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Iowa Dept. of Public Instruction

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Volume 3

Iowa Elementary
Teachers Handbook

Iowa Elementary Teachers Handbook

VOLUME III

SPELLING AND HANDWRITING

Issued by the

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JESSIE M. PARKER, Superintendent
Des Moines

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FOREWORD

Included in this handbook, the third in the series of elementary courses of study bulletins for the state, are the reports of the subcommittees on Spelling and Handwriting. Both committees in developing their material have availed themselves of the abundance of reliable research data accessible in the respective fields and have prepared recommendations that are in accord with the findings of this research. In both instances it is recommended that teachers adhere carefully to the directions to teachers provided in the manual of the Handwriting system or Spelling system that has been adopted for basic use in their schools. It will be found that there is no conflict between the provision of these courses and the basic principles which constitute good instruction in either area as found in the manuals accompanying commercially published materials in each field.

In the section dealing with spelling stress has been given to problems perplexing to teachers which are not ordinarily treated in text materials. Significant among these are sources of spelling lists, general recommendations relative to methods, the problem of individual differences, testing, and answers to a number of problems submitted by classroom teachers covering a wide range of common difficulties.

Because of the rapidly increasing use of the typewriter, some persons have assumed that handwriting skill is not as important as formerly. Evidence from the "Statistical Abstract of the United States for 1930," as reported in the *Encyclopedia of Educational Research*, page 556, reveals, however, that the sale of handwriting materials such as pens, ink, and lead pencils has increased with the increase in the use of the typewriter. This indicates that people are doing more rather than less handwriting and that from the standpoint of social utility it is just as important as it ever was.

The committee in dealing with this section have kept the social value of good handwriting skill constantly before them and have included many suggestions that will be helpful to teachers in realizing this aim.

The course provides definite and concise statements on the formation of letters with clear-cut illustrations, and has an

especially valuable discussion of the problem of diagnosis and remedial treatment. Much stress is given to the correlation of handwriting with other subjects, particularly spelling, written language, and the social studies. The real test of the effectiveness of instruction in this subject is in the writing which children do in typical motivated situations where written language is used.

This Course of Study, like others issued this year, is made possible by the generous cooperation of the teachers in our schools and the heads of departments and the faculties of our colleges and universities. Grateful acknowledgment of these services is made to the following committee members: Mr. H. K. Bennett, Dr. Ernest Horn, Dr. Barton Morgan, Mr. Paul B. Norris, and Dr. Elmer L. Ritter of the Central Committee; to members of the special Spelling Committee—Miss Eleonore C. Martin, Miss Ethel Fitzsimmons, Mrs. Helen Fischer, Mr. W. C. Ortmeyer, Miss Maude Peters, Mr. F. J. Snider, and Miss Alta Wilmarth; and to members of the special Handwriting Committee—Mrs. Walter A. Person, Miss Beatrice Lehning, Miss Georgia Conard, and Miss Nettie Price.

JESSIE M. PARKER

Superintendent of Public Instruction

June, 1943

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INTRODUCTION

Although spelling has long been recognized as one of the important subjects of the curriculum, it is only during comparatively recent years that the greater possibilities of this study have been emphasized. The present-day purpose is more than the mastery of a long list of miscellaneous words. The words studied must be those needed most by the individual as a child and as an adult whenever he expresses his thoughts in writing. Such words have largely been determined by means of research.

The study of spelling not only trains for accuracy for social requirements but also encourages spontaneous self-expression through ability to spell required words rather than to substitute less meaningful terms that the individual can spell. "Because spelling presents such an important need in writing and does not present an important difficulty in other activities, the selection of words which elementary school pupils should be taught to spell is limited to the vocabulary used in the writing activities of life."¹

"What is taught within a given subject must be that which is needed in one or more of all the types of important activities that people carry on in life outside of school."² If the spelling program includes a well-planned and motivated study procedure, and if that plan promotes a readiness to accomplish individual progress, the pupil will become more active, more responsible, and more efficient. Through the development of characteristics that obtain worth-while satisfaction, the pupil becomes a better citizen. If these opportunities are not used to develop in the individual a worthy sense of power through accomplishment, the neglect of them will inevitably tear down and defeat our purpose. "While accomplishing the above purpose the teaching of spelling has opportunity, along with other subjects, to further the development of self-reliance, self-appraisal, and self-direction."³

¹McKee, Paul, *Language in the Elementary School*, Houghton Mifflin Company, 1939, p. 334.

²Ibid.

³Foran, Thomas G., *The Psychology and Teaching of Spelling*, The Catholic Education Press, Washington, D. C., 1934, p. 7.

Many adults, influenced no doubt by the well-known tendency to remember one's childhood efforts in a rosy light, seem to think that spelling is neglected in the schools of today and that it is not so well taught as it was a generation ago. Nothing could be further from the truth. The course of study is more practical because the words taught are those most frequently needed in life outside the school. The words taught in any grade are the words most likely to be needed by the children in that grade. Methods of teaching are more effective. The fact is that research in spelling has now made it possible to teach spelling on a really professional level. It is the purpose of this course of study to show teachers how to reach this level.

Source of Spelling Lists

Textbook lists make up only a part of the entire writing vocabulary of the student. That these words may be a representative list of the most frequently used words, committees selecting the texts should regard the source of words in each a basic factor in determining their choice. Some authentic studies of word lists are:

Adult Lists

Horn, Ernest, *A Basic Writing Vocabulary*, University of Iowa Monographs in Education, 1926

Thorndike, E. L., *A Teacher's Word Book of the Twenty Thousand Words Found Most Frequently and Widely in General Reading for Children and Young People*, Bureau of Publication, Teachers College, Columbia University, 1932

Although this is a reading rather than a spelling vocabulary, it is useful in comparing the words most frequently used in writing with those most frequently met in reading.

