will be responsible for initial planning, a single person to serve as coordinator will be needed. That coordinator may well be the chairperson of the planning committee. If possible, the ad hoc coordinator should be someone who is already familiar with the concepts of career education and who will provide leadership for initial career education planning.

4. Review of Career Education Literature by the Planning Committee

   One of the first tasks for the planning committee will be for them to familiarize themselves with career education or review the concept and research results. Voluminous information about career education has been published the past few years. The committee should obtain and study appropriate materials with the assistance of the AEA representative.

5. (Optional) Visit School Systems That Have Recognized Career Education

   The planning committee should take advantage of the experience of school districts that have already successfully implemented career education. An effective procedure is to visit those districts and talk with both administrators and teachers.

6. Adopt or Develop a Career Education Definition and Philosopoy

   It is important that each school district adopt or develop a definition of career education as well as a related philosophy. That definition can then serve as a focus for the development of the career education goals.

7. Study and Discuss the Matrix which Conceptualizes the Career Education Development of Students

This step involves studying and discussing the arrangement of career education into manageable components, and the arrangement of each component into a logical sequence of student development.

In that matrix, career education has been divided into seven areas or domains:

Concept of Self
Occupational & Educational Concepts
Concept of Self and Society
Economic Concepts
Interpersonal Relationships
Work Attitudes & Values
Decision-Making Skills

In that chart, the career education development of students is divided into four stages:

Awareness	(K-3)
Accommodation	(4-6)
Exploration	(7-9)
Preparation	(10-12)

8. Board of Education Adopt Definition and Plan (Model) with Commitment of Time and Funds for Implementation

Up to this, the steps toward a career education initiative have consisted of preliminary investigations and planning. Now it is time to get board approval of the effort, as well as approval for expenditure of any necessary funds.

9. Appoint a Career Education Leader or Coordinator

Thus far, work on the career education project has been accomplished by a temporary committee and coordinator. The next step is to appoint a career education director or leader. The planning committee may be used to develop specifications and qualifications for the position of coordinator, as well as to screen candidates. This position can be either full- or part-time depending on the size of the district and other circumstances.

10. Appoint a Career Education Committee

In Step 2, a small ad hoc career education committee was appointed. That committee served to do some initial planning and to get the project started. It is now time to appoint a larger, permanent committee. This committee should include community as well as school representatives. That is especially important because a good career education project will include extensive community involvement.

MAJOR EVENTS FOR AN ARTICULATED CAREER EDUCATION INITIATIVE

Major events in the development of an articulated career education initiative are listed below.

1. Administrative Commitment

   If Career Education is to be articulated, the administration must be committed to providing leadership for articulation. Without top-level leadership, articulation has little chance of taking effect.

2. Adoption or Development of a Definition and Philosophy of Career Education for the School System

   Career education means different things to different persons. Individuals have many varying philosophies of career education. If an articulated career education effort is to be implemented, a definition and philosophy of career education must be adopted or developed, understood and accepted by all participants.

3. Study the Framework for Career Education

   To facilitate articulation, the career education effort is organized into a logical framework. The framework for the articulation project involves vertical organization of career education into four sequential levels of development: Awareness (K-3), Accommodation (4-6), Exploration (7-9), and Preparation (10-12). Horizontal organization includes domains for each developmental level: self; self and society; interpersonal relationships; decision-making skills; occupational and educational concepts; economic concepts; and work attitudes and values.

4. Adoption or Development of Specific Objectives

   Based on the overall definition and philosophy of career education, specific objectives stated as student outcomes, should be developed or adopted.

5. Discussion of Objectives Assigned to Levels and Areas

   Once the overall framework and objectives have been established, the objectives should be discussed for their placement in the categories within the organizational framework.

6. Selection of Activities

   At this point the broad planning for articulation has been completed. Now specific career education classroom and community learning activities for each objective and at each appropriate grade level must be selected. Usually those activities will be from various sources available through the area education agencies and state education agency.

7. Implementation

   Once the activities have been selected, they will be implemented in the instructional program.

8. Monitoring

After implementation has begun, the career education efforts should be monitored to see that the activities that were planned are actually being carried out to achieve the specific objectives.

9. Evaluation of Outcomes

The primary criterion for judging success of an articulated career education project is, of course, achievement of the objectives by students. The program should be evaluated by measurement of student outcomes.

10. Adjustment of Program

Once the career education project has been implemented, it will probably need to be changed and adjusted over time. Some adjustments may be based on information received from monitoring the program and measuring student outcomes. Other adjustments may be based on changing career education concepts and priorities.

11. Implement Staff Development Programs on Concepts and Infusion Process for Career Education

In order for teachers, counselors and administrators to effectively participate in the career education effort, it is essential they all receive inservice education in career education concepts and practices. (The Cashmere Inservice Modules from Cashmere, Washington could be used in this inservice program.)

12. Make Definition and Plan (Model) Available to Students, Parents, and Community Representatives for their Review

For the sake of public relations and to gain support, it is important that students, parents, and the community be well informed about the concepts and plans for the career education initiative. That step is important for all curriculum changes, but it is especially important in the case of career education since it involves all students at all levels and includes considerable community involvement.

13. Establish Priority Levels of Specific Career Education Objectives for Each Stage

There are many objectives of career education. The importance of those objectives may well vary from school district to school district. Each district should establish their own priorities for the objectives.

14. Have Priority Objectives Reviewed by Students, Parents, and Community Representatives. When Appropriate, Modify Priorities as a Result of that Review

Again, review by students, parents, and community representatives is good public relations, should gain needed support from those groups, and should result in priorities that reflect the wishes of the community.

15. Coordinate Priority Designation of Objectives Among Grades and Subject Areas to Facilitate Articulation

The results of Step 13, prioritization of objectives, provides the blueprint for the career education initiative. Now this blueprint must be superimposed on the entire school curriculum. This involves deciding in what subject area and at what grade level each objective is to be taught. This is an extremely important step, particularly if the result is to be a well-articulated program. This step assures that each objective is appropriately included, the objectives are included in logical sequence, and there is no unnecessary duplication

16. (Optional) Administer the Career Education Inventory as a Pretest

A Career Education Inventory, which measures students' achievement in each of the Career Education domains, was revised for use with students in grades 3, 6, 9, and 12.

17. Select or Develop Learning Activities to Accomplish Objectives

Once the career education objectives have been reviewed, discussed and assigned to the appropriate grades and subject areas, learning activities to accomplish those instructional objectives must be selected or developed. The development of learning activities is difficult and time-consuming, so the task will be much easier if teachers will use the many "proven practices" for classroom and community activities. (The Job Shadowing Handbook and the Handbook for Interviewing Community People are available for schools.) The classroom activities from the National Center for Career Education and many other commercial and noncommercial activities are also available at the area education agencies for use by teachers. Other commonly used activities are Project Discovery and instructional television programs. With this step, assess activities presently implemented.

18. Monitor the Career Education Activities Through the Use of a Process Monitoring Instrument

After planning and implementing a career education initiative, it is useful for the schools' administrators to monitor the program to determine the instructional activities actually being carried out. To attain specific objectives for that purpose, the Career Education Articulation Project developed a monitoring process instrument.

It is suggested that the instrument be administered periodically. The results will assist in determining the career education activities being carried out at various grade levels, as well as the career education objectives being met.

19. Evaluate the Impact of the Career Education Program on Students

The ultimate measure of the success of a program is, of course, in terms of the effect it has on students. Success of a career education project should be measured to the extent to which student outcomes meet the objectives of the project.

The Iowa Career Education Inventory was designed to measure student attainment of the Iowa career education objectives and is administered at grades 3, 6, 9, and 12. The Inventory is built upon a matrix of seven domains and the four career development levels. The design of the instrument is based upon recognizing each content domain as an independent component of the inventory.

20. Evaluate and Revise Classroom Learning Activities as Appropriate

Evaluation and revision of career education activities should be a continual process on the part of each teacher. Some activities will not work as well as anticipated and will need to be revised. New activities will be discovered or developed and used in addition to, or as a replacement for, other activities.

21. Administer Follow-up Survey to Graduates

A good indication of the effectiveness of a career education is what happens to the students after they graduate, and the opinions of those graduates. It is suggested that, as part of the evaluation of the career education effort, an annual follow-up survey of graduates be conducted.

22. Analyze Results of the Evaluation and Modify Program, as Appropriate, to Meet Goals

Evaluation and program review should be an ongoing process. On at least an annual basis all the evaluation data (Monitoring Process, Inventory, and Follow-up) should be examined to determine how well the program is operating. Based on the evalution results, the program should be modified when appropriate.

*Revised from the Articulation Guide developed under an exemplary grant from the Department of Public Instruction.

List of decisions

The following questions begin to outline the decisions that need to be made by a district. The list is by no means all inclusive, however, it will be a place to start. Hopefully, this list will provide some structure to your decision-making process.

Who will make the decisions and the timeline for making those decisions is something that should be made early in the planning stages. The list of decisions is organized by chapter to assist districts with understanding the content of each section of the guide.

Chapter IV Strategies of Instruction

*How will staff development inservice be arranged? Who needs to be involved and for how long?
*How much "out of class" time will teachers be given to write activities or do other necessary changes/modifications?
*What arrangements will be made for staff wanting/needing to develop curriculum changes?
*What assistance will the AEA provide in the curriculum revision process?
*What process is used to ensure K-12 curriculum articulation?
*What are the administrations feeling on the advantages and disadvantages of infusion versus direct instruction and/or separate programming?
*Will you address all domains, at all levels, in all subjects, by all faculty?
*Does your district agree with/or have plans for the incorporation of the suggested subject matter changes?
*What is your curriculum revision process and cycle?
*Who has the major responsibility for the curriculum revision process?

CHAPTER 5

Special Components

'There is nothing permanent except change'.

-Heraclitus

THOUGHTS FOR CHAPTER 5

"If a student cannot give a good answer to the question of why he is studying what he is studying, he probably should not be studying it."

- Arthur Foshoy

* *

"Education is the apprenticeship of life."

- Robert Eldridge Aris Wilmott

* *

"Our business in life is not to get ahead of other people, but to get ahead of ourselves.

- Maltbie Davenport Bobcock

* *

"The wind and the waves are always on the side of the ablest naviagators."

- Edward Gibons

* *

"An idea that is not dangerous is unworthy of being called an idea at all."

- Nicholas Ling

* *

"That which is used, develops. That which is not used wastes away."

- Hippocrates

* *

"What I hear, I forget
What I see, I remember
What I do, I know"

- Anonymous

* *

SPECIAL COMPONENTS - CAREER EDUCATION

Career development within a career education plan requires some special considerations in order to be comprehensive that can not be "infused" into the existing curriculum as classroom activities. Support is needed in the form of materials and community resources and, of course, a guidance plan is needed. Attention should be given to establishing career education resource centers, a plan to utilize the community resources in terms of people and places, and a guidance process which will help students with decision-making in respect to tentative careers and choosing the courses that will support the student's career goals. Experiences for special education students and experiences relating to multi-cultural/non-sexist education are normally emphasized with special components in career education.

The examples of special components used in the following are actual projects that school districts implemented as Career Education Mini-Grant projects during the 1982-83 school year. Additional information is available via the Department, Career Education Division.

COMMUNITY AND SCHOOL

Interstate 35 Work Experience Program - Interstate 35. The program provided experiences to help students integrate work values and skills into their lives to make intelligent choices as they develop their career blueprint. An additional objective was to establish the program as an integral part of the school program and as an integral part of the community. The Experience Based Career Education (EBCE) did accomplish these objectives with a great deal of success.

The various types of careers discussed were presented without reference to a specific race, sex or religious group. Placement on work sites were also non-discriminatory. Boys and girls were given equal opportunity to pursue careers in which they had shown interest. Seven students, three teachers and one AEA consultant conducted the program.

Because of the good evaluation of all parties involved, the program will be continued and expanded next year. The community resource people and the school benefited from the mutual working relationship with the students. An article was written for the monthly school newsletter which was sent to every household in the school district. The career education consultant rated the program excellent, "well designed and implemented".

Pilot Demonstration of Partnership Activities - Area Education Agency 6. The objective was to demonstrate a pilot partnership program between one school and one business or industry at one site for the purpose of increasing learning experiences for youth. Non-traditional role models for speakers were recruited. When students toured the plant, they saw men and women of various ethnic groups at work.

During the 83-84 school year, both workshops for industrial arts and business/office practice will be repeated. Plans will involve community partners, tours and additional inservice will be scheduled.

The project provided teachers with an opportunity to interact with each other and representatives from the business community. Three hundred eighty-seven (387) students were effected by the project. Eighty-seven (87) teachers and (60) business persons participated. It was a very successful and exciting project.

Vocational Aides for Trainable Mentally Handicapped Students - Lakeland Area Education Agency 3. The objectives were to provide individual supervision to students in training experiences in the community and also to provide employers with an awareness of the potential these students have to being productive employees. Three aides were hired to do supervision. Eleven (11) students got the chance to explore careers in community job site. All of the students showed improvement in work-skill areas and three progressed to the point of continuing in a job independently. Parents, employers and the students all gained a lot by the experience. Continuation, however, appears doubtful unless funds can be found to support the program. The reviewing consultant was very impressed with the techniques used in the project as well as the resulting positive interactions.

Vocational Articulation with the Private Sector - Area XV Indian Hills Community College. The project had eighty (80) secondary students, sixty-eight (68) educators and thirteen (13) private sector employers participating. The articulation of six vocational-technical programs was addressed. The six areas were agriculture, welding, machine operator, electronics, drafting and secretarial/clerical.

Two seminars were conducted with membership from the three targeted groups for the purpose of articulating curriculum of selected secondary and post-secondary technical programs. Competencies were developed for the purpose of eliminating bias and stereotype. The competencies were then incorporated into the articulation process.

Local education agencies in Area XV are piloting the competencies in each of the six selected curriculum areas. A series of six publications for the selected areas identify competencies that are to be articulated between secondary and post-secondary programs. The reviewer stated, "the local district is extremely pleased with the products generated by this activity".

Job Shadowing - Fort Dodge. This multi-district project was aimed at giving rural students an opportunity to job shadow in Fort Dodge. Special attention was given to potential dropout students. Equity concerns were considered and the handicapped students were involved. The Fort Dodge District facilitated the staff work, placement activities, the job shadowing administration and evaluation. A booklet was produced entitled Job Shadowing in Rural Areas.

Four rural districts participated. Four hundred fifty-eight (458) students participated in the job shadowing experiences. Three hundred eighty-eight (388) community resource people provided the sites and where the personnel shadowed. The project is, indeed, outstanding and demonstrated an initiative and sharing among school districts which is rare.

EQUITY

It is important for students to seek themselves reflected in their school environment, whether it be in the curriculum, bulletin boards, instructional materials, or in the staff membership. This is important for all students regardless of their sex, race, cultural background or disability. Students who do not see themselves reflected often feel alienated from the educational process and may soon question their own worth.

Schools must strive to create a learning atmosphere devoid of sex, race, handicapist and cultural stereotypes, prejudices, discrimination and separatism. Knowledge of the complex causes and consequences of prejudice and discrimination must supplant existing myths and misconceptions. The stability of our nation depends in large measure on the understanding and respect derived from a common educational experience among diverse racial, socio-economic, ethnic and cultural groups, as well as both sexes.

The school administrator, at the central office or building level, is responsible for carrying out school board policies, providing supervisory leadership for the rest of the staff, and making everyday decisions to keep schools running smoothly throughout the year. Although the school board adopts policies and plans on multicultural, nonsexist education, the administrator determines by his or her support and leadership whether those policies and plans are translated into visible, viable programs and curriculum activities in the schools.

Individual schools and their commitment to equity obligations are not exempt from human nature. The administrator's support and actions lessen public controversy over equity obligations and create popular support. A leader's indifference or passivity, however, often prolongs public controversies and allows a fragmented approach to a school's commitment to civil rights obligations. For this reason, the public support of superintendents and building administrators is strategic to successful implementation of multicultural, nonsexist education plans.

School administrators can show leadership and support for multicultural, nonsexist concepts in many areas. Employment and personnel policies, as well as staff handbooks, should reinforce such concepts. Student discipline policies and student handbooks should foster positive intergroup relations and mutual respect among students and staff regardless of their sex, race, national origin or disability. As supervisors of instruction, it is important that administrators ensure that multicultural, nonsexist goals and objectives are included in curriculum guides, and that course outlines include the contributions, perspectives and interests of diverse cultural groups, women and men, and the disabled. As supervisor of facilities and the budget, it is important to ensure that all students have equitable access to school buildings, facilities and monetary resources.

One of the most effective steps administrators can take is to include educational equity concepts in a visible way in program and staff evaluation. This step implies to staff that an important aspect of a quality educational program is the degree to which it reflects cultural diverrsity and the roles open to men, women and the disabled in today's society.

All school districts are required by law to have a Title IX, Section 504, or multicultural, nonsexist education coordinator to coordinate equity activities in the educational agency. The most effective coordinators are those who have the active encouragement and support of the district administration, and the authority necessary to achieve their goals and to see that the district's multicultural, nonsexist education plan is implemented.