Children's Lists¹

A number of extensive investigations have been made of children's letters, but the resulting lists with frequencies for only one study have been published. This is Fitzgerald, J. A., "Letters Written Outside the School by Children of the Fourth, Fifth, and Sixth Grades: A Study of Vocabulary, Spelling Errors and Situations," University of Iowa, *Studies in Education*, Vol. IX, No. 1, 1934.

Reviews of investigations of children's vocabularies are found in "Vocabulary Problems in the Elementary School," National Conference on Research in English, *Seventh Annual Research Bulletin*, Scott, Foresman and Company, 1939.

¹"Spelling," pp. 1166-1180, *Encyclopedia of Educational Research*, Macmillan, 1941.

METHODS

Most spelling books in use in Iowa recommend either some form of the test-study method or some form of the study-test method. Teachers will be wise to adhere closely to the procedures outlined in their spelling text. The principal difference in these two methods is in what is done on the first day. A brief outline of these two methods follows:

I. *Test-study*

- A. *First day.* The teacher pronounces the words while the pupils, with open books, look carefully at each word as the teacher pronounces it and then pronounce the word themselves. Words which have special writing difficulties should be written on the board by the teacher as she pronounces them. Any word which, in the teacher's judgment, may not be understood by the pupils should be explained and used in a sentence.
The next step is to give a written test on the words so that each pupil can discover which words he has not already learned to spell.
The third step is the correction of the test, under the direction of the teacher. If there is any time left after the test is corrected, each pupil should study the words which he missed on this test.
- B. *Second day.* Study the words missed the first day following the steps suggested for individual study, page 15.
- C. *Third day.* Write the entire new list of words for the week as well as the review list. Correct both lists preparatory to study the following day. If there is still time left in this period, it should be used to study words missed. Follow individual study steps suggested on page 15.
- D. *Fourth day.* Study words missed on third day preparatory to mastery test. Follow individual study steps suggested on page 15.
- E. *Fifth day.* Mastery test over the words for the week. After this test is corrected, each child should study any word missed on this test.

II. *Study-test*

- A. *First day.* The teacher pronounces the words of the new lesson while the pupils with open books look at the words. Meanings of new words not known by pupils should be looked up. Use the words in context so that they will be more meaningful.

- B. *Second day.* Work with words following suggestions given on page 15 for individual study.
- C. *Third day.* Give the initial test over words presented and studied on Monday and Tuesday. Include also the review words.
- D. *Fourth day.* Study words missed on the Wednesday test following suggestions given on page 15 for individual study.
- E. *Fifth day.* Give mastery test over words presented on Monday, review list and pupils' own lists of words missed last week. Each child should study any word missed on this test.

Additional Study Activities

1. Build words by adding suffixes, as "ing," "ed."
2. Write the plurals of the nouns.
3. Fill in missing letters in words.
4. Fill blanks in sentences with correct words chosen from the spelling list.
5. Use words in sentences.
6. Arrange words in alphabetical order.
7. Divide words into syllables.
8. Write homonyms and antonyms.
9. Pronunciation. Use dictionary to find correct spelling, pronunciation and syllabication of words.

Individual Differences

1. Test at the beginning of the term
 - a. Pupils write a test over the words to be taught during the semester. If a score of 95% correct is obtained, the pupil need not study spelling during the semester. However, these pupils should show that they can spell all the words correctly. Children may work in pairs, one child pronouncing to the other the entire list of words for the term for purposes of test, and each child learning the words that he misses on this test.
 - b. Tests before the study of the lesson
If a pupil writes all of his new list correctly the first day of the test-study procedure, he need not study spelling the second day. Or if he writes all words correctly on the third day, he need not study on the fourth day. He will, however, write the test on Friday.
2. Individual work
 - a. Pupils keep their own individual notebooks of words missed in the mastery test. These words will be studied and written again. (The mastery test is the final test given on the last day of the unit in the test-study method.)

- b. Pupils work in pairs, pronouncing words to each other. This is especially for those pupils working on words missed in the mastery test.
- c. Assign dictionary work for advanced pupils.
- d. Excuse pupils from study periods if they write words correctly. They can be working on other assignments or doing special work for the teacher.
- e. Special work on penmanship needs to be given to pupils who have difficulties in letter formation. "Slow or illegible handwriting and inadequacies in instruction in written composition are certain to be reflected in lower achievement in spelling."¹

Pupil's Individual Study Method

It is essential that the child be taught an economical method by which he can learn individual words. The method suggested in the textbook may be followed. Many textbooks follow in general the following method given in the *Eighteenth Yearbook* of the National Society for the Study of Education.

How to Learn to Spell a Word

1. The first step in learning to spell a word is to pronounce it correctly. If you do not know how to pronounce a word, look up the pronunciation in the dictionary. When you are certain that you know how the word is pronounced, pronounce it, enunciating each syllable distinctly and looking closely at each syllable as you say it.
2. Close your eyes and try to recall how the word looks, syllable by syllable, as you pronounce it in a whisper. In pronouncing the word, be sure to enunciate the syllables carefully.
3. Open your eyes to make sure that you were able to recall the correct spelling.
4. Look at the word again, enunciating the syllables distinctly.
5. Recall again, with closed eyes, how the word looked.
6. Check again with the correct form. This recall (as in 2 and 5) should be repeated at least three times, and oftener if you have difficulty in recalling the correct form of the word.
7. When you feel sure that you have learned the word, write it without looking at the book, and then check with the correct form.
8. Repeat this two or more times without looking either at the book or at your previous attempts.
9. If you miss the word on either of these trials, you should copy it in your spelling notebook, since it probably is especially difficult for you.