Last, but not least, it is important that administrators work to the maximum degree possible to model multicultural, nonsexist behavior. The old adage, "actions speak louder than words" applies very appropriately. Students and staff are more apt to do as you do, rather than do as you say. All administrators should use culturally sensitive and sex-inclusive language in both oral and written communications. The ability to operate effectively in multicultural, nonsexist environments is no longer just a desirable skill in school administration. It is a necessary one.

Uniting the multicultural, nonsexist curriculumwith career education and guidance is relatively easy, due to the number of mutual goals. All share the goal of helping students develop positive self-images, effective human relationships and decision-making skills to help them assume the rights and responsiblities of society.

Students leaving our schools will encounter physical, attitudinal and behavioral differences between themselves and others. They must learn to appreciate the strength and enrichment embodied in those differences. They will need attitudes and skills which will help them build viable working relationships with people whose values do not mirror their own, and enable them to understand and cope with inevitable societal change. Career Education and Guidance, which deal largely with the affective domains, are well-suited to help students develop these skills and attitudes for healthy interpersonal and intergroup relations.

The culturally sensitive counselor knows enough about diverse cultural groups to be able to compare and contrast value systems without labeling cultural differences as deficiencies. They have undertaken the difficult but important task of stepping outside their own cultural backgrounds to examine themselves as cultural beings. They have looked at personal patterns of thinking, assumptions and values that could impede or derail advising and counseling activities without their awareness.

Recognizing that sex-role attitudes are largely derived from social conditioning, nonsexist counselors work to be sensitive to sex-role stereotypes and the impact that traditional expectations may have on students' self-concepts and aspirations levels. They analyze their personal values and motivations about sex-role stereotyping and are able to monitor them when working with counselees. Nonsexist counselors encourage both females and males to develop into adults who can comfortably display a full range of human behaviors. They want students to comfortably display assertiveness, gentleness, independence, strength, tactfulness, logic, intuitiveness and self-confidence, without being concerned whether the behavior is gender-appropriate, but whether it is humanly appropriate. This is basic to sex-fair counseling.

In the world of work, job titles and average earnings are still statistically tied to race, gender and disability in a way that reflects poorly on our national ideals of equality in education and employment.

Just as the career education counseling program readies students to leave the community for the new climate of a postsecondary institution or the workplace, it should also ready them to live and work in a multicultural, nonsexist environment. In this shrinking world, the more successful and self-fulfilled adults of tomorrow will be those who, as students, learned to accept and appreciate diversity, be open to new experiences unblocked by stereotypical responses, cope with change, and use the benefits of cultural pluralism for themselves and others.

Four major goals of a Multicultural-Nonsexist approach to career education and all other curriculum are the following:

To help students develop positive and realistic self-concepts regardless of race, sex, cultural background, or disability. This self-concept should be based on understanding and valuing their personal and group identities, as well as a greater awareness of their values and the relationship of these values to everyday decisions and actions.

To help students understand that both sexes, diverse racial/cultural groups, and the disabled have made valuable contributions to the heritage of the United States, and that this diversity enriches and strengthens our country. Inherent in this goal is exposing students to a broad range of career roles and life styles regardless of their sex, race, national origin or disability.

To help students understand that all persons have common needs, feelings and problems, while at the same time stimulating their respect for the uniqueness of each individual and cultural group. Inherent in this goal is the awareness that racism, sexism, cultural bias, and bias toward the disabled are social phenomena.

To help students develop positive interpersonal and intergroup communication techniques, as well as a motivation to play an active role in solving societal conflicts. Inherent in this goal is understanding that present societal conflicts are a consequence of centuries of cultural and group conditioning, and that improved human relations depend on increased intergroup and interpersonal communication, understanding and cooperation.

GENERAL INTEREST

Career Education Activities for Aerospace Education - Mason City. The objective was to conceptualize the impact of aviation upon society and to gain knowledge of exciting careers in aerospace. Slide/tape and video information programs were created on fifteen different topics. An aerospace fair was also implemented and all students had the opportunity to visit the fair during the course of a day. Female pilots were featured as speakers. Three hundred one (301) secondary students participated in the fair. Four instructors were involved in the project. The materials were involved in the project. The materials were and will be used in ninth grade science and are available for general use by other teachers and schools.

The consultant reviewing the grant stated, "---was a resounding success in the classroom and is being looked at by the Federal Aviation Agency as a model that could be disseminated nationwide".

World of Manufacturing - Jefferson. One hundred eighty (180) students participated in the project. The objectives were to enable students to understand the functioning of industrial technology, and to gain skills and knowledge useful in occupations. Also, careers were promoted as available to all members of the class regardless of age, sex, race, or socio-economic status. Students engaged in role playing of many occupations. The project complemented the school's Project Discovery, job shadowing and activities provided in the career center. Students did well on an examination testing course objectives. Parents quizzed indicated that they held high acclaim for the world of manufacturing course.

Linn-Mar School Store - Linn Mar. The object was to explore all phases of business including management, accounting, clerical, merchandising and sales. Activities were to set up the store, interview potential employees, advertise and operate the store. Selection of students to work at the store included selected criteria that did not allow discrimination but promoted equal opportunity. It will be ongoing and serve special education and regular students. The reviewer stated a concern as to how the students are paid. Nine students benefited. Four teachers administered the program.

Health Careers Awareness - Area Education Agency 6. Ten careers in the health field, for which there is a high labor market demand, were identified. Research packets on each were developed for upper elementary and junior high students. One objective was to portray a variety of workers through print and non-print materials. In preparing the packets, every attempt was made to include diverse ethnic groups and handicapped persons. The packets are available for students and teachers to investigate health careers. The packets were exhibited at the health fair. Fifty (50) elementary and fifty (50) secondary students have used the materials.

Future Leaders Forum - Fort Dodge. This multi-district project benefited one hundred fifty (150) students in the talented and gifted category. Twenty teachers were involved in the project. The forum covered many possible careers in which this student group would be interested and not normally presented for their consideration. Student evaluations were very good and media provided good coverage of the event. It was quite successful.

Career Awareness Program - Shellsburg. This program was to initiate a "career awareness center" for use by subject area disciplines and to encourage non-sexist attitudes in respect to occupations.

Project activities included research for selecting materials, purchase of materials, development of an awareness program, use of community resources, use of IPBN (public TV) career programs, and student attendance at career days. Multicultural, non-sexist materials and the use of materials by all students was encouraged. Career information is being integrated into subject matter areas in all grades. The consultant reviewing the project rated the project as successful and one that will increase in activities and effectiveness with the continuance of the program.

One hundred ninety-one (191) elementary and one hundred ninety-six (196) secondary students benefited from the project. Thirty-three teachers plus two library volunteers along with one aide were involved in the task of this mini-grant.

Improvement of Career Center at Jefferson High School - Jefferson. Three hundred (300) secondary students and thirty-two staff members participated in the project. The project provided a wide variety of up-to-date career information, free of sex and racial bias and stereotyping, to the Jefferson High School students. These materials contributed to the accomplishment of the Iowa Model Career Education goals that the district has adopted. Groups of representatives of the student population reviewed the materials and gave endorsement to purchase and retain them. The materials received heavy use by students. Teachers were made aware of the materials and provided incentive for students to use the career center. The consultant examining the project felt that it was quite successful.

Career Center Development - Pleasant Valley. The development of this career center benefited eight hundred seventy-five (875) secondary students. Twelve teachers incorporated the center's materials into their teaching. The establishment of a career education center and the selection of quality materials for student use helped to meet the district wide goals and objectives for career education. The reviewer said that overall the project was successful in establishing a center.

GIFTED AND TALENTED STUDENTS

The following overview was drawn from "Identifying Students for Gifted and Talented Programs", by Shirley K. Curl, AEA 5, and from an article by Dr. Wesley A. Apker, executive director of the National Association of State Boards of Education.

Most educators have accepted the philosophy that every individual should be given an opportunity to develop his/her full potential. We must continually strive to attain this goal. Gifted students are often not motivated in the educational setting to develop their full potential. If their abilities are not recognized they most go unnoticed and unchallenged.

In Superior Court Case 822584, Judge Alfred Gitelson of Los Angeles County stressed the needs for providing educational opportunity commensurate with a student's ability to achieve.

> "Equal education is the foundation of the right to be a human being. . This does not mean that any gifted child or any child having a greater capability to learn may or shall be deprived of his or her opportunity of learning more. It does mean that every child shall have the equal opportunity to learn to the best of his or her ability. That opportunity must be made available to all on equal terms." (As quoted in "The Bulletin of the Gifted Children's Association", San Fernado Valley, Inc., May, 1971.)

Equal education has been interpreted by some to mean that all students should have the same educational experiences. Thomas Jefferson is often quoted as hving said, "There is nothing more unequal than equal treatment of unequals." Gifted students who possess advanced skills and a greater amount of knowledge than their classmates must be given differentiated educational opportunities to challenge and motivate them, thus enabling them to learn at a rate of which they are capable.

The importance of correctly identifying our gifted and talented youth must not be minimized. If an educational program is to be appropriate for the gifted, their identity and unique needs must be known. Ruth Martinson in her book, The Identification of the Gifted and Talented, says:

> "The values to the gifted individual and to his society which accrue from identification and subsequent educational opportunities are well recognized. The accomplishments of the gifted exceed those of like numbers from the general population, both in quality and quantity. Examples of distinguished perforamnce can be documented from the time of the founding of the Republic and cut across many fields. We are all better off because of the contributions of such people as Racel Carson, Ralph Bunche, Jonas Salk, Thomas Jefferson, and Mary Bethune. They all had a lasting impact on education, ethics, government, and on life itself. Vast improvements are easily ascribable to the work of a Salk or an Edison. The dollar value of their work is impossible to estimate, but it is obvious that far more economic benefits accrue from their output."

The Future

From coast to coast, concern for the education of our country's gifted children continues to grow.

Both teachers and parents, in greater numbers, are beginning to question the logic of an educational system that, in effect, "ignores" its most able students.

Another factor that has led to a re-examination of our educational priorities is the national decline in standardized test scores.

Although these trends - and others - have combined to create a more favorable environment for the education of the gifted child in the 1980s, certain barriers to providing special programs for gifted children have not disappeared. They have, however, changed a little.

In the past, for example, many persons thought that programs for the gifted child were, in certain ways, discriminatory. Now, although these programs are viewed in a more positive light, they still must compete with "basic education" and with programs in other categories of special education, for example, programs for the handicapped and the bilingual.

One thing is certain: The key to a stable future for programs for the gifted depends on how well these programs compete with other programs for local and state funds. To succeed, programs for the gifted must get their fair share of the money that is made available for education.

Limitations on taxes and our citizens' poor opinion of public schools confront education with serious problems. In spite of these problems, programs for the education of the gifted can survive. In fact, they can even expand. But it will take effort and ingenuity on the part of many to keep these programs alive, robust, and growing at a pace that meets the demand.

Specifically, who must do what if these hopes are to be realized?

* To begin, state and local leaders must learn to use appropriate resources that already exist. Educators usually assess the needs of their students before they begin developing a program to meet those needs. It would be helpful to everyone involved if educators also learned to assess in advance the resources they already have available - "on hand" money or expertise they can use to convert sound theory into practical reality.

* In working with the gifted, it's one thing to adopt someone else's idea for a program; it's another thing to master the art of adapting someone else's program to the unique needs found in a particular community.

* Educators should remember that every school and every community has certain resources available that can be used to educate the gifted. Unique talents and special expertise, for example, already are "on staff" in the person of salaried personnel.

No one would suggest that educators are going to find enough money or expertise right at home to create the kind of programs gifted children need. They will find there, however, enough to get started, enough to lay the foundation of a program ith the kind of promise it takes to attract money for expansion and improvement from public and private sources.

When funds are limited, educators must state clearly the goals and objectives of their programs, and assess constantly the effect of their programs on the children.

Educators call this process "accountability," which means that the educator is not only responsible for what he does in school but must also explain his actions satisfactorily to the public.

For example, in these times when money is tight and budgets everywhere are being cut, it's "good public relations" for those who design and operate programs for the gifted to reduce the aura of "elitism" that still surrounds gifted and talented children.

To do this, all communities - urban, suburban and rural - should be reminded by educators through their local media that gifted children live in their midst and deserve an education commensurate with their needs.

Regular classroom teachers should be invited to assist - when possible - with programs for the gifted. Special education teachers, while most valuable in the skills they have to offer, hold no "monopoly" over the instruction of the gifted. Other teachers can contribute in many different ways.

Children who aren't enrolled in the gifted program should be encouraged to come in for special projects, or to hear a speaker, or to share in certain events side by side with the gifted students.

Let's Invite the Parents

Educators must quit building walls around gifted and talented children; they must begin to let the parents in and let them participate according to their interest and ability.

Across the country, parents in their role as PTA members form the main bridge between the schools and the community. If the diverse needs of gifted children are to be served, and their magnificient protential is to be developed, then their bridge must hold firm above the waters, troubled and otherwise.

PTA members can be a valuable asset to any program. They can "unlock" classroom doors and let the kids out - not to roam the halls, but to work alongside adults; to read to the elderly, the young, the handicapped; or perhaps, to plan a research project.

PTA members can also bring the community into the picture. They can bring businessmen, artists, tradesmen, and the insightful elderly into the schools to serve as mentors for the bright and gifted children.

In 1980 the question shouldn't be, "Are the gifted and talented getting a fair shake?" but rather, "Are the schools giving the gifted and talented a fair shake?" Tomorrow, perhaps, the answer will be what it should be today: an unqualified "Yes."

DEFINITION OF TERMS

Iowa (1980)

Gifted and talented children and youth are those identified as possessing outstanding abilities who are capable of high performance. Gifted and talented children are children who require appropriate instruction and educational services commensurate with their abilities and needs beyond those normally provided by the

regular school program. Gifted and talented children include those children with demonstrated achievement or potential ability in any of the following areas or in combination:

> **"General intellectual ability"** refers to students who can learn at a faster pace, master higher levels of content and handle abstract concepts at a significantly higher level than expected, given the student's chronological age and experiences.
>
> **"Creative thinking"** refers to students who have advanced insight, outstanding imagination and innovative reasoning ability. Such students possess outstanding ability to integrate seemingly unrelating information in formualting unique ideas, insights, solutions, or products.
>
> **"Leadership ability"** refers to those students who possess outstanding potential or demonstrated ability to exercise influence on decision-making. These students may be consistently recognized by their peers, may demonstrate leadership behavior through school and nonschool activities or may evidence personal skills and abilities that are charactertistic of effective leaders.
>
> **"Visual or performing arts ability"** refers to students who demonstrate or indicate potential for outstanding aesthetic production or creativity in areas such as art, dance, music, drama, and media production.
>
> **"Specific ability aptitude"** refers to those students who have exceptionally high achievement or potential and a high degree of interest in a specific field of study.

. . . a district shall not identify more than three percent of its budget enrollment for the budget year as gifted and talented.

Position Statement (Iowa, 1974)

The gifted and talented are those children and youth whose abilities, talents, and potential for accomplishment are so outstanding that they require a variety of special provisions to meet their educational needs. The gifted and talented are found in all ethnic groups, socioeconomic groups, and environments. In a democratic society which seeks to offer educational opportunities appropriate to each child's ability, it is essential to provide for the unique needs of the gifted and talented. They are entitled to a meaningful and complete educational experience regardless of age, location, ethnic background, or economic circumstance.

The Iowa Department of Public Instruction accepts its responsibility as stated in the Constitution of the State of Iowa to provide educational programs to provide educational programs for all persons to the limits of their abilities. To fulfill the intent of the Constitution it is imperative that programs for the gifted and talented be provided.

Our goal is to provide qualitatively differentiated educational programs to meet the unique needs, interests and abilitites of the gifted and the talented in the State of Iowa.

The needs of gifted and talented students are unique and varied. To facilitate their needs in respect to career education is to facilitate the needs that they will probably be experiencing in a very conscious sense. They need help in getting along with others, to develop the deeper perception needed to go along with their greater perception rather that is in a narrow or broad sense and to be exposed to a wide spectrum of people and possibilities in the economic sector.

Gifted and talented students need a carefully created Individual Education Plan (IEP) - guidance. Also, teachers undertaking to provide or facilitate the proper learning climate for this group need to think in terms of acceleration and enrichment. See Chapter 7 for resources.

GUIDANCE

To meet the challenges of today and tomorrow, education must assume a major responsibility for providing experiences that foster the career development of all individuals. Career development is defined as individual self-development over the life span, while CAREER GUIDANCE IS DEFINED AS THE SCHOOL PROGRAM RESULTING IN HOME AND SCHOOL/COMMUNITY EXPERIENCES WHICH FACILITATE CAREER DEVELOPMENT. The content of any career guidance program must be developed initially from assessing the present and future career development needs of the individual. Career guidance should begin in kindergarten and continue throughout the school years. It should systematically help individuals explore their values, attitudes, aptitudes and interests in relation to the world of education and work.