¹"Spelling," p. 1177, *Encyclopedia of Educational Research*.

Methods in Spelling in the First Two Grades

If directions to pupils are provided with the spelling lesson, the teacher will need to read them with the class and help them to understand that they are learning to spell these words to be used in needed writing. Opportunity must be provided for the frequent use of these words in written work.

During the first few weeks a small number of words are taught each day. Pronounce the word and use it in a sentence. Have pupils pronounce it, and use it in a sentence of their own. The teacher then writes the word on the board. Pupils say the letters. She may then erase the word and have them watch again as she writes it. Finally the pupils may copy or attempt to write from memory.

The procedure is continued with two or three other words. The list of five is completed by studying the same way for a day or so. Each day words of the lesson taught previously are reviewed. When all words are presented a summary over the words of the lesson just completed is given.

Many errors are caused by writing difficulties. Note when pupils have such difficulties and stress that letter formation or letter combination.

Tests

Tests are sometimes wrongly regarded as something separate from instruction. On the contrary, they are an essential part of instruction. There are two types of tests: first, those used as a part of the study of each lesson, and second, those used to plan the work for a term and to appraise its efficiency.

I. Tests used in the study of each lesson

The use of these tests is described on page 13.

A. In the test-study method

1. After a pronunciation exercise and explanation of the meaning of the words where needed, the pupil takes the test over the words in the lesson to find out which words he needs to study. This is perhaps the most important test that can be given. It saves the pupil's time by making it unnecessary to go through the motions of studying words that he already knows, and it provides motivation by showing each pupil clearly which words he needs to study.

2. The second test is given after the study of words missed on the first test to show the pupil which words, if any, he has not already learned.
 3. The third test, the final test over the lesson, shows the pupils how well they have done their work. The results on this test should be compared with the results on the first test to show progress.
- B. In the study-test method there are only two tests, corresponding with the second and third tests given above under the test-study method.

II. Semester tests

Many teachers give at the beginning of a term about fifty words chosen from the list taught that term and a second test at the close of the term of about fifty words of equal difficulty. The first of these tests identifies pupils who will probably need special help in spelling, as well as those who may possibly be excused from the spelling work of the term. See page 14, Individual Differences. A comparison of the scores on these two tests provides a good measure of what has been accomplished during the term.

Since the preparation of term tests is quite a task and is made difficult by the fact that most teachers do not have access to the data giving grade accuracies for the words in their books, the State Department of Public Instruction will make available through the county superintendent's office suitable tests for the adopted text in each county.

Time Allotment

Reference should be made to the *Manual for Use of Iowa Elementary Teachers Handbooks* for detailed suggestions relative to time allotment for the spelling period. In the rural schools much time can be conserved by grouping grades 4-8 and rotating the pronunciation of words from grade to grade. Detailed suggestions for handling this situation are given in the manual.

PROBLEMS

Note: This is a list of problems submitted to the Spelling Committee by teachers in the field.

A. Phonics

1. *Shall phonetic sounds be taught in connection with spelling?*

Since the sounds in the English language are often not spelled consistently in various words having the same sound, it is important that a child notice how each part of a word is spelled, as he pronounces it correctly. Aside from this, it is inadvisable to teach phonics in spelling since presumably systematic instruction in phonics for independent word recognition will be given in reading.

2. *Are pupils who do not use and understand phonics good spellers?*

A very large proportion of children having special difficulties in spelling in the intermediate and grammar grades are shown to have little understanding of sound-letter associations. Children should learn early, however, that it is unsafe to spell phonetically. As pointed out above, the child must note carefully how each part of the word is spelled as he pronounces each part accurately. Note, for example, how the sound *a* is spelled in *ate*, *fail*, *lay*, and *great*.

3. *Should word lists ever be introduced to children of the lower grades by phonetic families?*

The difficulty of studying words by phonetic families is that the child may be led to apply the generalization from the families presented to other words of similar sounds which are spelled differently. Therefore, it is not generally advisable to present words by phonetic families.

B. Rules

1. *Is it advisable to teach rules that have a bearing on the spelling of words?*

"Rules are not a substitute for adequate instruction in the spelling of words, but serve only as guides to supplement instruction. Their contribution to achievement in spelling depends on the methods by which they are taught and the capacities of pupils to use them fluently.¹ There are several rules which have few exceptions and which cover a large number of words. The following meet these requirements:

"a. Words ending in silent 'e' usually drop the final 'e' before the addition of suffixes beginning with a vowel, but they

¹Foran, Thomas, *The Psychology and Teaching of Spelling*, The Catholic Education Press, 1934, p. 184.

keep the final 'e' before the addition of suffixes beginning with a consonant.

"b. When a word ends in a consonant and 'y,' change the 'y' to 'i' before adding all suffixes except those beginning with 'i.' Do not change 'y' to 'i' in adding suffixes to words ending in a vowel and 'y,' or when adding a suffix beginning with 'i.'

"c. Words of one syllable or words of more than one syllable accented on the last, ending in a single consonant preceded by a single vowel, double the final consonant when adding a suffix beginning with a vowel.

"d. The letter 'q' is always followed by 'u' in a word.

"e. Proper nouns and adjectives formed from proper nouns should always begin with capital letters.

"The rules for the use of periods in writing abbreviations and for the correct use of the apostrophe to show possession or the omission of letters in contractions also meet the above requirements."¹

2. *Should derived words be taught by rule, or learned as separate words?*

Words should be taught separately, with their meanings. There are few rules that do not have exceptions which confuse the child when he tries to apply them.

C. *Motivation*

The teacher must be aware of the real sources of motivation and also make the child familiar with them. These are (1) a knowledge that the words in each lesson are not only of permanent value but also likely to be used in the writing done by the children of that year; (2) the use of the preliminary test, which shows a pupil which words he needs to study; (3) some plan of showing the pupil what progress he is making.

1. *Are oral spelling contests of much value as a learning device?*

Since the more associations made the more firmly fixed will be the words studied, oral spelling adds an auditory image to visual images of words. Written spelling is more efficient since it gives the pupil an opportunity to write, and study if necessary, each word in the lesson. Nevertheless, oral spelling is not without value; it merely has less value. Occasional oral spelling lessons may be justified especially for purposes of review.

2. *Do many children consider spelling a grind?*

No. On the contrary, spelling is nearly always listed among the first three or four subjects of greatest interest, partly because of the definiteness of the job to be accomplished and partly because the pupil can see what progress he is making.

(See suggestions given in first paragraph under Motivation.)

¹*Encyclopedia of Educational Research*, p. 1176.

3. *Do the written exercises in workbooks provide a motive for spelling?*

Those exercises which serve as a test of the lesson for the week or as a practice exercise for the study of the lesson serve as a motivation for learning that lesson. The motivation of correct spelling in composition work is a different problem and must be treated separately.

D. *Meanings*

1. *What is the best method in getting pupils to associate the word and its meaning?*

Careful investigations by McKee and others have indicated that writing words in sentences is not an economical method of studying spelling. It is appropriate to identify the word to be used by pronouncing it, using it in a sentence, and pronouncing it again, but it is not economical to have the pupils write complete sentences.

2. *Is the spelling period the time to teach the meanings of words?*

Word lists for the first six grades contain very few words the meaning of which is not already known. Since in most schools spelling is not taught systematically beyond grade eight, there are a few words included in grades seven and eight which are frequently used in adult writing but which may not be familiar to the children. Such words should be used in sentences and, if necessary, the meaning explained. In addition, sentences may be used to enable the pupils to discriminate the word from other words of the same or similar sound.

E. *Gradation*

1. *If we base the spelling lessons on the words that a child needs at a particular time, are we sure that he will have a sufficient spelling vocabulary by the time he is graduated?*

The words in any given grade should meet two requirements: they should be frequently needed in the writing done by children in that grade, and they should have permanent value. The only exceptions to this double requirement are in the case of certain words in grades seven and eight which, although not frequently written by children, are difficult and so crucial in adult writing as to be included in the last years of systematic instruction in spelling.

2. *In giving a spelling test, which type of test is to be preferred—that in which words are pronounced to the pupil, or that in which the pupil selects the correct form from several that are given?*

The child does more actual writing of words than selecting correct words. For that reason a writing test is preferable. However, he should have practice in the other type also.

3. *If a pre-test at the beginning of the year shows that a child can spell all the words in the list to be taught for the year, should he be promoted to the next grade, or what should be done for him?*

He may be excused from actual spelling study. See Individual Differences, 1, for further activities for such pupils.

4. *How should pupils be graded in spelling—on their Friday test results, or should their spelling in other subjects be considered?*

One objective of teaching spelling is to develop a spelling conscience—to lead a child to want to spell all words correctly in all written work. However, it is very discouraging for the child who has spelling difficulties to have his grade cut because of written work when he has managed to fulfill his spelling contract quite satisfactorily. Therefore, it is suggested that he be graded on the degree to which he has met his contract in the spelling class and then take spelling into account, along with other mechanical errors, in other written work.

5. *If a pupil spells all words correctly on Wednesday, should he write them again on Friday?*

A child may spell words correctly on Wednesday by guessing at one or several words. It is advisable to have him write on Friday.

6. *Isn't it possible to set up some uniform method of correlating spelling with all other subjects, grades in spelling to be based on the average?*

There must be some actual teaching of spelling. Children unquestionably learn some spelling in connection with the written work done in other subjects, as well as from their reading. But this incidental learning is not sufficient. The purpose of the spelling period is to enable pupils to discover which of the words important to be learned have not already been learned incidentally. The pre-test enables each pupil to discover which of the words in the lesson he has not already mastered.

7. *How many words should be taught to pupils in the grades?*

This cannot be stated in arbitrary numbers. For the last twenty-five years the tendency has been to reduce the total number of words to be studied systematically so that most textbooks do not teach more than four thousand words in the first eight grades.

8. *Is a list of common and widely used words necessarily the only list to be studied by the pupils?*

As far as systematic study is concerned, it is. However, pupils should take pains to spell correctly all words that they use in their written work and to learn to proofread such written work for spelling errors.

9. *How much time should be given to syllabication? In what grades is this most helpful? To what extent should pupils be held responsible for knowing syllable divisions of words?*

Care should be given to say each syllable correctly when pronouncing the word and to look at each syllable carefully as it is pronounced. Studies which have been made, point consistently to a slight superiority for some form of emphasis upon syllabication.