In utilizing the Iowa Career Education Inventory the differences between career development and career guidance should be fully understood. Career development describes people--career guidance describes programs, services and activities that assist students in such things as: (a) Self-awareness: to become aware of self characteristics related to career development; (b) Career planning: to develop career decision-making knowledge and skills; (c) Career preparation: to develop understanding of the relationships between academic work and career preparation, and to progress in personal career preparation; (d) Work and leisure: to recognize that personal satisfaction in a career is related to involvement in leisure activities; (e) Career awareness: to develop awareness of psychological, economical, and sociological aspects of work and of careers; and (f) Placement: for the pupil to attain educational and/or occupational placement upon separation from the school.

The definition of career education included in the Iowa State Plan for Career Education (1975) was "a sequence of planned educational activities designed to provide students experience in decision-making, exploration of employment opportunities and the development of positive attitudes, values, knowledge and skills pertaining to self and the society in which they live". Career education is viewed as a broad total concept with career guidance as the component of career education facilitated by counselors through various school guidance programs.

The most logical person to organize and implement the career guidance program is the school counselor. However, in some schools, this may not be possible because of situations specific to a school district. In some districts another staff person may be assigned as the career guidance coordinator. Regardless, the following set of counselor statements are not only appropriate but necessary for conducting career education in any setting: (a) provide leadership in the identification and programmatic implementation of individual career development tasks; (b) provide leadership in the identification classification and use of self, educational and occupational information; (c) provide leadership in the assimilation and application of career decision-making methods and materials; (d) provide leadership in

eliminating the influence of both racism and sexism as cultural restrictors of opportunities available to minority persons, females, handicapped and others who may be affected; (e) provide leadership in expanding the variety and appropriateness of assessment devices and proceduress required for sound personal, educational and occupational decision-making; and (f)) provide leadership in emphasizing the importance and carrying out the functions of career counseling.

Counselor Activities and Strategies for Handicapped - Iowa Central Community College. A directory developed for counselors was directed at increasing their knowledge of the program options open to the handicapped and also, how to facilitate participation in career-vocational programming. Updating the directory will be continuing. Counselors were very positive in their review of the directory/guide. The reviewer suggests that the publication become a part of the Iowa Curriculum Assistance System at Iowa State University.

Planning the High School Schedule: A Career Approach - Des Moines. The accomplishments of this project will impact all students in the Des Moines school system. All eighth graders will be using the Career Information System of Iowa (CISI) and Choosing High School Options Involving CISI Exploration, (CHOICE) system. The Career Decision-Making Unit takes students through a planning process and allows them to identify career areas and occupations. The CHOICE system allows for unbiased counseling and enables parents to see long-range plans needed to help the students accomplish her or his goals. The system helps eliminate the bias in goal-setting that might be present because it helps students see what they need to take to get where they want to go. It should be much easier to encourage students to take math, science, or any other important courses once they have set a career goal. Expectations will raise as students learn more about what it takes to succeed. The system makes use of the computer.

The system plugs into thirty-six program sequences developed by the Des Moines school system. Field testing of materials was initiated. Over one hundred staff (100+) persons have/are involved and hundreds of hours have been used so far in developing the system. Over two hundred (200) students have been involved in piloting the system.

The reviewing consultant had this to say in respect to the project, "This is a good project. It has captured the enthusiasm of those working on it and the superintendent. It promises to do a lot of good for CISI as Des Moines will make their CHOICE program available to other school districts. It is well planned and executed in development. I've been involved closely and see much value in their grant. It is an outstanding project".

About - The Career Information System of Iowa

The Career Information System of Iowa, CISI, is a comprehensive, centralized source of localized, up-to-date, accurate information about the occupational and educational climate in which we live and work.

CISI is designed to take valuable career information off the shelves and place it in the hands of people who need it. It matches people (students) with compatible careers and careers with people. It matches people with education and education with people. CISI is the CAREER CONNECTION. (From the brochure)

CISI materials are found in the majority of Iowa schools and are utilized to varying degrees. A lot of additional materials other than career information have been developed by the CISI staff which can be very valuable in providing a basis for in-depth discussion within the school on the topic of careers/school program. Mini-Course workshops are provided to schools by the Department, CISI staff. The workshops will deal with applications, intended audience, expansion ideas, curriculum infusion ideas, and flexibility of materials to suit individual client or counselor/teacher needs. These courses are:

1. AWARE (Upper Elementary) in the Classroom - Approximately a ten class period career exploration mini-course.

   a. Develops self-awareness.
   b. Develops world of work-awareness.
   c. Develops goal setting and decision-making skills.
   d. Handout available listing Iowa Career Education Model Domains, Levels and Instructional Objectives fulfilled by activities.

2. PROCESS in the Classroom (Middle Grades) - Approximately a twenty class period mini-course that can be integrated into several subject matter courses or stand alone as a career decision-making class.

   a. Includes self-analysis, world of work investigation, examination of aptitudes, interests and abilities in relationship to work.
   b. Handout available listing the Iowa Career Education Model Domains, Levels and Instructional Objectives fulfilled by this activity.

3. PROCESS Self-Assessment Mini-Course - (Based on Richard Bolles - What Color Is Your Parachute materials) an eight to ten period mini-course using critical analysis, problem solving techniques in analyzing skills, interests, attitudes and values in relationship with the world of work.

   a. Develops knowledge of personal skills and abilities.
   b. Develops a concept of transferable skills.
   c. Develops a knowledge of the potential importance of transferable skills.
   d. Can serve as a unique springboard for resume building or interview preparation.
   e. Handout available listing the Iowa Career Education Model Domains, Levels, and Instructional Objectives fulfilled by this activity.

INSERVICE

Implementing Career Education - Waterloo. The project was aimed at the infusion of career education activities into math, science, social studies, language arts, music and to encourage teachers to make better use of community resource people. This was done through six workshop sessions. Teachers were inserviced about the Career Information System of Iowa (CISI), job shadowing, and heard selected speakers. Materials were screened for multicultural and sex equity concerns as a part of the project. Sixty staff members were involved in the project.

The project provided additional materials and activities for the curriculum areas and expanded use of community resource people was noted. The next step is to continue to work on expanding the community resource list. The consultant who reviewed the project rates it as highly successful, though the academic teachers were not as receptive as they could have been.

Development of a District-Wide Career Education Plan - Garnavillo. The project covered assessment, inservice, plan development and curriculum development. Curriculum development included the writing of activities to infuse into courses. One objective addressed multicultural non-sexist issues. The activity raised the level of awareness and realization of concepts in career education for the teachers. Twenty-four staff members participated. The reviewer thinks that a good start has been made and the project was successful.

Development of Grade Level Career Education Objectives - Des Moines. Eleven staff members worked on the objectives of this project. These teachers reviewed and discussed the Des Moines District's career education goals K-2, 3-6, 7-9, 10-12. This process resulted in definition of the four-year career development phases, a format for recording grade level objectives by subject areas, identified strategies for completing grade level objectives and finalized the definitions of the seven domains. The major objective to identify grade level career education objectives by subject areas for the elementary (K-5) and transitional levels (6-8) was accomplished. Format and structure for addressing objectives was developed by the high school staff but not completed. They will be completed by continuing district efforts. The project provided the emphasis to upgrade the district's long standing effort and attention to the career development of its students.

LIBRARY MEDIA PROGRAM

Philosophy and Rationale

Programs of library media services are designed to help students grow in the ability to discover, create, evaluate and apply information to help them function effectively as individuals and to participate in society fully. Through use of materials, the learner achieves and reinforces reading, observing, listening and communication skills. The student interacts with other people, attains knowledge, as well as skill, develops an inquiring mind and becomes more capable of self evaluation. A quality library media program can challenge students to take part in rewarding and exciting experiences which will satisfy individual needs and instructional goals.

The library media program combines resources including people, materials, machines, quarters and environment with purposes and processes to serve the needs of a specific educational program.

It contributes to the life experience of patrons and to their self-fulfillment.

In all areas of the curriculum students and teachers seek information at suitable levels in appropriate formats. Both need assistance - formal and informal - in using the materials and other resources and in preparing materials to help meet their objectives. Library media specialists assist teachers in the development and implementation of the curriculum. They monitor many curriculum related activities of learners and manage such curriculum related activities as computer laboratories, small group conferences, and video taping.

A vital concern of the library media program is to guarantee intellectual freedom for students, faculty and staff. Preservation of such human rights requires selection policy and procedure statements, prepared by library media center staff-faculty-student committees and endorsed by the board, which provide for resolving human differences in an orderly and appropriate manner.

A quality library media program stimluates students to:

- o find information needed in an appropriate format and on the appropriate level
- o locate and obtain materials from the school library media center, the district and/or Area Education Agency center, the local public library, other local and network resources.
- o pursue self-directed learning of all kinds
- o explore and satisfy interests and curiosities
- o enjoy imaginative expressions of creative artists
- o learn to evaluate materials, to use them and to generate information from them
- o design and produce materials to achieve own objectives
- o learn to seek assistance in use of materials, staff and facility of school library media center and other information services
- o establish desirable intellectual habits that last for life
- o use library media center and other library and information services for career and life goals

The Library Media Specialist and Career Education

Library media specialists can make a unique contribution to the career education program by:

- o Being co-designers of the curriculum with the teachers
- o Being the catalyst to bring groups of teachers together to plan for career education programs.
- o Extending the goals and objectives of the career education program through the programs and activities of the school library media center.
- o Providing easy access to a wide variety of materials, both print and audio-visual, to support the career education program at all levels.
- o Making materials available for informational and recreational needs of all users
- o Preparing bibliographies
- o Cooperating with teachers on the selection of text and library materials
- o Developing and presenting a K-12 library media skills program integrated with classroom instruction including career education thrusts
- o Continuing the vital work of individual reading and user guidance

The school library media center can be important to the career education program by:

- o Providing an inviting atmosphere conducive to recreational reading and browsing
- o Providing reading, viewing, and listening experiences which will stimulate further interest in career education goals
- o Providing interest centers and exhibits supporting units relating to career education
- o Providing instruction in library media skills, including information retrieval, operation of equipment, and research techniques
- o Providing assistance in production of new learning resources to meet curriculum and individual needs

PROJECT DISCOVERY (middle school program)

Project Discovery is an array of forty learning packets. These packets are carefully designed and provide "hands-on" learning in the various clusters. The

materials are available from Experience Education of Red Oak, Iowa, a private non-profit educational agency. The Iowa Department of Public Instruction was instrumental in supporting the development of these instructional packets.

Project Discovery Curriculum Development - Mason City. Objectives included development of a ninety hour program for each sixth and seventh grader; providing carryover and continuity to career education in the regular curriculum; developing a practical set of experiences which students can relate to their interests, abilities, and values. Attention was given to developing experiences that distinctly eliminate bias and stereotyping regarding age, race, sex, economic status and handicap. Seven hundred eight (708) students participated. Two teachers were involved in teaching the materials.

The Project Discovery activities are related directly to the career guidance outcomes sought by the school counselors. Each teacher in the middle school has career education objectives integrated into their own courses as part of the overall school district goal of integrating career education with the regular curriculum.

The program is deemed highly successful by the district administrators and Board.

Project Discovery - Ar-We-Va. Thirty (30) students used the new packets. Two staff members are teaching Discovery packets. The objectives were to provide "hands-on" activities in grades seven through nine; to provide exposure to "non-traditional" occupations for both males and females; and to provide experience with a wide variety of occupations without leaving school. The project fulfilled the exploration phase of the career education district plan. It is used in conjunction with the Career Information System of Iowa and other guidance activities. Evaluation by students was very good. Guidance activities encouraged students to examine non-traditional occupations.

Addition to Project Discovery - Eldora-New Providence. The objective was to more adequately serve the seventh graders and to stress the elimination of bias and stereotyping. Specifically, expanded awareness was sought by having students understand that jobs need not be for just boys or just for girls. Activities were used to help students understand the elderly and to view handicapped in a non-stereotype way. Evaluation noted an increase in the students' knowledge of occupations and a positive attitude change toward represented occupations. Seventy-five (75) students and eight staff members participated.

Special Education - Iowa City. Thirty-two (32) special education students were taught by three staff members in the use of Project Discovery. The objectives were to have students explore with "hands-on", to gain in abilities, and to gain in awareness of occupations. Individual Education Programs (IEP) were written to accommodate career/vocational goals of the student. The consultant related that the activities were accomplished and that the program will continue to be developed to a greater degree.

Keeping Up With The Times - Akron-Westfield. One hundred sixty-one (161) students participated. Four staff members implemented the Project Discovery program. Successful expansion of the program occurred.

Project Discovery met the need for "hands-on" exploration in helping to meet the needs of the total career education program. The IDEA's survey was used along with films. The most frequently used packages were Electricity, Hair Care, Law

Enforcement, Skin and Nail Care, Small Engines, So Ya Wanna Be An Artist, and Advertising and Editorial Design. The Project Discovery program is worthwhile and popular and is continuing.

Extending Career Week at South Junior High - Fort Dodge. Fifty-five (55) students benefited from the program and five teachers and three administrators has responsibility for the project. Components of guidance are well integrated into the program and includes a parent involvement in addressing the needs of these special students. A book resulted from the project called Pathways to a Positive Self-Image. The book contains career activities chosen for students with both mental and physical learning disabilities. It promotes equal opportunity. Speakers and field trips were also incorporated into the program. The project reviewer considers this program an excellent model for implementation of Project Discovery in regard to special needs students.

SPECIAL NEEDS

Implementing Career Education

A Career Education Special Needs Committee is extremely important in furthering the development, approval, and implementation of a plan so that career education is put into practice for special targeted student populations. At minimum, special education staff or other special support staff should be involved in the existing career education planning group for the school or school district. Guidelines for the development and implementation of a career education plan are detailed in the Trainers' Guide to Life Centered Career Education (Brolin, McKay & West - CEC, 1920 Association Drive, Reston, Virginia 22091). "Life Centered Career Education: A Competency Based Approach" is recommended as a primary resource for teachers and administrators wishing to infuse career education into their curriculum. Some of the highlights of the approach are described below.

Life Centered Education

Career education can be looked at as requiring a shift from the traditional content based curriculum to one which is more process based. Moore and Gysbers (1972) cautioned against viewing students as having to be brought up to a grade level by the end of the school year at all costs, thereby creating passive-dependent students who may be apathetic, irresponsible, or rebellious. A process oriented approach, relating curriculum directly to the outside world, and focusing on each student's unique ways of learning and becoming motivated, is recommended as more appropriate. In process education, primary emphasis is on developing skills; acquiring knowledge and information (content) is secondary. In curriculum development and lesson planning, the key question is: What skills (competencies) are essential to the individual in order to make him/her a more effective person? In process education, the content of the curriculum is selected for its utility in facilitating and exercising those skills. The skills are the goals within the curriculum, the vehicle by which the goal of skill development may be realized (Cole, 1972). Thus, a competency based curriculum should be designed to assure that each student acquires competencies deemed essential to function adequately as a consumer, a producer, a learner, and a citizen (Parnell, 1973). (SOME SLOW LEARNING STUDENTS MAY REQUIRE MORE TIME TO ACQUIRE THE COMPETENCIES DEEMED ESSENTIAL FOR COMMUNITY LIVING. EXTENDED SECONDARY PROGRAMS OR APPROPRIATELY DESIGNATED POSTSECONDARY PROGRAMS MAY NEED TO BE CONSIDERED.)

The proposed competency based curriculum approach does not necessarily mean the abolishment of courses and structure currently operating in school programs. It does require, however, that instructional content be selected according to ability for facilitation and student acquisition of the competencies. It is recommended that academic studies be taught primarily in conjunction with the student's need for such instruction in acquiring each competency. Students should be placed in classes which offer the best method of competency attainment. It is important to remember that the role of the curriculum is to guide instruction but not to prescribe the means. Therefore, each school system must decide how it can infuse the teaching of the Life Centered Career Education competencies into its curriculum.

Instructional Responsibilities

Implementing an effective career education program is predicated on the appropriate redirecting of traditional teacher/counselor roles and a heavier involvement and investment in educational programming from parents, community agencies, and business and industry personnel. In the development of each school's career education plan, these roles should be clearly explicated by a Career Education Steering Committee with input from parents and community representatives. Suggested roles for the allocation of curriculum responsibilities are presented in Table 2-1. It is expected that roles will vary from school to school.

TABLE 2-1
Suggested Allocation of Curriculum Responsibilities

Compentency	Junior High Curriculum	Senior High Curriculum
Daily Living Skills		
1. Manage family finances	Business Math	Home Economics, Math
2. Select, manage, and maintain a home	Home Ec., Vocational Ed.	Home Economics
3. Care for personal needs	Home Ec., P.E./Health	Home Economics
4. Raise children and enrich family living	Home Economics	Home Economics
5. Buy and prepare food	Home Economics	Home Economics
6. Buy and care for clothing	Home Economics	Home Economics
7. Engage in civic activities	Social Studies, Music	Social Studies, Music
8. Utilize recreation	P.E., Art, Music, Counselors	P.E., Art, Music
9. Achieve community mobility	Home Economics	Driver Education

TABLE 2-1 (Continued)

Compentency	Junior High Curriculum	Senior High Curriculum
Personal-Social Skills		
10. Achieve self awareness	Music, P.E., Counselors	Art, Music, Counselors
11. Acquire self confidence	Art, Music, P.E., Home Economics, Counselors	P.E., Counselors, Social Studies, Art, Vocational Ed., Music
12. Exhibit socially responsible behavior	P.E., Counselors, Music	Social Studies, Music
13. Exhibit interpersonal skills	Counselors	Music, Counselors
14. Achieve independent functioning	Counselors	Counselors
15. Practice decision making, problem solving	Math, Counselors	Science, Counselors
16. Communicate adequately	Language Arts, Music Speech, P.E.	Language Arts, Speech Music, Art
Occupational Guidance and Preparation		
17. Gain occupational knowledge and exploration	Vocational Education Home Ec., Counselors	Counselors
18. Make appropriate choices	Business, Vocational Ed., Counselors	Counselors
19. Acquire appropriate work habits and behaviors	Vocational Ed., Math, Home Ec., Art	Home Ec., Vocational Ed.,
20. Acquire physical and manual skills	Vocational Education, P.E.	Vocational Ed., P.E., Art
21. Obtain a specific occupational skills	Vocational Ed., Home Ec.	Vocational Ed., Home Economics
22. Seek/secure employment	Counselors	Counselors

Mainstreaming Exceptional Students in the Life Centered Career Education Program

Role of Special Educators

The Life Centered Curriculum approach advocates a definite changing role for the special education teacher. The teacher would become more of a consultant/advisor to other school personnel, parents, community agencies, and industries by coordinating services and integrating the contributions that school, community, and home can make in meeting each student's life career development needs.

The special education teacher and other support staff will still be needed to provide specific classroom instruction when it cannot be provided appropriately to certain students in regular classes or community services. In addition, special tutoring will be necessary for many exceptional students to enable them to keep up in regular classes.

Special education teachers and other support staff will need to advise school and nonschool personnel on how they can best work with each student. Brolin, Malever, and Matyas (1976) found that regular educators felt the following support was needed from special education teachers: (a) inservice assistance, (b) methods and materials consultation, (c) modifying/developing materials, and (d) sharing relevant information on the student's basic academic skills, values, and attitudes.

Integration of special needs students into regular classes is highly recommended but only when there are assurances it will be beneficial to the student in competency attainment. A MAJOR RESPONSIBILITY OF THE SPECIAL EDUCATOR AND OTHER SUPPORT STAFF SHOULD BE TO MONITOR EACH STUDENT'S PROGRESS AND TO ASSUME THE RESPONSIBILITY OF DETERMINING WHERE, HOW, AND WHEN EACH COMPETENCY IS TO BE ACQUIRED.

Role of Regular Educators

With program goals and objectives more clearly delineated and assistance from special education teachers readily available, most special needs students should be able to be assimilated into regular classes and programs. Table 2-1 suggests which regular teachers and counselors may be most appropriate for teaching the 22 competencies. This information is presented only to serve as a guide in determining instructional responsibilities. There may be other personnel who would be equally appropriate to assume the responsibility of teaching specific competencies.

Role of the Family

Family members are crucial to the success of a career education program for exceptional students. No matter how good the curriculum and its instructional services, students can fail if the family is not supportive. Families must believe that the school is genuinely interested in their children, and that it has designed a meaningful curriculum. Parent involvement in the Life Centered Career Education inservice workshops and the development of a local career education plan is absolutely necessary so that roles and responsibilities may be clearly delineated.

With guidance and assistance from school personnel, the family can contribute to the learning of every competency. The home is a fertile ground for teaching personal-social, daily living, and occupational skills. Parents can assist their children by structuring responsibilities, developing career awareness, teaching specific skills, and providing a secure psychological environment where self confidence and independence can be developed adequately. Family members should also be encouraged to participate in class activities.

Role of Community Personnel

Community Agencies and Organizations. Professional workers from such agencies as the state vocational rehabilitation agency, employment service, social service agency, public health, rehabilitation centers and workshops, and mental health agencies are examples of major governmental services that should be utilized for the career development of special needs students. In addition, there are several community service organizations, civic clubs, and other resources that are available

in most communities that can be major contributors to the career education program. Some examples of service organizations are the YMCA, YWCA, Red Cross, League of Women Voters, and the American Legion. Some examples of civic clubs are the Jaycees, Rotary Club, Kiwanis, Elks, and Lions Club, which geneally involve themselves in projects for community improvement. Some other community resources that might be used are the local association for retarded citizens (ARC), churches, hospitals, nursing homes, libraries and Big Brothers, to name a few.

Business and Industry. Community workers are particularly significant in the Occupational Guidance and Preparation curriculum area. Field trips and on the job tryouts in business and industry inject the realistic components needed in a career education curriculum. Business and industry people should be requested to speak to classes, serve as resource persons, serve on career education advisory committees, sponsor cooperative work-study programs, provide appropriate media for classes, and assist in course development. Clergymen, bankers, politicians, firemen, policemen, medical personnel, and other community workers can assist in the Daily Living Skills curriculum area.

An effective and comprehensive school-community relationship will greatly enhance the implementation of a meaningful career education curriculum for all students. Career education requires the effective use of community resources so students may adequately explore and be prepared for the real world.

STUDENTS WITH SPECIAL NEEDS ARE A PART OF THE SAME CAREER DEVELOPMENT PROCESS. THE PACE OR DELIVERY OF THE PROCESS MAY NEED TO BE ADJUSTED. One way to approach this is to develop individualized education programs (IEP). IEP's provide an excellent source for student assessment, identification of individual needs and development of instructional activities for the learner. Each IEP should include as a minimum:

-statement of the child's present level of educational performance
-statement of annual goals, including the short-term instructional objectives
-statement of the specific special education and related services to be provided to the child, and the extent to which the child will be able to participate in the regular educational programs
-projected dates for initiation of services and the anticipated duration of services
-appropriate objective criteria are evaluation procedures and schedules for determining, on at least an annual basis, whether the short-term instructional objectives are achieved.

When modifying curriculum materials and instructional approaches it is necessary to apply sound educational principles that will help all students, especially those who have special needs. The following is a list of some general instructional strategies and techniques which might be used when planning and organizing programs for special needs youth:

Use both visual and verbal teaching techniques.

Vary teaching techniques--make use of modeling, imitation, discussion/lecture, and other techniques.

Reinforce appropriate behaviors that are in context with desired learning outcomes. An adequate feedback system should be provided, whether it be verbal or non-verbal, oral or written. Lessons should be planned so that immediate feedback is provided.

Organize instruction to guarantee some degree successful learning outcomes. Do not perpetuate the "failure syndrome" associated with some special needs youth.

Utilize assessment data to ascertain the optimum level at which the special needs learner can work. Work that is too easy will not challenge the learner. Likewise, if the material is too hard, it could cause unnecessary anxiety thus reducing student motivation and ability to learn.

Repetition is an important teaching technique for most learners and usually creates a positive momentum for teaching "hands on" learning activities.

Help students develop a sequential and simple way of correcting problems which might occur. Keep steps small and build on previously learned tasks.

Special education teachers and tutors can correlate the teaching of related subject matter to career education concepts. Also, remedial instruction in basic subject skills may be provided.

Special needs students should be made to feel a part of the industrial arts class, rather than "separate" or "special." Facilitate their active participation in group activities such as mass production and laboratory maintenance so that they perceive themselves as an integral part of the learning team.

Technical or related career information should, whenever possible, be integrated with laboratory activities to show the immediate application of the information.

A rather new concept being used to help keep track of all the necessary data for a student's career development process is a "Folder System". The actual folder folds out and has printed on it the appropriate career education objectives or activities and the dates of completion. This system will assist all faculty working with the student and the student to have ready access to important planning information. Several varieties are available from commercial vendors or you could establish your own system to accommodate students at any level in the career development process. Several sources include:

"Individualized Education Program Form" in
Training Guide to Life Centered Career Education

"The Vocational Behavior Checklist"
West Virginia University
509 Allen Hall
Morgantown, West Virginia 26506

"Learner Performance Record" in Career Exploration
and preparation for Special Needs Learners
Allen & Bacon, Inc.

"Vocational School Competency Checklist"
1978, Academic therapy Publications
Navato, California

THE BIG POINT: WHEN YOU ARE MANAGING AND PROVIDING CAREER EDUCATION ACTIVITIES KEEP IN MIND THAT ALL STUDENTS ARE INVOLVED IN THE CAREER DEVELOPMENT PROCESS. THE PROCESS IS THE SAME, IT IS THE PACE AND DELIVERY THAT MAY NEED ADAPTING.

List of decisions

The following questions begin to outline the decisions that need to be made by a district. The list is by no means all inclusive, however, it will be a place to start. Hopefully, this list will provide some structure to your decision-making process.

Who will make the decisions and the timeline for making those decisions is something that should be made early in the planning stages. The list of decisions is organized by chapter to assist districts with understanding the content of each section of the guide.

Chapter V Special Components

*What is the district's plan for the development of community and school relations?
*What is the district's plan to address equity?
*What plans are established to adjust curriculum progrms for gifted and talented students and special needs populations?
*Does your district have a K-12 career guidance plan?
*Does your district have and use CISI materials?
*How developed if the library media center in the district?

CHAPTER 6

Evaluation

'Care about what counts, not about what is merely countable.'

- Herman Saly

THOUGHTS OF CHAPTER 6

"All change is not growth, as all movement is not forward."

- Ellen Anderson Tholson Glasgon

* *

"You grow up the day you have the first real laugh at yourself."

- Ethel Barrymore

* *

"The greatest mistake you can make in this life is to be continually fearing you will make one.

- Elbert green Hubbard

* *

"The wises mind hath something yet to learn."

- George Santayana

* *

"We judge ourselves by what we feel capable of doing, but others judge us by what we have already done."

- Longfellow

* *

"We are judged by our actions, not by our intentions."

- Anonymous

* *

"When your work speaks for itself, don't interrupt."

- Henry J. Kaiser

* *

EVALUATION

During a time of emphasized accountability, and questions by the public, educators are incorporating the evaluation cycle into all types of programs

The need for evaluation cannot be understated, for the process of checking progress is the only method known to identify if the anticipated progress has occurred.

The career education evaluation flowchart that follows suggests one career education evaluation that could be used. You may have already in place a better and/or more efficient method that works in your setting.

BASIC CAREER EDUCATION
EVALUATION

CAREER EDUCATION	EVALUATION
	Context Evaluation
	Conduct Needs Assessment
	Process Evaluation
"Conduct" Needs Assessment	o "Isolate appropri- o ateness of needs" o Assess relevancy o of goals
Develop Goals	o Assess validity of objectives
Develop Objectives	o Assess appropri-ateness of plan
Develop Plan	o Determine extent to which plan was implemented
Implement	
	Evaluate Impacts of Career Education Program

Concern:

1) What is the best method of evaluating career education programming?

Response:

1) Although each local district should determine their own evaluation strategies and procedures, there are some items that need to be addressed: (1) change in students scores as they related to the career education concepts, (2) change in the teacher involvement in career education within the classroom, (3) success of the implementation process.

Report on Evaluation

The staff, parents and community should be kept informed of the evaluation results as well as the school administrator and school board.

What information and particular format used to report is up to the discretion of the Career Education Coordinator and Local Advisory Committee. The frequency of reports should be based on the evaluation plan and the other career education public relations activities.

If a career education newsletter is going out to staff and community, evaluation results can be included on a regular basis.

Refine Program

The career education program needs to be under a continual refinement process to insure that the current career education activities reflect the needs of both the students and staff. As changes occur, e.g., staff, student needs, school goals, the curriculum can provide the mechanism that not only supports change but provides continuity during change.

A vital part of the total process needs to be provisions for change. These changes can be a result of re-assessment, changes in direction of the district or reflect the changing needs of students. As the staff becomes more sophisticated in their career education usage, strategies need to be established to respond to these changes.

Develop Ongoing Strategies

During the time that the district-wide career education plan is being developed and implemented, the intent is to narrow the scope of the project so it is managable; however, as the plan evolves, the committee must also continue to focus on future ongoing strategies that will support the continuation of curriculum development.

Items that the committee may need to address are: a) further inservice, (b) additional curriculum writing sessions, (c) schedule for re-assessment and evaluation, (d) inservice needs for new staff, (e) further implementation needs, (f) updating instructional materials, equipment and resources, and (g) updating of resource files.

To assure that ongoing strategies are kept in place within the district, a process needs to be adopted similar to the process identified in The Basic Career Education Evaluation Chart.. This system provides a structure for continued change through a systematic and accountable strategy.

SAMPLE EVALUATION

The following set of evaluations are only a sample of those that can be used. Use these samples or the concepts behind these samples as you deem appropriate. The career education committee or local advisory committee should provide the necessary direction.

SAMPLE

PARENT EVALUATION

Directions: Please circle the number of the response which most nearly indicates your thought regarding that item. All extreme negative responses are on the far LEFT, and extreme positive responses are on the far RIGHT.

Indicate the degree to which you...	None				A Lot
1. have discussed different kinds of occupations with your child(ren).	1	2	3	4	5
2. have discussed your child's(ren's) interests, skills, and abilities with him/her.	1	2	3	4	5
3. have related your child's(ren's) interests, skills, and abilities to occupational areas.	1	2	3	4	5
4. have encouraged your child(ren) to be involved in volunteer work or unpaid work in the home and community.	1	2	3	4	5
5. have encouraged your child(ren) to be involved in the working world to gain an understanding and appreciation for the business world.	1	2	3	4	5
6. have talked with classes at school about your work, the responsibilities, rewards, etc.	1	2	3	4	5
7. have encouraged your child(ren) to relate the skills they are learning at school to the working world.	1	2	3	4	5

SAMPLE

COMMUNITY-EVALUATION

Directions: Please circle the number of the response which most nearly indicates your thought regarding that item. All extreme negative responses are on the far LEFT, and extreme positive responses are on the far RIGHT.

To what extent have you...	None		A Little		A Lot
1. been invited into schools to provide information regarding your occupation?	1	2	3	4	5
2. positively evaluated your information sharing sessions with students?	1	2	3	4	5
3. provided field trips for students to explore the working world?	1	2	3	4	5
4. provided internships or job shadowing experiences for students to explore the working world?	1	2	3	4	5
5. positively evaluated students' work attitudes and habits?	1	2	3	4	5
6. provided training opportunities for students either prior to or after high school completion?	1	2	3	4	5
7. shared informatiion regarding job openings in your area?	1	2	3	4	5
8. reflected your work in a positive manner?	1	2	3	4	5
9. assisted students in forming work values and setting priorities?	1	2	3	4	5
10. assisted students in determining interests and skills in terms of specific jobs?	1	2	3	4	5
11. assisted in presenting greater career awareness in the educational programs of our schools?	1	2	3	4	5
12. assisted in relating academic courses to the working world?	1	2	3	4	5

COMMUNITY EVALUATION (Continued)

To what extent have you...	None		A Little		A Lot
13. assisted in providing resources for career resource centers or library media centers?	1	2	3	4	5
14. assisted students in being prepared with basic skills that can be used in many work settings since change is inevitable?	1	2	3	4	5
15. assisted students in determining a realistic assessment of their abilities and aptitudes?	1	2	3	4	5
16. assisted students in determining how their leisure contributes to their total career development?	1	2	3	4	5

SAMPLE

ELEMENTARY STUDENT EVALUATION

Directions: Please circle the number of the response which most nearly indicates your thought regarding that item. All extreme negative responses are on the far LEFT, and extreme positive responses are on the far RIGHT.

Through my classes at school, I have had an opportunity to...	None		A Little		A Lot
1. understand the importance of doing good work both in and out of school.	1	2	3	4	5
2. understand the importance of getting along with people.	1	2	3	4	4
3. get involved in running a business (selling in the school store, producing a product on the assembly line, etc.).	1	2	3	4	5
4. invite my parent(s) to talk with my class about his/her job.	1	2	3	4	5
5. think about my interests and skills in regard to work.	1	2	3	4	5
6. think about my interests and skills in regard to leisure.	1	2	3	4	5
7. become aware of several new occupations I wasn't familiar with.	1	2	3	4	5
8. listen to speakers talk about their job.	1	2	3	4	5
9. read materials relating to various careers.	1	2	3	4	5
10. see films, filmstrips or video tapes relating information on various careers.	1	2	3	4	5

ELEMENTARY STUDENT EVALUATION (Continued)

	None		A Little		A Lot
11. take study trips in the community to become aware of various careers.	1	2	3	4	5
12. understand how my school subjects will be used later in the world.	1	2	3	4	5
13. understand how to make decisions.	1	2	3	4	5
14. explore my likes and dislikes.	1	2	3	4	5

SAMPLE

SECONDARY STUDENT
Pre/Post Inventory

Directions: Read the following statements and circle 1, 2, 3, 4, or 5, to the appropriate number of the response as it applies to your knowledge regarding the statement. All extreme negative responses are on the far LEFT, and extreme positive responses are on the far RIGHT.