10. *What amount of time should be spent on spelling daily for each grade within the room? What amount of time per week?*¹
Practically all recent writers recommend that not more than fifteen minutes a day be devoted to spelling, which would be seventy-five minutes per week.²

11. *Where can I find the difficulty ranking of individual spelling words for use in preparing my test?*

By the use of spelling scales and scientifically comprised lists. Some authentic spelling scales are:³

Ashbaugh—*Iowa Spelling Scales*, Journal of Educational Monographs, No. 3, 1922, Public School Publishing Co.

Ayres—*A Measuring Scale for Ability in Spelling*, Russell Sage Foundation, 1915

Buckingham—*Extension of the Ayres Spelling Scale*, Public School Publishing Co.

Buckingham—*Spelling Ability—Its Measurement and Distribution*, 1913. Contribution to Education, No. 59, Teachers College

12. *How may consolidation of lessons be worked out where more than one grade is in a room?*

A schedule can be worked out so that part of the children will study on the days when the others write.

13. *Is it permissible or advisable to give very retarded children a shortened word list, or should they be given special help to master the same number of words as the average child?*

Retarded children should be given shortened word lists. It is better to know a few words well than to have a hazy knowledge of more words.

14. *How early in the grades can use be made of "accelerated" children in supervising the study periods of other members of their own age?*

This depends entirely upon the child. If the child is a good student and dependable, he can begin such work early in the grades. Such a plan does increase a sense of class morale and solidarity.

F. *Integration*

1. *How may spelling of words be integrated with other subjects?*

The words learned in the spelling lesson are those having the greatest probability of being used in other written work. As pointed out previously, it is important to give training in proof-

¹For time allotment schedule, see *Manual for Use of Iowa Elementary Teachers Handbooks*.

²Foran, Thomas G., *The Psychology and Teaching of Spelling*, The Catholic Education Press, Washington, D. C., 1934, p. 49.

³"Spelling," pp. 1168, 1169, *Encyclopedia of Educational Research*.

reading and in building a spelling conscience in all written work. Pupils may be trained to check their own papers after writing the pre-test. Spelling errors in written work should be corrected and lists made of words misspelled in composition. These lists can be used for special spelling study exercises.

2. *Should a pupil be required to spell correctly all words he uses in written work?*

A pupil uses many words in his written work which are not commonly used nor used often in written work. Spelling these need not be required, but the individual should be able to spell all common words which have been included in his spelling up to the present time. He should form the habit of looking up the spelling of words he doesn't know.

3. *Are the best readers the best spellers?*

It has been observed that intelligence is not as important a factor in spelling as it is in reading. Some bright children are poor spellers and some dull children spell much more accurately than the average of their achievement in other subjects would indicate.¹

G. *Study Aids (Learning Activity)*

1. *How can the child be helped to secure a good visual image of a word?*

The child looks at each part of the word carefully as he pronounces it, then practices attempting to recall how the word looked, interspersing the recalls with re-impression.

2. *Is it less confusing to teach in daily units than in weekly units?*
There is no reason why weekly units should be confusing. The child studies only such words as the preliminary test shows him to be unable to spell. The weekly plan, moreover, has definite advantages in meeting individual differences, and especially in saving the time of pupils who miss very few words on preliminary tests.

3. *Does repeated practice in writing a word or group of words aid in remembering to spell these words?*

Writing words aids in remembering them, but merely writing them by copying the word previously written is far from being as effective as the study method in which the pupil studies the word and then writes without a copy. He then checks to find if he has written the word correctly.

4. *Does alphabetizing of words help to learn to spell them?*

Alphabetizing words is a dictionary exercise and makes it necessary to notice letter arrangement, and therefore should be an aid in spelling. It also develops a knowledge of alphabetical order, which is essential to the use of the dictionary.

¹Foran, Thomas G., *The Psychology and Teaching of Spelling*, The Catholic Education Press, Washington, D. C., 1934, p. 49.

5. *Why is it that a child can spell a word in a list but cannot spell it when he needs to use it in context?*

Children sometimes memorize their lists of words if they study them just as words. Furthermore, spelling in context, and particularly in writing when attention is not especially directed to spelling, is likely to be a more difficult test of spelling. This does not mean that spelling in context is better; it is merely a more severe test.

6. *Do we have enough review in spelling?*

Most of the new texts give definite provisions for review. If the teacher finds there is a greater need for review than those texts provide, she may bring in special review exercises.

7. *How much would you stress forms of words?*

Children should be led to recognize similarity in the forms of words, but to teach words through their similarity to other words often causes confusion.

8. *Do regular study periods produce better results than those of incidental study?*

To produce satisfactory results it is necessary to take some time for the purpose of establishing study habits and actually studying words. This is best done in a regular spelling period.

9. *Does studying words singly produce better results than studying them in sentences?*

Studies on this subject show that studying words in lists gives better results per time unit than studying words in sentences.

10. *Which is better, directed or independent study?*

A certain amount of direction is necessary to establish proper study habits. The pupil should then carry on his study independently.

11. *At what age is it possible to begin the use of children to check their own work for mistakes in spelling?*

Children should be taught to discover mistakes on their own papers. The age at which this may be begun depends on the ability of the child in distinguishing one form from another. It is well for the teacher to supervise their first efforts carefully and to do the checking of the Friday's paper herself.

H. *Miscellaneous*

1. *Is it advisable to teach or stress penmanship during the spelling period?*

Poor writing is frequently listed among the most important factors which contribute to poor spelling. It is entirely appropriate, therefore, to stress the careful and correct writing of the words in the spelling lesson. It is also advisable to use spelling words for penmanship exercises.