	Low degree		Average		High degree
Indicate the degree to which you...					
1. are familiar with the variety of careers available.	1	2	3	4	5
2. are familiar with the various kinds of occupational training opportunities beyond high school.	1	2	3	4	5
3. are aware of the various printed and audiovisual materials available to assist you with your career decision making.	1	2	3	4	5
4. are aware of the various teachers, counselors, community resource persons available to assist you with your career decision making.	1	2	3	4	5
5. are familiar with your personality traits or characteristics.	1	2	3	4	5
6. are familiar with the skills needed to locate, apply for, and obtain a job.	1	2	3	4	5
7. are familiar with your abilities or skills.	1	2	3	4	5
8. are familiar with your occupational interests.	1	2	3	4	5
9. can apply the knowledge you have regarding your interest, skills, and abilities in order to tentatively select a career.	1	2	3	4	5

SECONDARY STUDENT Pre/Post Inventory (Continued)

	Low degree		Average		High degree
Indicate the degree to which you...					
10. have related classroom activities to your career goals beyond high school.	1	2	3	4	5
11. have identified the career area you want to enter.	1	2	3	4	5
12. are aware of the skills needed to perform the tasks in your chosen career area.	1	2	3	4	5
13. are aware of lifestyle and how it relates to your chosen career field.	1	2	3	4	5
14. are aware of how your chosen career will affect your leisure time.	1	2	3	4	5
15. are aware of the decision making process as it relates to your career.	1	2	3	4	5
16. are aware of your work values and how they affect your career development.	1	2	3	4	5
17. are aware of how the courses you take in school will be used in the world of work.	1	2	3	4	5
18. are aware of the importance of determining career plans and setting career goals.	1	2	3	4	5
19. are aware of the importance of being a responsible citizen with good work habits.	1	2	3	4	5

SAMPLE

SECONDARY STUDENT EVALUATION

Directions: Please circle the number of the response which most nearly indicates your thought regarding that item. All extreme negative responses are on the far LEFT, and extreme postive responses are on the far RIGHT.

Through my classes at school, I have had an opportunity to...	None		A Little		A Lot
1. discuss the importance of good work habits.	1	2	3	4	5
2. examine my personal work habits and relate them to the working world.	1	2	3	4	4
3. examine my work values and relate them to the working world.	1	2	3	4	5
4. examine my interests, skills, and abilities and relate them to the working world.	1	2	3	4	5
5. explore various career options available to me.	1	2	3	4	5
6. explore educational/training opportunities available to me.	1	2	3	4	5
7. interview people regarding their work and their lifestyle.	1	2	3	4	5
8. explore career decision-making and understand the process.	1	2	3	4	5
9. develop skills that will be transferable to the working world.	1	2	3	4	5
10. examine audio visual and printed materials regarding work.	1	2	3	4	5
11. examine the importance of being a responsible citizen with good work habits.	1	2	3	4	5
12. participate in the shadowing of workers, work exploration, or study trips in regard to work.	1	2	3	4	5

SECONDARY STUDENT EVALUATION (Continued)

Through my classes at school, I have had an opportunity to...	None		A Little		A Lot
13. explore goal setting in order to determine career plans.	1	2	3	4	5
14. determine how the courses I take in school will be used in the world of work.	1	2	3	4	5

SAMPLE

LEARNER OUTCOMES EVALUATION

Do you think...	Not Important		Important		Extremely Important
- career planning and decision making is an important area for consideration?	1	2	3	4	5
- it is important to give students an opportunity to explore various occupations?	1	2	3	4	5
- it is important for students to have the skills for obtaining and keeping a job?	1	2	3	4	5
- the development of positive work attitudes is necessary for success at school and in the working world?	1	2	3	4	5
- the development of human relationship skills is necessary for success at school and in the working world?	1	2	3	4	5
- an understanding and appreciation of self in relation to work and leisure is important?	1	2	3	4	5
- becoming a productive citizen should be a goal of every student?	1	2	3	4	5
- understanding economic factors and their influence upon career opportunities is important for students to understand?	1	2	3	4	5
- the relationship between school and the working world is an important area for students to understand?	1	2	3	4	5

SAMPLE

TEACHER EVALUATION

Directions: Please circle the number of the response which most nearly indicates your thought regarding that item. All extreme negative responses are on the far LEFT, and extreme positive responses are on the far RIGHT.

During my class periods, we...	None		A Little		A Lot
1. use audiovisual/printed materials to reflect occupational areas relevant to my curriculum area.	1	2	3	4	5
2. invite parents to talk about their work.	1	2	3	4	5
3. invite business/industry representatives to talk about their work.	1	2	3	4	5
4. participate in "hands on" experiences in order to explore work situations.	1	2	3	4	5
5. prepare bulletin boards to depict work situations.	1	2	3	4	5
6. discuss the importance of school, how it prepares students for work, and the skills students learn in school that will transfer to the work setting.	1	2	3	4	5
7. discuss how our curriculum is used in the working world.	1	2	3	4	5
8. take study trips to explore various work situations.	1	2	3	4	5
9. utilize activities to help students identify their interests and skills.	1	2	3	4	5
10. simulate various work situations (class produces a product on the assembly line, operates a small business, etc.).	1	2	3	4	5

TEACHER EVALUATION (Continued)

During my class periods, we...	None		A Little		A Lot
11. utilize interviews, assessments, surveys, etc., conducted with community workers in order for students to become aware of the variety of occupations available.	1	2	3	4	5
12. discuss the importance of good work habits and work values; how they relate to the present and the future.	1	2	3	4	5

SAMPLE

ADMINISTRATOR EVALUATION

Directions: Please circle the number of the response which most nearly indicates your thought regarding that item. All extreme negative responses are on the far LEFT, and extreme positive responses are on the far RIGHT.

To what extent have you...	None		A Little		A Lot
1. provided encouragement to teachers and counselors regarding assisting students understand their interests, skills, and abilities?	1	2	3	4	5
2. encouraged teachers and counselors to invite community workers to talk to students about their work?	1	2	3	4	5
3. provided resource materials (activities, printed materials, audiovisual, etc..) to assist teachers and counselors share career and occupational information with students?	1	2	3	4	5
4. encouraged teachers to demonstrate how their curriculum area(s) is used in the working world?	1	2	3	4	5
5. encouraged teachers to provide opportunities for students to explore the working world through study trips, work exploration, shadowing, or internships?	1	2	3	4	5
6. encouraged teachers and counselors to utilize parents as resource persons?	1	2	3	4	5
7. encouraged teachers and counselors to emphasize good work habits, work values, and relationship skills necessary for the present and the future?	1	2	3	4	5
8. provided time for teachers and counselors to evaluate their present status with regard to the preceding items and make plans for future action?	1	2	3	4	5

List of decisions

The following questions begin to outline the decisions that need to be made by a district. The list is by no means all inclusive, however, it will be a place to start. Hopefully, this list will provide some structure to your decision-making process.

Who will make the decisions and the timeline for making those decisions is something that should be made early in the planning stages. The list of decisions is organized by chapter to assist districts with understanding the content of each section of the guide.

Chapter VI Evaluation of Career Education

*What are your policies on evaluation of programs?
*What are your timelines for program evaluation?
*Do you have an established program evaluation process, if so who has the lead responsibility to ensure it occurs?
*What evaluation forms have been used in the past? Do they need revising?
*What groups do you plan to have provide data for the program evaluations?

CHAPTER 7

Resources and Helps

'Education will improve when we realize school is a concept and eliminate the 2 x 4 x 6 teacher. That is a teacher who is bound by the two covers of a textbook, limited to the four walls of a classroom and restricted to the six periods of a school day.'

- Author Unknown

THOUGHTS FOR CHAPTER 7

"There is something that is much more scarce, something finer for, something rarer than ability. It is the ability to recognize ability."

- Elbert Green Hubbard

* *

"Experience is one thing you can't get for nothing."

- Anonymous

* *

"Everybody is ignorant, only on different subjects."

- Will Rogers

* *

"Some will never learn anything because they understand everything too soon."

- Sir Thomas Pope Bloan

* *

"There is only one rule for being a good talker: learn to listen."

- Christopher Burlington Morley

* *

"The important thing is poise. How a man handles a situation is much more important than the situation itself. . . ."

- Lord Northcliff

* *

"To know the right question is to know half the answer already."

- Anonymous

* *

Doing something is much better than doing nothing.

Most people experiencing this type of learning process feel comforted somewhat by the knowledge that there is a place to find the answers to some of their questions. So to ease some of the frustration and encourage additional thinking, Chapter 7 has been established.

The contents in this chapter are greatly varied by design, for the developers of this book appreciate the fact that practioners involved in this process will be at different levels.

The selected resources are activity sheets are included to provide some "food for thought" in filling in some gaps in your K-12 career development plans. The selected resources are organized alphabetically by sections.

MODEL FOR THE INFUSION OF CAREER EDUCATION INTO THE OBJECTIVES CURRICULUM*

	1A	1B	1C	1D
PHASE I READINESS	Board: Administration Support	Select District Career Ed. Contact Person	Select Bldg. or Subject Contact Person	Establish District wide C.E. Committee

PHASE II PLANNING

2. Assess needs: teacher, parent, community
3. Administer student Career Education inventory
4. Establish cadre of support persons
5. Review all needs assessment results and program goals for district plan decisions

PHASE III INSERVICE TRAINING AND CURRICULUM DEVELOPMENT

6. Develop matrix of priority objectives and establish local plan
7. Develop and conduct inservice program
8. Define "real" curriculum: curriculum mapping
9. Curriculum development and activity writing

PHASE IV IMPLEMENTATION AND RESOURCES

10. Implement Career Education Program
11. Develop career guidance program
12. Establish resource center/library
13. Provide career exploration strategies field trips, job shadowing, OJT, EBCE, CISI
14. Utilize community resources

PHASE V MAINTENANCE AND EVALUATION

15. Re-administer student and teacher needs assessments

16. Evaluate Career Education Program

17. Report on project evaluations - PR - Awards - Recognition

18. Refine program

19. Develop on-going strategies

* Based on the curriculum model developed and used by Keystone AEA 1.

SELECTED RESOURCES

The resources listed below have been selected by professionals in each field as places to begin. The list is not all inclusive--we hope to build up the resource for further editions of this guide. The items are assigned by description areas and the areas are in alphabetical order.

AGRICULTURE

Project 2000 Basic Principles for Agriculture and Agribusiness Education

Department of Agriculture and Education, Iowa State University, Ames, Iowa 1976

The curriculum guidelines provided are intended to serve the needs of individuals desiring education in agriculture and agribusiness through public education in Iowa. Three basic functions of agriculture and agribusiness education are addressed and they are: (1) employment in the field of agriculture and agribusiness (occupational awareness, exploration and preparation); (2) avocational agricultural coursework; and (3) view of crucial importance of food.

ART

The Visual Arts in Iowa Schools

Iowa Department of Public Instruction, 1984

The foundation for this handbook was created in another cooperative project titled, "Art Framework". The purpose of that project was three-fold. First, it was intended to serve as a broad guideline for art educators, regarding the purposes and goals of a quality education program. Second, it was designed to inform school administrators and board members of the general characteristics of an educationally valid program. Lastly, the framework was intended to increase the understanding of parents and the general public of the potential benefits to students and society which can be derived through art education.

Careers in Art, An Illustrated Guide, by Gerald F. Brommer and Joseph A. Gatto, David Publications, Inc., Worcester, Massachusetts, 1984

This book provides important information for anyone interested in an art career. Each section includes information on the career area, what typical jobs are like, what personal qualities are necessary for success in the career, what alternate careers may be of interest, what steps toward your career goal can be taken while you are still in high school, and which colleges offer necessary programs.

BUSINESS EDUCATION

Education for Business in Iowa

Curriculum and Reference Guide, Iowa Department of Public Instruction, 1983

This guide offers information and assistance in three major areas: 1) the total business program-policy statements and strategies, 2) curriculum guides-addressing the major area of business education, 3) special components affecting business education.

EQUITY

Young Women and Employment: What We Know and Need to Know About the School-to-Work Transition

Report of a Conference, U.S. Department of Labor, Office of the Secretary, Women's Bureau, 1978

Recognizing Sex Bias, 1972, State Board of Education, Illinois Office of Education, Joseph M. Cronin, State Superintendent of Education, Urban and Ethnic Education Section, 188 West Randolph Street, Chicago, ILL

Promoting Sex Equity in the Classroom

A Resource for Teachers Vocational and Technical Education, Iowa Department of Public Instruction, 1979

This packet contains the following information:

Sex Equity Guidelines
Strategies for Art, Language, Content, Agriculture, Distributive Education Health Occupations Education, Home Economics, Office Occupations, Technical Education, Trade and Industrial Education

Guidelines for the Creative Use of Biased Materials in a Non-Biased Way, Women on Words and Images

Suggestions are given on addressing the following areas: language, roles, portrayal of personal traits, and eliminating sex biases in vocational education.

Guidelines for Sex-Fair Vocational Education Materials, Women on Words and Images

This guide was designed primarily for use by the vocational education community; it is hoped these guidelines will also serve all educators. Following the guidelines you will find a checklist for evaluating sex bias in your materials. A reading of the checklist is valuable for increasing awareness of sexism in materials; however, all sections may be applicable to your needs and therefore may be omitted from the review process. The guidelines for creative use of biased materials will serve particularly to raise the awareness level of teachers, teacher trainers and students.

Try It, You'll Like It!

A student's introduction to Nonsexist Vocational Education, Martha Matthews and Shirley McCune, Resource Center on Sex Roles in Education, National Foundation for the Improvement of Education, Washington, D.C.

This guide is a collection of thoughts, information and questions designed to help you think about some new alternatives—alternatives in "nonsexist vocational education" or in vocational education courses which are not traditional for your sex. It isn't designed to tell you what to do...it's designed to help you: explore your interests; consider the role in your life of paid work outside the home; think about the work you'll do inside the home; evaluate whether vocational education courses which are not traditional for your

sex may offer you a way of pursuing your interests or gaining skills you need for work inside and outside your home, become familiar with your legal rights to nondiscrimination and equal treatment in schools and employment.

Anything You Want To Be, Leaders Discussion Guide, American Telephone and Telegraph Company, 1976

This program is designed for use on the secondary level in Social Studies, Family Living, English, Science, Psychology and Career Education curricula. It is also an effective tool for Guidance Counselors and Teacher trainers concerned with the expanded range of possibilities available to young people today. Community and religious organizations might also find the unit a useful addition to their program of work.

Multicultural Nonsexist Education in Iowa Schools

Iowa Department of Public Instruction

Guides are available in the following areas:

Agricultural Education
Math and Science
Language Ats
Arts Education
Guidance and Counseling
Physical Education
Library Media Services
School Administration
Social Studies
Home Economics and Industrial Arts
Business Education

These guides provide definitions, rationale and philosophy, as well as legal authority, goals and objectives a comprehensive self-evaluation checklist, bibliography and resource organizations.

GENERAL

Project Bicep Materials

Bainstable Instructional Career Education Program by Patricia L. Duffy.

These books have excellent activities for K-12 curriculum. Books currently found in the following areas:

K-6 - fine arts, reading, language arts, science/health, social studies, mathematics

Middle School - fine arts, home economics, English, industry-technology, math, science, social studies

7-12 - guidance

Career Education: What It Is and How to Do It, 2nd Edition, by Kenneth B. Hoyt, Rupert N. Evans, Edward F. Mackin, Garth L. Nangum

This book puts ideas together relating to the following topics and career education: what it is, why we need it, how it developed, how to do it and how to get it.

GIFTED AND TALENTED

Gifted Education, A Packet of Information

This publication was compiled by the Iowa Talented and Gifted Association. The publication offers the best and most useful material available for teachers and parents who wish to better serve this group. Copies and memberships may be obtained from: Shirley Brown, Iowa Talented and Gifted Association, 4124 Ovid Avenue, Des Moines, Iowa 50310.

Identifying Students for Gifted and Talented Programs by Shirley K. Curl, Area Education Agency 5, Karen Garvin and Pat Achey-Cutts, Area Education Agency 7.

Information in respect to this publication may be obtained from Lee Wolf, Consultant, State Department of Public Instruction (see next page for address).

Career Education for Gifted and Talented Students

This publication is edited by Kenneth Hoyt and Jean R. Hebeler and available from Olympus Publishing Company, Salt Lake City, Utah.

This book provides an excellent orientation and foundation of career education in general and then relates this philosophy to the needs of gifted and talented students.

Guiding the Gifted Child

This book by James Webb, Elizabeth Meckstroth, and Stepanie S. Tolan, is a must for those working with the Gifted and Talented. It is available for $11.95 from Ohio Psychology Publishing Company, Suite 610, 5 East Long Street, Columbus Ohio 42315. For information call: (513) 293-5225.

Dr. Lee Wolf is the State Department of Public Instruction's consultant and is available to provide districts help and assistance in working with Gifted and Talented students. Dr. Wolf will provide information and a packet that explains how state approval and special funding may be obtained to those district that desire to establish a quality program.

Dr. Lee Wolf, Consultant (515) 281-3198
Instruction and Curriculum Division
State Department of Public Instruction
Grimes State Office Building
Des Moines, Iowa 50319

HEALTH & PHYSICAL EDUCATION

A Tool for Assessing and Designing Comprehensive School Health Education

Iowa Department of Public Instruction, 1982

This curriculum is for local schools to use as a means of assessing their current programs in health education and to plan for a comprehensive health education program for the future. This tool and the process for curriculum study it suggests are recommended for use on a continuing basis. The tool includes the following major sections: 1) A schedule and a plan for implemention of a local curriculum study in health education; 2) A suggested framework for the school health education program; 3) Suggestions for curriculum development in health education; 4) An instrument and a procedure for assessing curriculum programs and the identification of needed changes.

Many of the suggestions included (i.e., framework, procedure for program development, and goal and content areas) arose from the 1978-79 Task Force efforts as approved by the State Board of Education. These sections are included for local school use and consideration where they seem appropriate. The underlying theme for curriculum tools in Iowa is to provide help and suggestions while not being prescriptive.

HOME ECONOMICS

The following curriculum guides for Home Economics are available from the University Book Store, Iowa State University, Ames, Iowa.

Curriculum Guides - General

Housing and Home Furnishings Guide (1982)
Entrepreneurship: A Senior High School Home Economics Career Exploration Unit (1981)
Contemporary Parenting Choices:
1. The Decision to Parent (1979)
2. Sexuality and the Adolescent
3. Parenting Today (in production)

Integration of Combined Wage Earner/Homemaker Roles in Secondary Home Economics Programs (1980)
A Guide for Teaching Textiles and Clothing (1979)
A Guide for Teaching Food and Use and Nutrition Education (1978)
A Guide for Teaching Management and Consumer Education (1977)

Curriculum Guides - Special

Group Learning Centers: A Strategy for Use in Classes Mainstreaming Disabled Students (1977)
Home Economics for the Sixth Grade in the Middle Schools (Unit Banks):
1. The Hobby Approach to Self-Development
2. Learning to be a Contribution Family Member
3. Accepting Job Responsibility
4. Becoming an Informed Consumer

Teaching Physically Handicapped Students in Regular Home Economics Classrooms: A Guide for Teaching - Housing & Home Care
Suggestions for Lesson Series: We Consumers (Adult)

INDUSTRIAL EDUCATION

Industrial Technology and Disabled Learners

Iowa Department of Public Instruction, 1984

Manual was developed to assist professinals in serving disabled students in industrial technology programs. The project represents the collective thoughts of educators from many different geographical locations in Iowa and from many different sized school districts, universities and colleges and the Department of Public Instruction.

Activities Incorporating Industrial Arts-Career Education into the Elementary Curriculum

Iowa Department of Public Instruction, 1981

Activities are divided into three basic areas based on the Industrial Arts clusters of Graphic Communications, Production, and Energy and Power. Activities are further divided into three sections: those recommended for grades K-3, K-6, and 4-6. Within these sections the activities are arranged in order of difficulty; the first activity in a section is the easiest, while the last is the most complicated and requires more involvement.

The Iowa Guide for Curriculum Improvement in Industrial Arts K-12

Iowa Department of Public Instruction, 1975

This guide has been prepared to assist teachers and public school administrators in improving the quality of their educational program.

This guide is a framework for local curricula development and thus avoids prescribing specific content and methodology. It gives the practicing industrial arts teachers and administrators the freedom and flexibility to be innovative and develop unique approaches and methodology for a particular locale. The guide is intended for use in situations where a comprehensive curriculum development effort is undertaken, a new industrial arts curriculum is being developed, and an existing program or specific offering is being examined with consideration given to revision.

This guide should be of particular value to teachers interested in developing interdisciplinary units. Comprehensive programs and specialized courses can also be improved by applying the suggestions found in the guide.

For all situations it will be helpful to review the total curriculum process. Four phases of coordinated planning and decision-making are essential. These phases are diagrammed and described in this chapter along with references to particular sections of the guide which will be of assistance in developing curriculum for K-12 industrial arts.

Other industrial technology publications available are:

1. Selected Aspects of Organization and Administration, 1979
2. Introductory Level Graphic Communication, 1978
3. Introductory Level Energy and Power, 1978
   Supplements for Selected Short Courses, 1980
   a. Model Rocketry
   b. Alternative Energy Systems
   c. Mechanical Conversion System
4. Introductory level Production (Manufacturers and Conservation), 1980
5. Computer Applications in Industrial Arts, 1981
6. Using metrics in Industrial Arts Instruction

LIBRARY MEDIA

Mini-Bib 3: Special Population Selection Tools for Library Media Centers: Ethnic Groups, Women and the Aging

Iowa Department of Public Instruction, 1984

Mini-Bib 4: Special Population Selection Tools for Library Media Centers: The Gifted, the Handicapped, the Reluctant and the Coping

Iowa Department of Public Instruction, 1984

Multicultural Nonsexist Education in Iowa Schools: Library Media Services

Iowa Department of Public Instruction, 18 p.

Plan for Progress in the Media Center, K-6

Iowa Department of Public Instruction, 1979, 31 p., plus Planning Guide

Plan for Progress in the Media Center, 7-12

Iowa Department of Public Instruction, 1980, 31 p., plus Planning Guide

Selection of Instructional Materials, A Model Policy and Rules

Iowa Department of Public Instruciton, 1980, 23 p.

Betty Jo Buckingham, Consultant, Educational Media, Instruction and Curriculum Division, Iowa Department of Public Instruction, Grimes State Office Building, Des Moines, Iowa 50219 (515) 281-3707

LANGUAGE ARTS

American Speech-Language-Hearing Association and Speech Communication Association. Standards for Effective Oral Communication Programs. Fall Church, VA: Speech Communication Association, 1980. (Prepared for use with Title II, ESEA Basic Skills Improvement Program.)

Define oral communication and assumptions underlying an effective program. Emphasizes the relationship of oral communication to the language arts, as well as the need for direct instruction.

Britton, James. Language and Learning. Baltimore: Penguine Books, Inc., 1970

Presents a theory of language development which incorporates real world (participatory) and representational (spectatorial) uses. Theoretical chapters are interspersed with chapters illustrating the language of pre-school, elementary, and secondary school children.

Elbow, Peter. Writing Without Teachers. New York: Oxford University Press, 1973. (Especially chapters 2 and 3.)

Describes an approach which challenges the traditional view that you must first get your meaning clear and then write. Learning to write is a matter of producing material on paper--quickly, letting the words flow--without editorial interference, before editing and rewriting.

Framework: Integrating Language Arts

Department of Public Instruction, 1981

Glatthorn, Allan A. A Guide for Developing an English Curriculum for the Eighties. Urbana, IL: National Council of Teachers of English, 1980.

A step-by-step process for improving the English curriculum in a school district. Includes an analysis of current trends and infuences on the English curriculum, and summarizes research findings in different language areas. Advocates that teachers and curriculum leaders translate this knowledge and experience into usable curriculum materials.

Hall, Mary Anne. Teaching Reading as a Language Experience. Charles E. Merrill, 1976.

The theoretical bases for the language experience approach and suggestions for its implementation in the classroom are explored. Attention is given to integrating reading instruction with other language arts.

Moffett, James. Teaching the Universe of Discourse. Boston: Houghton Mifflin Company, 1968.

Moffett proposes a naturalistic language curriculum requiring a reorganization of traditional subject divisions with integration through the ways humans learn by symbolizing processes in thinking, speaking, listening, reading, and writing. His theory of discourse is centered on the relationship, among the composer, comprehender, and topic. One leaarns to discourse by using language in every realistic way, not by anaalyzing it.

Pearson, David P. and Dale D. Johnson. Teaching Reading Comprehension. Chicago: Holt, Rinehart and Winstron, 1972.

This text attempts to integrate theory and practice. Pearson and Johnson introduce basic issues and conflicts in comprehension instruction model of the comprehension process.

Pinnell, Gay Su, editor. Discovering Language with Children. Urbana, IL: National Council of teachers of English, 1980.

Presentation of research findings and classroom suggestions for early language development, "Language Development in Educational Environments," and "Evaluation in Language Education." Twenty-six articles for the non-specialist.

Wolvin, Andrew D. and Carolyn G. Coakley. Listening Instruction. Urbana, IL: ERIC Clearinghouse on Reading and Communication Skills and Speech Communication Association, 1979.

Thirty-eight exercises for high school and college (could be adapted for other levels) follow a theory chapter which defines listening as a process, discusses its importance, uses, and improvement.

MATHEMATICS

Education in the 80's Mathematics, Shirley Hill, Editor, A National Education Association Publication, 1982

This publication covers areas such as: Mathematics education at the start of the decade, tools of technology, and mathematics, the critical filter.

Educating Americans for the 21st Century: A plan of action for improving mathematics, science and technology education for all American elementary and secondary students so that their achievement is the best in the world by 1995.

A report to the American people and the National Science Board

The National Science Board Commission on Precollege Education in Mathematics, Science and Technology, 1983

A Commitment to Excellence

Direction for Mathematics Education in Iowa Schools for the 1980's, Iowa Department of Public Instruction, 1982

This document was developed and written as a guide for educators to assess a K-12 mathematics program. Desired changes may occur after completing a curriculum study, or from a desire to make minor modification within a given grade level or classroom. This document contains references to resources deemed appropriate and background information the authors felt essential for implementing changes.

Mathematics at Work in Society: Opening Career Doors, written by James R. Choike, 1981

This book was prepared, published and distributed by the Mathematical Association of America under the National Science Foundation Grant SED-80088438. This project includes the project book and a set of four television video tape cassettes entitled: "An Actuary-What's that?", "Mathematics in Space", "Mathematics: The Language of Research", Mathematics: Where Will I Ever Use It?" These materials have been designed to increase awareness of the connection between mathematics and careers for students of grades 8 and above. For more information:

The Mathematical Association of America, 1529 Eighteeneth Street, N.W., Washington, D.C. 20036

SCIENCE

A Tool for Assessing and Revising the Science Curriculum

Iowa Department of Public Instruction, 1984

This tool was jointly developed by the Iowa Department of Public Instruction and a committee of the Iowa Council of Science Supervisors to encourage and aid local schools in the assessment of their science curricula on a continuous basis. It provides:

* a schedule for conducting a science curriculum assessment and/or revision
* a model for assisting schools in developing their science philosophy, goals and objectives
* recommendations for levels at which suggested objectives are introduced, emphasized and maintained
* an instrument for matching local science curriculum needs, to available science programs

SOCIAL STUDIES

Strategies for Teaching Economics, Primary level (grades 1-3), Donald G. Davison, chairman, Joint Council on Economics Education, 1977

The Master Curriculum Guide was published to be used as a tool for curriculum development. It is designed as a resource document for school systems engaged in K-12 economics ideas that can be taught at different levels of difficulty.

SPECIAL NEEDS

Objective Skill Development for Adolescents revised and edited by Constance H. Dembrowsky, 1983

This guide is a structural curriculum changed to help teenagers develop self-esteem and interpersonal skills. This program focuses on the social/behavioral skills of communication, assistance, self-responsibility and problem solving/decision-making.

Career Education Activity Kit (K-6)

Lakeland AEA, Darlene Reynolds, published by: Kansas State Department of Education.

An interdisciplinary curriculum that reinforces learned capabilities through Career Education.

Inservice Training Module: "Infusing Iowa's Career Education Objectives into Existing Curriculum:

Iowa Department of Public Instruction

The goals of this module is to have workshop participants explore how the infusion and direct instruction of career education works. Also, covered is the implementation process with local teachers, counselors, administrators and curriculum consultants.

Inservice Training Module: "Career-Vocational Theory and Development of Disabled Persons"

Iowa Department of Public Instruction

The goals of this module will be to demonstrate the use of career and vocational theory of development in planning sequential curriculum for disabled students enrolled in all special education program modules.

Assessing and Evaluating the Career Development of Special Education Students

Iowa Department of Public Instruction Guide

This guide provides an overview of the career-vocational theory, career and vocational education and a series of descriptions for assessment instruments.

Integrating Secondary Handicapped Students into Vocational and Special Education Curriculum

Monograph 2 - Adoptions for teaching secondary handicapped students.

By Madelyn K. Regan, Midwest Regional Resource Center - Drake University - May, 1980.

This monograph is designed to provide teachers with information on the intergation of handicapped students into vocational and general education curriculums. This is one in a series of six monographs.

Career Education Bulletin Boards

Iowa Department of Public Instruction

This guide provides points for developing bulletin boards and lots of ideas for the development of career education bulletin boards.

A Reference Guide for Secondary Career and Vocational Programming for Handicapped Students

Iowa Department of Public Instruction, 1982

This guide deals with general information and definitions for work experience exploration, specially designed occupational or vocational training and vocational cooperative, sheltered workskhops and other related information.

Developing Community Sites

Iowa Department of Public Instruction

A training module that will prepare participants to develop community sites and use them effectively.

Development for Individualized Education Programs (IEP) for the Handicapped in Vocational Education written by Lorella A. McKinney, National Center for Research in Vocational Education and Donna M. Seay, APC Skills, Inc., 1979

This guide describes the necessary steps involved in setting up an Individualized Education Program, procedures for identification/diagnosis of individual needs, observation and testing and prescribing vocational education in the IEP.

Career Education for Handicapped Children and Youth, Donn E. Brolin and Charles J. Kokaska, Charles E. Merrill Publishing Company, 1979

This book is written for all persons concerned with the career development of handicapped individuals-parents, teachers, counselors, administrators, rehabilitation workers, psychologists, business and industrial leaders and many others. The book is a text for use by university educators in regular and special education, vocational education, guidance and counseling psychology, rehabilitation and anyone who prepares their students for working with the handicapped. It should also be most useful for curriculum planners and inservice trainers who design and implement career education in their districts. State department administrators, educational consultants and numerous community agencies involved in the career development of handicapped individuals should also find this book a valuable resource.

Life Centered Career Education: A Competency Based Approach, edited by Donn E. Brolin, Published by Council for Exceptional Children, 1978

The Life Centered Career Education Curriculum brings relevancy into the classroom for all students. This is not just a piece of curriculum; rather, it is a total approach to learning that synthesizes basic subject areas into a cohesive program. The curriculum is concerned with three domains: daily living skills, personal-social skills, and occupational guidance and preparation. These curriculum areas are developed around 22 specific learner competencies. Competencies include such topics as managing family finances; engaging in civic activities; maintaining good interpersonal skills; and seeking, securing, and maintaining employment. The skills addressed by the Life Centered Curriculum are essential for a person to function adequately and independently as a citizen in today's society.

Vocational Preparation of Retarded Citizens, Charles Merrill Publishing Company, Columbus, Ohio 43216

Text designed to assist professionals in programs for mentally disabled populations.

Career Education For Children With Learning Disabilities, Academic Therapy Publications, P.O. Box 899, San Rafael, California 94901

Specific ideas and activities for implementing career education for the learning disabled student.

Career Education for the Handicapped Child in the Elementary Classroom, by Gary Clark, Love Publishing Company

Text has specific examples of career education activities for the elementary school age student.

Resources

The following items are included to serve as resources when developing/revising career education activities. The information covers types of activities, ideas for inservice, items to identify domains, and helpful tips for field trips, resource people and textbook selection. Selected pages may also be useful as handouts or for a transparency.

DEVELOPING CAREER EDUCATION ACTIVITIES

A. Review the Task

1. Review domains in career development
   Identify career education objectives

B. Review basic text or program for opportunities to "springboard" into career education domains/objectives.

1. Possible alternatives - review text for <u>each</u> career objective or review text for <u>all</u> possible career objectives opportunities (domains).

C. Upon identifying a "springboard" - <u>briefly</u> the kind of activity appropriate to the career objectives and/or instructional objective. I recommend variety in activities.