2. *How does achievement in spelling compare with intelligence?*
The usual findings show only moderate or even low correlation between general intelligence and spelling.¹
3. *Of what use is oral spelling?*
Oral spelling should be regarded as a supplement to rather than a substitute for written lessons. It does have a real value but is not so efficient as written spelling. (See Motivation No. 1.)

¹Foran, Thomas G., *The Psychology and Teaching of Spelling*, The Catholic Education Press, Washington, D. C., 1934, p. 199.

REMEDIAL WORK

Low achievement in spelling may be attributed to faulty training more frequently than to special disabilities such as defective eyesight. A very common cause of low spelling accomplishment is poor study habits. Slow or illegible handwriting and inadequacy of instruction in written composition are certain to be reflected in lowered achievement in spelling. Faulty speech habits, particularly in pronunciation, are also frequently found in poor spellers. "Important as they are, however, the effects of special disabilities on achievement have in comparison with training been overemphasized."¹

"The effectiveness of instructional procedures in spelling is heavily dependent upon the development of right attitudes, such as interest, confidence, spelling conscience, intention to remember, and aggressive attack. All these desirable attitudes can be stimulated and maintained in the following ways: (a) by showing the student that the words taught are those most likely to be needed by him now and in the future, (b) by limiting the student's study to those words which tests have shown him to be unable to spell, (c) by providing him with a definite and efficient method of learning, (d) by emphasizing individual and class progress, (e) by encouraging in the class a spirit of mutual pride and cooperation in spelling achievement."²

If you find a child who is having a great deal of difficulty in mastering his spelling lessons, ask yourself these three questions:

1. Is he interested in learning to spell?
2. Does he use conscientiously the method which he has been taught?
3. Does he have any special disabilities, such as poor hearing, speech defects, and poor vision?

It is important that neither the teacher nor the pupils take a defeatist attitude toward spelling accomplishment. All pupils can learn to spell. Even those who are blind or deaf have learned to spell. Some, of course, learn much more easily than others.

¹"Spelling," p. 1177, *Encyclopedia of Educational Research*.

²"Spelling," p. 1176, *Encyclopedia of Educational Research*.

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Section II

HANDWRITING

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Iowa Elementary
Teachers Handbook

INTRODUCTION

Modern trends in handwriting practice have been summarized by a number of authorities. We can give no such complete account here, but following is a brief summary of the important trends.¹

Good writing conserves time and energy of both the writer and the reader. Whether or not a pupil writes legibly and easily depends primarily upon the guidance he has received during the drill periods and the degree to which he has been required to practice good writing in all daily work. All children can improve the quality of their handwriting, and this objective should be kept constantly before them.

It is important that good writing habits and correct letter formation be taught when a child begins to write and that these standards be maintained so that time need not be spent during the following years in laborious drill to correct bad habits. The emphasis on handwriting in the first grade should be light. General evidence points to the desirability of using manuscript writing in the first two grades.

It is now recognized that the handwriting problem is not limited to the handwriting period; the real test of the effectiveness of instruction is in the writing which children do in typical motivated situations where written language is used. Nevertheless, experience has shown that without special guidance and remedial work writing results are likely to be poor.

Diagnosis of Handwriting

There is an increasing emphasis on the importance of diagnosing writing difficulties. A wealth of material is available to assist both teacher and the pupil in diagnosis. Newland,¹ through analysis of over a million letters, points out that illegibilities of *a*, *e*, *r* and *t* contribute 45 per cent of all illegibilities of elementary pupils. To effectively teach writing the teacher should know which errors occur most frequently according to scientific investigation and which errors are consistently appearing in daily written work. The most time

¹For more detailed accounts see, for example, Hildreth, G., *Learning the Three R's*, Educational Publishers, Philadelphia, 1936; Freeman, Frank N., and Dougherty, Mary L., *How to Teach Handwriting: A Teachers Manual*, Houghton, Mifflin Company, New York; West, Paul V., *Changing Practice in Handwriting Instruction*, Public School Publishing Company, Bloomington, Illinois, 1927.

allotted to teaching and drilling on correct letter formation should then be devoted to these errors. Pupils should be taught to diagnose writing so that they can cite errors, know the cause, and know how to correct such mistakes.

Why Teach Handwriting?

The general objectives of handwriting instruction as outlined in this course of study are in accord with most writing methods and most authorities in this field of instruction. They might be summarized as follows:

1. To develop sufficient skill enabling pupils to write easily, legibly, and rapidly enough to advantageously meet their needs and social requirements
2. To equip the child with methods of diagnosing writing difficulties, developing power to direct his own practice and ability to judge whether or not he is succeeding in that practice
3. To provide a means of individual progress at rates best suited to each individual
4. To develop versatility for good writing with different media under different physical conditions
5. To develop the ability to arrange written work effectively
6. To develop a desire to use acquired skill in all writing situations
7. To develop a knowledge of the value of effective handwriting as a social accomplishment
8. To develop in the child a habitual use of care and system in the handling of writing materials
9. To develop ability to interpret skill because of its value as a social accomplishment and also because of the appreciation it develops for good handwriting

PRIMARY HANDWRITING

General Aims

1. The development of the idea that writing is a form of communication
2. The development of a degree of legibility sufficient to make possible easy reading by others
3. The development of a writing conscience—an awareness of errors and poor workmanship, a desire to improve, and a joy in attaining desirable standards of work

¹Newland, T. Ernest, "An Analytical Study of the Development of Illegibilities in Handwriting from the Lower Grades to Adulthood," *Journal of Educational Research*, December 1932, 26:249-258.