Activity types: (elementary)

1. bulletin boards
2. discussions
3. learning centers
4 demonstrations
5. review of questions
6. group project
7. classify
8. match items
9. measure
10. explain a phenomena
11. make/complete a chart
12. class project
13. explain terms
14. view film/filmstrip
15. experiment
16. investigation
17. individual project
18. drill and practice on specific skill
19. prepare drama
20. make collection
21. report of a topic
22. mainpulation of equipment
23. predict results
24. solve problems
25. do a simulation
26. make observations
27. listen to resource person
28. take test

Activity types: (secondary)

1. discussion
2. interest inventory
3. skills inventory
4. group project
5. observation of job
6. interview
7. report
8. do a simulation
9. listen to resource person
10. view film
11. library research
12. complete job application
13. review job opportunities
14. conduct experiment
15. role-playing activity
16. develop collage
17. manipulate equipment
18. field trip
19. prepare lists
20. internship

D. Review supplementary materials such as films, magazines, etc. for "springboards".

E. Write "Career Education Cells".

BEHAVIOR IN THE KNOWLEDGE DOMAIN

Action verbs you can use when writing knowledge oriented objectives:

KNOWLEDGE

Define
Memorize
Repeat
Record
Listen
Recall
Name
Relate

COMPREHENSION

Restate
Discuss
Describe
Recognize
Explain
Express
Identify
Locate
Report
Review
Tell

APPLICATION

Translate
Interpret
Apply
Employ
Use
Demonstrate
Dramatize
Practice
Illustrate
Operate
Schedule
Shop
Sketch

ANALYSIS

Distinguish
Analyze
Differentiate
Appraise
Calculate
Experiment
Test
Compare
Contract
Criticize
Diagram
Inspect
Debate
Inventory
Question
Relate
Solve
Examine

SYNTHESIS

Compose
Plan
Propose
Design
Formulate
Arrange
Assemble
Collect
Construct
Create
Set Up
Organize
Manage
Prepare

EVALUATION

Judge
Appraise
Evaluate
Rate
Compare
Value
Revise
Score
Select
Choose
Assess
Estimate
Measure
Inspect

BEHAVIOR IN THE SKILL DOMAIN

Other action verbs you can use when writing skill oriented performance objectives:

PERCEPTION

Allow
Appraise
Conceive
Cultivate
Detect
Envision
Envisage
Find
Form
Generate
Mold
Picture
React
Taste
Touch
Smell
Feel
Sense
Visualize
Vouch

SET

Display
Alter
Appraise
Arrange
Carry
Change
Check
Decide
Derive
Find
Generate
Group
Infer
Invite
Join
Move
Offer
Organize
Place
Position
Put
Rearrange
Regroup

GUIDED RESPONSE

Act
Alter
Apply
Arrange
Assemble
Build
Calculate
Categorize
Compile
Count
Cut
Diagram
Display
Draw
Extract
Fasten
Fold
Graft
Grip
Chart
City
Handle
Hold
Indent
Insert
Itemize
Join
Lengthen
Locate
Map
Mark
Measure
Mix
Mold
Number
Pack
Participate
Place
Position
Recite
Replace
Reset
Return
Separate
Sharpen
Show
Specify
Store
Tabulate

GUIDED RESPONSE (Cont'd)

Trace
Transfer
Type
Unbind
Uncoil

MECHANISM

Articulate
Assemble
Build
Cite
Compute
Conclude
Decide
Differentiate
Dissect
Display
Distinguish
Draw
Explain
Extract
Finish
Fix
Illustrate
Interpolate
Itemize
Locate
Measure
Mend
Modify
Multiply
Manipulate
Organize
Participate
Position
Produce
React
Reorganize
Reproduce
Rewrite
Revise
Sharpen
Simplify
Sketch
Strengthen
Structure
Synthesize
Translate
Validate

COMPLEX OVERT RESPONSE

Alter
Analyze
Appraise
Articulate
Bisect
Calculate
Change
Compile
Compose
Compute
Decide
Decrease
Derive
Design
Dissect
Expand
Extract
Finish
Generate
Formulate
Illustrate
Integrate
Interpolate
Lengthen
Locate
Measure
Manipulate
Participate
Position
Pronounce
Predict
Present
Reconstruct
Shorten
Simplify
Specify
Strengthen
Summarize
Systematize
Translate
Unearth
Validate

BEHAVIOR IN THE ATTITUDE DOMAIN

Action verbs you can use when writing attitude oriented performance objectives:

RECEIVING

Beset
Appreciate
Answer
Ask
Distinguish
Follow
Interact
Look
Question
Support
Watch

RESPONDING

Answer
Assist
Alter
Aid
Calculate
Change
Compare
Conclude
Contrast
Criticize
Defend
Differentiate
Discriminate
Display
Express
Interact
Join
Modify
Offer
Present
Report
Relate
Smile
Suggest
Support

VALUE

Applies
Appraise
Categorize
Compare
Contrast
Cooperate
Criticize
Defend
Differentiate
Discriminate
Evaluate
Express
Interpolate
Join
Label
Match
Position
Praise
React
Respond
Separate
Show
Summarize
Support
Translate
Volunteer
Weigh

ORGANIZATION

Adhere
Accent
Alter
Argue
Articulate
Assemble
Categorize
Combine
Compare
Cooperate
Defend
Direct
Distinguish
Explain
Generalize
Identify

ORGANIZATION (Cont.)

Integrate
Modify
Organize
Prepare
Reconstruct
Reorganize
Search
Specify
Substitute
Synthesize
Translate

CHARACTERIZATION

Act
Aid
Analyze
Apply
Appraise
Communicate
Compare
Compute
Cooperate
Differentiate
Display
Explain
Formulate
Interact
Measure
Modify
Organize
Participate
Reconstruct
Restrain
Serve
Show
Specify
State
Substitute
Transfer
Translate
Weigh

VERBS FOR STATING BEHAVIORAL OBJECTIVES

Cognitive Domain

1. Knowledge--remembering previously learned materials

cite list	match	reproduce
define	name	select
identify	recognize	state
label		

2. Comprehension--ability to grasp the meaning of material

convert	extend	paraphrase
describe	give examples	summarize
estimate	illustrate	translate
explain	interpret	

3. Application--ability to use learned material in new and concrete ways

apply	modify	relate
compute	operate	show
construct	predict	solve
demonstrate	prepare	use
discover	produce	use

4. Analysis--ability to break down material into its component parts so that its organizational structure may be understood

analyze	differentiate	infer
associate	discriminate	outline
determine	distinguish	point out

5. Synthesis--ability to put parts together to form a new whole

combine	devise	rearrange
compile	integrate	reorganize
compose	modify	revise
create	organize	rewrite
design	plan	tell
develop	propose	write

6. Evaluation--ability to judge the value of material for a given purpose

appraise	conclude	judge
assess	contrast	weigh
compare	evaluate	

SOME AFFECTIVE OBJECTIVES

preside	read	search	visit
volunteer	converse	peruse	investigate
participate	respond	listen	offer
share	show	react	consult
demonstrate	employ	propose	adapt
read use	ask	inquire	
choose	pursue	join	accept
browse	seek	gather	reject

PLANNING WORKSHEET SAMPLE

School:

Subject: Level: K-3, 4-6, 7-9, 10-12

Scope and Sequence:

Grade -

Grade -

Grade -

Vulnerable
Content Ojbectives: Grade Semester:

ACTIVITY WORKSHEET SAMPLE

Subject and level _____

_____

Instructional Strand and Objective _____

_____

Career Education Domain, Strand and Objective _____

_____

NOTES:

ACTIVITY:

RESOURCES USED:

FIELD TRIPS

1. Be sure that the students are fully aware of the location of the site they are to study.

2. Be sure the students have been aware of the product and occupations available at the site. Use any available films or filmstrips that may relate to the industry or the occupations. Point out the different jobs as they appear in the film.

3. Study as many different jobs as possible found at the site.

4. Whenever possible, have pictures of the site, occupations, and products.

5. Explain the background and the development of the particular industry to be visited.

6. Tell the students the name of the industry or company and names of people who have made the study tour possible. (Put names on the blackboard or bulletin board. Post any pictures you may be able to gather).

7. Go over any maps or layouts of the site you may have. Point out interesting spots or areas you want the students to see.

8. Help the students develop some questions they may wish to ask at the site.

9. The teacher or coordinator should <u>pre-visit</u> the site whenever it is possible.

10. Travel time can be used to good advantage. Have students assigned to groups and have each group watch for and compile a list of various workers observed to and from the visitation site. Compare lists.

SELECTION OF SPEAKERS

1. A speaker's topic must pertain to the teaching-learning objectives of the sponsoring individual or group.

2. Only invited speakers shall be present.

3. Evidence should be presented that the speaker is reputable and knowledgeable in the subject.

4. The speaker should agree to use suitable langugage and be audio and/or video taped.

5. The speaker should agree to speak to the structure and subjects requested and if he/she does NOT, students may be excused.

6. The structure for the presentation should pertain to the current subject matter being dealt with in the classroom.

7. The speaker is requested to participate in a question and answer session following his/her presentation.

8. No speaker shall be permitted to pass out literature to the students unless previously previewed and approved by the responsible teacher.

9. Adequate preparation and follow-up is imperative for all the students in attendance.

10. Students should not be required to listen to highly controversial speakers if they choose not to.

GUIDELINES FOR SPEAKERS

Welcome

You are about to play an important part in the career planning of high school young adults. What should you say in order to be of the most help to them? Whatever you say will be accepted as very important information concerning your career field; whatever you say will be a form of guidance.

Career guidance is the attitude that aims to HELP the individual be objective about his or her future career field and to:

1. Understand oneself.
2. Make the best of one's interests, capabilities, and other qualifications.
3. Adjust oneself satisfactorily to the varied situations within one's environment.
4. Develop the ability to make wise decisions and to solve problems independently.
5. Make one's own unique contribution to society.

Points to Especially Key In On

1. Brief overview of the job:

    a. General nature of the position
    b. Example of a typical work day
    c. Hours and working conditions (overtime, day/night shifts, vacations, sick leave, location, mobility, unions)
    d. Working contacts (clients, customers, supervisors, co-workers prestige and social values)
    e. Equipment, tools, and materials used

2. Requirements:

    a. Training, education, or experience necessary (length of time, cost, local recommended schools and school entrance procedures--waiting lists, minimum GPA, qualifications)
    b. Licensing (test and exams)
    c. Unions or professional affiliations
    d. Personal qualifications/charactertistics (age, physical, stature, abilities, personality type)

3. Earnings and Promotions:

    a. Beginning level and steps of advancement
    b. Average increase rate
    c. Opportunities for transfers and promotions

4. Advantages and Disadvantages:

    a. Present "real life" picture
    b. Clarify common stereotypes and misconceptions
    c. Do not try to oversee or recruit
    d. Effect of economic change on your job

GUIDELINES FOR SPEAKERS (Continued)

5. Trends and Opportunities:

   a. Equal opportunity (sex, cultural background, origin)
   b. Employment outlook
   c. How to get "your foot in the door"
   d. Related jobs for which this has prepared you

6. Steps to Take Right Now to Prepare for the Job:

   a. High school courses which are relevant
   b. Most advantageous schools or colleges at which to apply
   c. Majors and degrees recommended
   d. Related summer jobs to acquire experience
   e. Volunteer work
   f. Clubs, organizations, affiliations which are advantageous
   g. Helpful skills or general background knowledge
   h. How to be most "marketable"

7. Where to find further information:

   a. People or organizations willing to talk to students
   b. Companies to visit or tour
   c. Written literature or sources
   d. In-depth research resources
   e. Explorer posts specializing in this field

<u>"DO'S"</u>

1. Keep in mind the age, nature, and interests of your audience and adapt your audience and adapt your presentation to their level.

2. Be objective, honest, and realistic in describing your vocation. Give facts or state opinions as such.

3. Relate your topic to the immediate experiences and concerns of the students, showing a connection with what they are doing in school.

4. Use available visual aids to capture attention or clarify a point. (Keep your time limit in mind when using films or slides.)

5. After your presentation, stimulate questions. Encourage student participation by involving the audience in some way--ask <u>them</u> questions, have them participate in a demonstration, etc.

6. Repeat questions asked by students so that the audience can hear.

"DON'TS"

1. Oversell or "Recruit."
2. Deliberately discourage consideration of your vocation.
3. Dwell upon your personal biography and successes.
4. Overload your material with detailed facts and figures.
5. Try to advise individual students of their personal qualifications.
6. Stereotype in terms of sex or race.

SPEAKER GUIDELINES FOR

PRIMARY GRADES - K - 2

1. Tell your name and occupation.
2. Tell what you do and where you work.
3. Explain the duties of your occupation.
4. Explain the importance of your occupation and its relation to the community.
5. Where applicable, wear work clothes and bring tools of the trade, bring visual aids, demonstrations, slides, films, filmstrips, records, posters, handouts, etc.
6. Relate humorous or unusual experiences pertaining to your job.
7. Always allow time for questions from the children.
8. As much as possible involve the class in active participation.
9. Relate your occupation to academic skills. (Example: Knowledge of measurement is important to a carpenter.)

SPEAKER GUIDELINES FOR

INTERMEDIATE GRADES 3 - 4

1. Tell the class your name and occupation.
2. Tell what you do and where you work.
3. Explain the duties of your occupation.
4. Explain the importance of your occupation and its relation to the society.
5. Tell the typical places of employment.
6. Tell the qualification for your occupation: age, sex, education, etc.
7. Explain the conditions of your work: hours, regularity of employment, health and accident hazards, etc.
8. Where applicable, wear work clothes and bring tools of the trade, bring visual aides, demonstrations, slides, films, filmstrips, records, posters, etc.
9. As much as possible, involve the group in active participation.
10. Always allow time for questions from the students.
11. Relate humorous or unusual experiences pertaining to your job.
12. Relate your occupation to academic skills. (Example: Newspaper reporters need to be able to write, read, and spell properly.)

SPEAKER GUIDELINES FOR

UPPER GRADES 5 - 6

1. Tell your name and occupation.
2. Tell your duties and where you work.
3. Tell the importance of your job and its relation to the community.
4. Explain the qualifications for your occupation: age, sex, education, etc.
5. Explain the type of preparation needed for your occupation: general education, special training, and experience.
6. Tell the methods of entering your occupation.
7. Earnings: beginning wage rate, benefits, other rewards.
8. Tell about the conditions of work: hours, regularity of employment, health and accident hazards.
9. Tell about the typical places of employment.
10. Explain the advantages and disadvantages of the job.
11. Relate interesting, humorous or unusual experiences pertaining to your job.
12. Always allow time for questions during the presentation.
13. Where applicable, wear work clothes and bring tools of the trade, bring visual aids, demonstrations, slides, films, filmstrips, records, posters, handouts, etc.
14. As much as possible, involve the class in group participation.
15. Summarize: How you got into this occupation.
16. Relate your occupation to academic skills. (Example: A bookkeeper needs to have a great deal of knowledge of math.)

QUESTIONS FOR RESOURCE PEOPLE

1. What skills, training, and education are necessary? What subject areas from your formal schooling have you found most helpful in your occupation?
2. How would you describe a typical day?
3. What are your duties and responsibilities?
4. What is the salary range? for a beginning worker? after five years?
5. What are your working hours? Does your job require overtime? Do you get paid for overtime?
6. What are your job satisfactions? What are the drawbacks?
7. What are the opportunities for advancement in this area?
8. What are the benefits (vacation, health or medical insurance, stock options, etc.)?
9. What are the hazards, if any?
10. Is the job mostly indoors or outdoors?
11. Does your job deal mainly with people, ideas, or things?
12. What are the chances for travel?
13. What kind of co-workers can I expect to associate with?
14. Are jobs in this career area increasing, staying about the same, or decreasing?
15. Does this occupation require joining an association or union?
16. What are the appropriate dress requirements?
17. Are there any health requirements?
18. How much freedom/supervision do you experience?
19. What is the work environment like? What facilities are available?
20. Are there any license requirements?
21. Do you need transportation?
22. Who/What influenced you most in your choice of occupation?
23. How does your occupation influence your leisure time?
24. What hobbies do you enjoy? Why?
25. What are your future plans in this occupation?
26. Who can I write or contact for further information?

QUESTIONS AND ANSWERS ABOUT INSERVICING

In order for educators to fully understand the concepts of Career Education and know how to infuse them into the ongoing curriculum, there must be inservice education. What is inservice education? It might very simply be defined as planned activities which are concerned with the professional development of instructional staff members in such ways as to have a reasonably direct impact upon the quality of instruction offered.

It is hoped the following information will prove beneficial to those persons who are responsible for guiding and directing Career Education inservice for local school districts. Each district must adapt the ideas to fit its own needs.

QUESTION: Who will conduct the inservice?

ANSWERS:

1. The interested person who inititally attends the state dissemination of the handbook.

2. Any interested person who receives the handbook through the state dissemination or from some other person.

QUESTION: How do you sell the idea of inservice?

ANSWERS:

1. Obtain the support of the Board of Education and top administrative officials in your district.

2. Work with an area college or university and attempt to obtain college credit for inservice. Teachers really find it appealing to earn hours for recertification by working on projects that they can actually use in their classroom.

3. Brainstorm with a few "teacher leaders" to get ideas of how to convince other teachers they need this inservice.

4. Distribute one or two of the Pace Activities per grade level as "enticers" emphasizing that more are available through involvement in an inservice program.

5. Involve some of the teachers in the inservice program. Actual involvement creates a feeling of ownership.

QUESTION: How do you advertise the inservice program?

ANSWERS:

1. Place posters in teachers' lounges with information regarding time, place, and event.

2. Send special individual flyers through the teachers' association newsletter, curriculum bulletins, etc.

3. Make contact with the local newspaper and explain what you are doing. Ask for a special feature. If you're lucky, you might get it!

4. Word of mouth or "teacher to teacher" may be the most offensive form of advertising.

QUESTION: How do you advertise the inservice program? (continued)

ANSWERS: 5. Issue personal, written invitations to teachers.

QUESTION: What do you include in the inservice program?

ANSWERS: 1. Setting the stage:

MAKE SURE that you create an exciting environment for your inservice programs. Have displays of materials, posters, books, games, etc., and arrange chairs, desks, or tables in such a way that it will encourage communication among the participants. Be sure to schedule time for breaks and provide refreshments if possible.

2. A sample inservice schedule:

I. INTRODUCTION

A. Use an "ice-breaker" to melt away all barriers between yourself and audience.

II. DEFINITION OF CAREER EDUCATION:

A. What it isn't...

B. What it is... Why we need it...

1. Awareness
2. Accommodation
3. Exploration
4. Preparation

C. What it can mean to you...
(Provides good public relations and "bridge building" through community involvement)

III. WHAT DOES CAREER EDUCATION INCLUDE?

A. Self . . .

1. Decision-making skills
2. Goal setting
3. Self-concept

B. Work . . .

1. Dignity in all jobs
2. Awareness of careers
3. Academic skills as they relate to jobs

III. WHAT DOES CAREER EDUCATION INCLUDE? (continued)

C. Leisure . . .

1. Lifetime sports
2. Hobbies
3. Recreation

D. Resources . . .

1. Books
2. Audiovisual materials
3. People (community, teachers, students, etc.)
4. Study/Field trips
5. Newspapers and magazines
6. Free materials

IV. HOW DO YOU USE CAREER EDUCATION IN YOUR CLASSROOM?

A. Share ideas and materials

1. Pace Activities

a. games (previously constructed)
b. worksheets
c. posters
d. student work

B. Where does Career Education fit in the curriculum?

1. Not an add on
2. Enriches all areas and emphasizes the basic skills
3. Increases relevance

C. Study/Field trips and resource speakers

1. Request forms for speakers and trips
2. Study/Field trip activity sheets

V. HANDS-ON ACTIVITIES

A. Simulation of at least one Pace game or activity

1. Provide materials that are needed
2. Give guidance and instruction as needed
3. Have samples and models

QUESTION: How do you disseminate the materials?

ANSWERS:

1. NEVER distribute this whole notebook of materials (unless you want it stuck on a shelf). Share ONLY ONE OR TWO of the Pace activities at a time with the teachers.

2. Attempt to start with an activity that you know will be used or linked to a curriculum need.

QUESTION: Was your inservice successful?

ANSWERS:

1. Distribute the inservice evaluation sheet. (Sample included)

2. Obtain feedback as to if and how Pace and other Career Education Activities are being used. Surveys, evaluation sheets, and personal contacts are ways of doing this.

3. Share any successful ideas with others making sure that the proper person gets credit for the contribution. THIS IS IMPORTANT! This can be done with: newsletters, photographs, publicity releases, programs, faculty meetings, bulletin boards, etc., in order to let people know what's happening around the school.

ADVANTAGES OF INFUSION

1. Infusion makes abstract academic content more concrete, more relevant, and consequently, easier to learn.
2. Infusion increases the possibility for exposure to a wider range of career education concepts and skills.
3. Infusion assumes that everyone in the educational process will be participating from his or her own perspective, providing a broad-based support system.
4. If infusion is operative in the entire educational program, there is some assurance that the content of the curricula in regular classes will be more appropriate for many handicapped children.

POSSIBLE DISADVANTAGES OF INFUSION

1. Infusion tends to take an "activities" approach. This means that career education activities are used to enhance the learning of concepts and skills of a basic subject matter area. The concepts and skills of the activities related to career education are left to incidental learning.
2. Infusion does not lend itself to achievement evaluation for the types or level of learning desired for career education concepts or skills, because evaluation tends to focus on the subject matter concepts and skills.
3. Infusion does not encourage, or in any case permit, repetition of career development concepts and skills that are needed by many handicapped children for overlearning.
4. Infusion is not systematic enough to ensure that the scope and sequence of the desired concepts and skills will be covered.
5. Infusion depends upon the willingness and ability of teachers to incorporate the concepts and skills of a comprehensive model into each of the basic academic skill areas. In essence, it is a voluntary commitment unless the school district or building principal requires it, monitors it, and provides support in doing it through in-service training, materials, resources, etc.

ADVANTAGES OF SEPARATE PROGRAMMING

1. Separate programming assures that concentrated attention will be given at some time during the year to the goals and objectives for career education at a given level.
2. Separate programming communicates to pupils the importance of career development.
3. Separate programming may make more of an impact and lead to more effective and efficient learning through focused learning.
4. Separate programming offers students an opportunity to "tie together" the various career development concepts and skills they have been exposed to over a period of time.
5. Separate programming can serve as a motivating technique for upcoming basic subject matter content and experiences.
6. Separate programming provides a specific opportunity to take better advantage of the expertise of the elementary school counselor through using him or her as a resource person, a team teacher of a unit, or a consultant to individual pupils.
7. Separate programming may facilitate the undertaking of special activities and the extensive use of community resources.

DISADVANTAGES OF SEPARATE PROGRAMMING

1. Separate programming adds to an already crowded, highly competitive curricular marketplace.
2. Separate programming leads to specialization, which may require an instructor with special training in the area. Subject matter programming eventually leads to certification regulations
3. Separate programming as a curriculum or subject matter course is difficult to implement without a well-developed, systematic, sequential curriculum guide or a published curriculum series, neither of these currently exists.
4. Separate programming of career education concepts and skills in a total curriculum or subject matter format requires some standardized achievement assessment instruments to evaluate the functioning level of students and provide data for effectiveness of instruction. These do not presently exist.
5. Separate programming of certain components may lead to artificiality of instruction. That is, there are certain content areas related to actual job or daily living skills that logically belong in basic subject matter instruction. Certain aspects of consumer education, for example should be taught in math and social studies; certain aspects of human sexuality and body care should be taught in science or health; and obviously, such critical job and daily living skills as reading, writing, spelling, and arithmetic should be taught separately at the elementary level.
6. Separate programming could become a type of tokenism to satisfy the advocate of career education while effectively keeping the academic areas "pure" by avoiding infusion.

COMBINATION OF INFUSION AND SEPARATE PROGRAMMING

1. A combination of infusion and some separate programming permits a balance between teaching critical academic skills (with career education content incorported for application) and critical career education concepts and skills (with basic skills incorporated as problem-solving tools or aids to making certain job or daily living demands go easier).
2. A combination approach avoids, to some extent, the issue of adding to an overcrowded curriculum and poses less of a threat to subject matter specialists.
3. Combining the two approaches permits the teacher to be involved in the total education process by retaining responsibility for covering all critical areas, but without having to personally take on certain instructional goals.
4. Infusion and separate programming combined provide a unique opportunity to tie together concepts and skills learned in both academic and career education instruction.
5. A combination of infusion and separate programming provides the handicapped pupil in the regular classroom with the critical elements necessary for a "responsive environment," rather than a restrictive environment.

HOW TO GET STARTED AND THINGS TO LOOK FOR IN EVALUATING EDUCATIONAL MATERIALS

WELDON F. ZENGER Ed.D.

Try to get a feel for what is involved - Try to determine what the material is supposed to accomplish - Do this by reading and studying the publisher's promotional information such as: blurb sheets, brochures, pamphlets, catalogs and teachers' manual.

Some very practical suggestions for checking printed educational material are offered by an anonymous writer in an article entitled "The Ghost Behind the Classroom door", Today's Education, April-May, 1978. Some of those suggestions are listed below in very brief form. For a description of each of these suggestions, the article is excellent.

1. Read the descriptive material slowly and carefully.

2. Visualize each step in the process and attempt to figure out what the teacher will do and what the students will be doing while he/she is doing it.

3. Look for points that should have been included but were not.

4. Consider such statements as "and so on", "and the like", or "et cetera" as danger signals when they follow a list of items - the writer or publisher is probably padding.

5. Check the significance of the consultants and advisers.

6. Check the relevance of the material.

   a. Do I really have that problem?
   b. If I do, does it justify buying this material or product?

7. Will the material help the teacher do a better job or will it just make more work for the teacher?

8. Don't be misled by come-ons such as "teacher tested" or "developed by actual classroom experiment" - check the field-testing procedure more closely.

THE PRODUCT OR MATERIAL ITSELF

9. Inspect the product itself, (learning package, testbook, etc.) - at least as well as the promotional material - read all of it, checking for inaccuracies, omissions, and bias - If these do exist, decide how to overcome them, or at least, what you will do when the students ask about them.

10. Consider a perfect format as a danger signal - most learning materials do not fit a perfect format.

11. Don't be misled by the sale pitch that a larger school has adopted this material - There is not assurance that personnel in the large school studied it well before adopting it.

The first step in selecting a textbook for a particular course is to match the major content in the course that is in each of the textbooks being considered. This can be done by using the matrix on the next page. List the major content of the course in the horizontal columns and the names of the testbooks in the vertical columns of the matrix. Then check the space where the two columns intersect if the book has the content listed in the horizontal column. The matrix should be kept nearby so check marks can be changed as the textbooks are evaluated in more detail. Also, the matrix should be checked in pencil so the marks can be erased if necessary.

HANDBOOKS FOR EVALUATING TEXTBOOKS

To check and evaluate educational materials (especially textbooks) more in detail and for specifics, check the nine areas listed below by using Appendix B of the Handbook entitled, Curriculum Planning: A Ten-Step Process by Zenger and Zenger, R & E Reasearch Associates publishers, Inc., Palo Alto, CA 92982. These areas are all covered in checklist form by the Handbook.

I. Authorship - Is the author qualified to write this material at this level?

II. General Characteristics - Is it current, attractive, clearly written, etc.?

III. Physical and Mechanical Features - The paper, binding cover, etc.

IV. Philosophy - Will this material be accepted in your school and community?

V. Organization of Material - Is it organized clearly and concise or like you want it?

VI. Objectives - Are the objectives stated clearly so you know exactly what the intent is?

VII. Subject-Matter Content - Does the content follow and fulfill the objectives?

VIII. Teaching Aids and Supplementary Material - Does it include the Audio Visual aids, activities, etc., that you want?

IX. Teacher Edition or Manual - Do these include the guides, suggestions, background information, etc. that you want?

The following evaluation guide is from: The Executive Review, Vol. 4, Number 4, January 1984, Institute for School Executives, University of Iowa, Iowa City, Iowa.

SOFTWARE EVALUATION GUIDE: INSTRUCTIONAL

There are tremendous differences in software instructional design and subject matter, and there is no single list of criteria that will fit all. Use only the categories and questions you feel will fit the program you are evaluating. Responses can range from one word to a paragraph. No question on this list is intended as a prescription of what should be in a program, they are only questions to consider. Please discuss these topics in the order listed below.

Documentation

1. Is the documentation useful for the instructor and/or the students?
2. Are the objectives given?
3. Are suggested uses and activities
4. Are prerequisites indicated?

Introductory Part of Lesson

1. Is the program interesting?
2. How are the objectives given? (Are they necessary)
3. Does the program require prior knowledge?
4. Is a pretest given? (Is it necessary?)
5. Are the instructions clear?
6. Are the instructions complete?

Presentation of Information

1. Is the dialogue appropriately personalized?
2. Are necessary terms well defined?
3. Is the reading level in agreement with publisher's claim?
4. Is the text clear and concise?
5. Are other information sources necessary to use the program?
6. Is sufficient time provided for responses?
7. Are graphics used for important information?
8. Is color used effectively?
9. Are diagrams well labeled?
10. Are animations relevant and visually clear?

Sequence

1. Does the program follow a logical order?
2. Is the information given in appropriate increments?
3. Are menus appropriate and clear?
4. Are the transitions between statements or lessons clear?
5. Is instruction individualized for all levels of student ability?

Motivation

1. For what grade levels is the content appropriate (interesting motivational)?
2. If appropriate, does the program keep score?
3. Does the program provide progress reports?
4. Do the graphics increase motivation?
5. Is the program competitive against time, other students, or the computer information?
6. Is the length motivationally correct?

Content

1. Is the content complete?
2. Is the content accurate?
3. Is the content significant or relevant?
4. Are the key concepts taught well?
5. Does the knowledge presented integrate well with prior learning?

11. Are animations and graphics distracting?
12. Is the screen lay-out appropriate? (lettering, spacing, graphics)
13. Is sound used approriately?
14. Is the information provided or taught when needed?

Program Questioning Technique

1. Are questioning intervals appropriate?
2. Are responses easy to enter?
3. Is the computer expected response format clear?
4. Are multiple responses needed?
5. Can students be caught in a question loop? (questions & responses repeated)
6. Are exercises modeled in the program?

Feedback

1. Is the feedback appropriate? (corrective, supportive, immediate)
2. Is graphic and audio feedback used?

Student Control

1. Does the student have adequate control of the program?
2. Are pauses appropriate?
3. Can students take shortcuts?

Overall

1. Describe the program purpose: (See Descriptive Terms list.) Is it effective?
2. Does the program succeed in its objectives?
3. Can a student work independently? (no teacher input or help)
4. Discuss the ease of use (student and/or teacher).
5. Discuss how the program might be implemented in the classroom.
6. Discuss the levels of thinking required of the student.
7. Does the program challenge a student's creative ability?
8. Does the program utilize the computer or could the same information/learning be accomplished with another form of media?
9. Does the program provide a management system?
10. Is there cultural or sexual stereotyping?

SOFTWARE EVALUATION GUIDE: TECHNICAL

Listed below are the items which have been tested for technical operation of the program. For the most part the responses are intended to be descriptive of the program and its use. Some space is provided at the end for specific comments about the operation of the program and ways it could be improved.

Package name:
Package #:
Routing:

Equipment Needs
Computer:
Model #:
Screen B&W: Color:
Columns:
Number of disk drives:
Language required:
Memory required:

Peripherals
Additional diskettes:
Printer:
Paddles:
Joystick:
Voice synthesizer:
Music synthesizer:
Graphics tablet:
Other:

Software Design
Entry code can be modified:
Program is protected:
Ctrl C restart:
Power-off restart:
Menu driven:
Reset protection:
Write protected:
Diskettes initialied automatically:

Start-up Procedure
Instructions available:
Self-boot with power-on:
Simple command (PR #6):

Documentation
Designed for:
Indexed:
Organized by:
Initially requires sequence:
Glossary:
Reading level:
Information mapping applied:
Overall usefulness:

Ease of Use
Consistent response modes:
Uses key conventions (Q=Quit):
Easy to end program:
Easy access to menu & earlier parts of the program:
Length of pauses controlled by:
Disk switching required:

Presentation
Letter font appropriate:
Can suppress sound:
Graphics are clear:
Use of flashing lights:
Screen scrolling:
Colors are distinct and easy to use:
Does program fail:

Physical
Jacket provided for diskette:
Packaging format:

Comments

SUGGESTED PERIODICALS

AEDS Monitor
1201 16th Street NW
Washington, DC 20036

Classroom Computer Learning
5616 West Cermak Road
Cicero, Illinois 60650

Computing Teacher
ICCE, 135 Education
University of Oregon
Eugene, Oregon 94701

Courseware Critique
The University of Iowa
224 Lindquist Center
Iowa City, Iowa 52242

Courseware Report Card
Educational Insights, Inc.
150 West Carob Street
Compton, California 90220

Creative Computing
P.O. Box 5214
Boulder, Colorado 80321

Digest of Software Reviews:
Education
1341 Bulldog Lane, Suite B
Fresno, California 93710

Educational Technology
140 Sylvan Avenue
Englewood Cliffs, New Jersey 07632

Electronic Learning
Scholastic Inc.
730 Broadway
New York, New York 10003-9538

Peelings II
P.O. Box 188
Las Cruces, New Mexico 88001

School Microware Reviews
Dresden Associates
P.O. Box 246
Dresden, Maine 04342

Software Review
Meckler Publishing
520 Riverside Avenue
Westport, Connecticut 06880

Descriptive Terms*

Authoring: assists in creating or modifying computer programs

Classroom Management: program is organized to record student behavior, response, or scores

Creative Activity: any synthesis activity where students create and/or use their imagination

Demonstration: shows an activity such as an experiment or process

Descriptions: provides information with little or no student interaction

Drill and Practice: reviews content with no instruction, can include timed activities and controlled response time

Game: any program using a contest format which may or may not be educational

Logic and Problem Solving: requires students to analyze and/or apply reasoning

Programming: specifically designed to teach a computer language

Simulations: creates an artificial situation that requires the student to participate

Tool: programs which help students or teachers accomplish a task

Tutorial: specifically designed to teach students new information and/or skills

(*see Software Evaluation Guide: Instructional)

State Resource People

There are several groups of people who can provide assistance.
-The local Area Education Agency Consultants
-The Department of Public Instruction
-Career Education Consultants
-The Career Education Association
-Local community organizations
-Iowa Association of Supervision and Curriculum Development

List of decisions

The following questions begin to outline the decisions that need to be made by a district. The list is by no means all inclusive, however, it will be a place to start. Hopefully, this list will provide some structure to your decision-making process.

Who will make the decisions and the timeline for making those decisions is something that should be made early in the planning stages. The list of decisions is organized by chapter to assist districts with understanding the content of each section of the guide.

Chapter VII Resources and Helps

*What weaknesses do you have currently identified, in which you do not have a source of help identified?
*Do you have a list of resource people identified for your community, AEA, and others?
*Is there a list of text and media resources available for your district and AEA?
*Do you have an established bibliography of articles for career education?
*Do you have a set style for the writing of activities?
*What are your policies for inservicing?
*What resources are available to assist faculty with curriculum and activity writing?
*What are your reactions to the Model for infusion of career education into the general curriculum?
*What sections of the model do you agree/disagree?

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