4. The development of habitual healthful posture in all writing activities

Specific Aims

1. To teach the most efficient techniques of letter formation
2. To provide supervised practice in correct writing
3. To guide pupils in recognizing and correcting their errors
4. To encourage writing as a means of self-expression

Materials

1. Blackboard, prepared according to the instructions in the teacher's manual
2. 8½-in. x 10-in. unglazed, light yellow paper, unruled
3. 8½-in. x 10-in. unglazed, light yellow paper, 5/8-in. rulings
4. Soft-lead pencils
5. An alphabet of manuscript letters and figures for display
6. Manuals for pupils and teacher

Manuscript Writing

Freeman¹ has pointed out that manuscript is easier for beginners to learn since the letters stand out as separate units, the unit of movement is shorter, and there are no connecting strokes to make. Besides, the forms resemble print with which the child is usually already familiar.

Not only is manuscript easier for the beginner to learn, but also more rapid improvement is possible.² If the shift to cursive is made soon enough (grade 2 or 3), there is not likely to be any interference with either form or speed of subsequent cursive writing.

If, however, manuscript is not used in the primary grades of the school, and for some good reason the teacher cannot introduce it, she must still be able to use it and use it well. Almost all of the early board and seatwork for primary pupils must be prepared in manuscript. The teacher ought never to be satisfied to place an inferior model before her pupils.

Writing Readiness

Children entering first grade are not necessarily ready to write. Handwriting of any kind is a complex performance.

¹Freeman, F. N., "An Evaluation of Manuscript Writing," *Elementary School Journal*, Vol. XXXVI, pp. 617-622, 1932.

²Gates, A. I., and Brown, H., "Experimental Comparison of the Movements in Manuscript Writing and Cursive Writing," *Journal of Educational Psychology*, Vol. XX, pp. 3-16, 1929.

It requires nerve control, muscular coordination, and normal vision, as well as the ability to observe, to visualize, and to understand and follow directions.

Since it is unwise, and may retard the child's progress, to attempt to teach him a skill for which he is not ready, it is advisable to give a writing readiness test to all first graders early in the school term. On the basis of the results of such a test, early instruction can be planned so as to be of most help to each pupil.

A simple but useful test is to provide each pupil with a model of his name as well as a few capitals and small letters not used in his name. Prepare this model an inch in height across the top of the 10-inch length of sheets of 8½-inch by 10-inch light yellow, unglazed paper. Divide the paper below the model into three equal parts and crease along the divisions to mark the line along which the children are to write. Give each child a large, soft-lead pencil. Tell the children to copy the model three times, putting one copy into each of the three spaces below it. Be sure that all the children understand what they are to do, and allow ample time for every child to finish.

Watch each child as he does the test. Note the children who have difficulties apparently due to poor vision, marked nervousness, or lack of muscular control. Seek the cooperation of the parents for immediate professional treatment of such cases.

Children who fail to copy half or more of the letters correctly should be given definite guidance to develop writing readiness.

Developing Readiness

Take as much time as necessary to develop greater ability to observe, to visualize, to understand and follow directions. The number of weeks to be devoted to such preparation will vary with the pupils concerned. Some show marked progress after a few weeks, others require a much longer time.

To further the development of observation, use cards 4 inches by 4 inches, on each of which you have drawn one of the letters of the alphabet or one of the figures. Give the child several such cards and have him match them on his desk. Limit such exercises to matching—no writing. A variety of matching exercises in beginning reading will also help to develop the power to observe likenesses and differences.

To develop the ability to visualize, give each child several cards of these various figures and letters. Describe a letter or figure (do not show or write it), and ask a child to show the card on which it appears. Require thinking of the form, not seeing it first.

Forming Words and Sentences

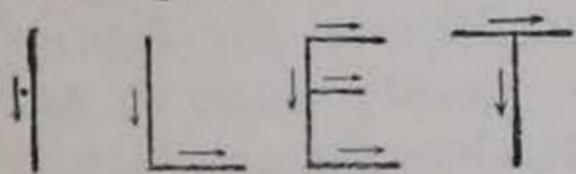
As individual children show proficiency in observing, visualizing, and following directions, give them, one by one, an opportunity to copy on paper from a model on their desks.

See that children sit comfortably relaxed, facing their desks squarely. Each child should have a large, clear model of the word he is to copy, a soft-lead pencil, and a sheet of unglazed, yellow paper with only a few lines on it. Later use paper with $\frac{5}{8}$ -inch ruling. Lead children to leave a space between words by using the width of one finger as a guide. When a new paragraph is begun, they may learn to indent by measuring three fingers in from the edge of their papers.

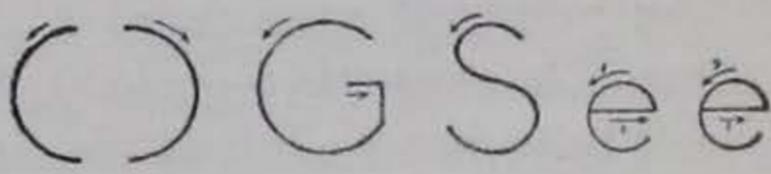
Children may do individual writing at the blackboard from your model written in large size, but do not expect them to copy from the board while working at their seats. At the board they may use the width of the eraser between words and the length of the eraser to indent paragraphs.

Present first the simplest words which they have already learned to recognize in reading, and which in turn teach the most needed straight, round, combined, and slant strokes.

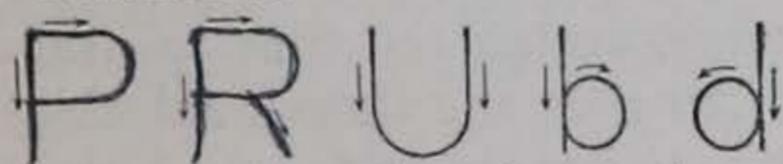
straight:



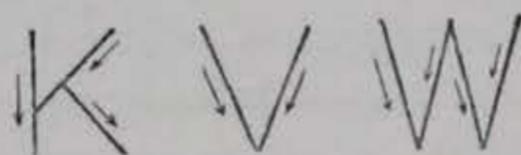
round:



combined:



slant:



Examples of such words are *little, name, can.*

Begin by letting the child copy from a model you give him at his seat. Watch carefully that he learns how to make the strokes in the proper direction, that his position is good, and that his paper is properly placed. When he has made a number of copies from your model, have him write the word from memory. Then have him compare his writing with your model.

In this way develop early in the pupil a habit of evaluating his own work.

If he does not see a noticeable error, show him, and after he has looked at your model again for a moment, have him try once more to write the word from memory. When he succeeds, recognize his accomplishment by a favorable comment, establishing at once your habit of noticing and appreciating good workmanship. Such recognition will also help to develop in the child joy and satisfaction in a high standard of achievement. These attitudes of thoughtful work should be fostered from the beginning to make sure of their growing into permanent habits.

When a pupil has written *little* several times, have him tell you some things that are little, one for each of his words. When he has learned to write *name*, give him a model of *My name is _____* with his own name in the blank. When he has learned to write his name, have him make a copy to label his hook for wraps, his locker, etc. When he learns to write *can*, have him tell you a number of things he can do. Make a model for him of *I can walk*, and so on. These exercises are suggestions for presenting words and associating them at once with thought and accomplishment.

By having available models of sight words from reading lessons, you may soon have the children planning sentences of their own to write independently. Watch that they maintain correct position and form while they work.

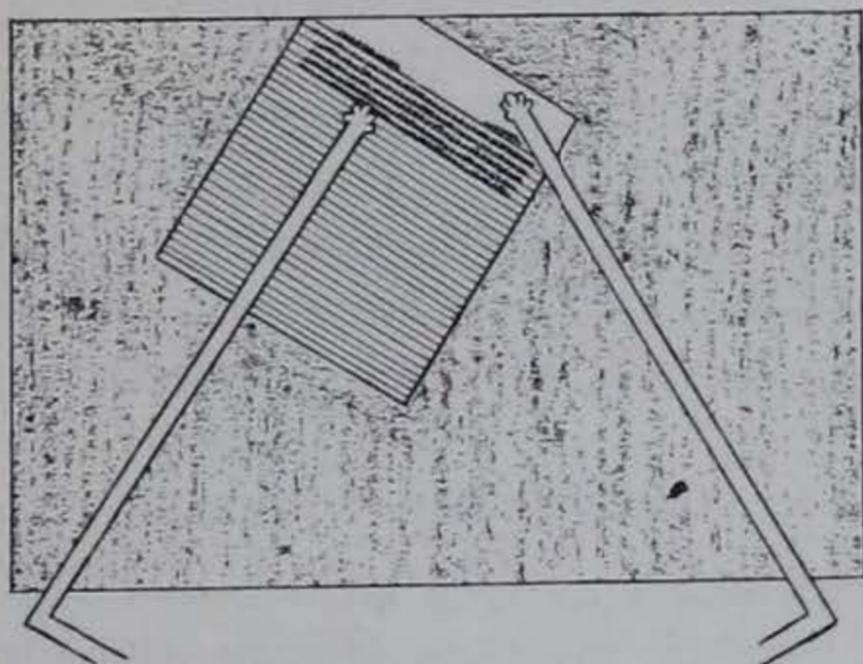
Do not emphasize speed at all in the primary grades.

As you will note from a statement in *Manual for Use of Iowa Elementary Teachers Handbooks*, twenty minutes per week have been allotted for formal handwriting instruction in grades three to eight, inclusive. It is assumed that much of this instruction will be individual, devoting the time to practice on those letters which seem to give the individual child difficulty in his language writing experiences. Grades one and two are not included in this statement since it is recommended that manuscript writing be used during the first two years and also because most of the primary handwriting instruction will come in connection with the reading period.

Left-Handed Writers

Children who seem definitely left-handed should be permitted to use their left hands, but should be taught to use

them successfully. Be sure that the paper is slanted just opposite from the position of the right-handed writer; i.e., slanted with the bottom to the left and the top to the right. Insist that the left hand be kept below the line of writing rather than beside or above it. Strokes must not be made backwards or upside down. No primary teacher can be excused for permitting a left-handed child to establish undesirable habits of handwriting which may handicap him throughout his life.



SECOND GRADE

Teacher Preparation

As a teacher of second grade, read this section through and work for the development of the desirable habits and attitudes explained in connection with first grade writing.

Make a model for each child of two or more sentences which tell something of interest and which include most of the small letters and the most frequently used capitals. Use it as a writing test for each child during the first weeks of school. As the children write, study their habits and difficulties in writing. See that parents are told of existing visual difficulties or marked lack of muscular coordination.

Writing Practice

For suggestions on time allotment for writing practice, refer to *Manual for Use of Iowa Elementary Teachers Handbooks*.

One-space letters will continue to nearly fill the $\frac{3}{8}$ -inch space between lines. By the end of the year the writing may be somewhat smaller. Be sure that every child knows how to make correctly all the small letters and most of the capitals.

He should be able not only to write them correctly but to tell in his own words how to form them. Continue to emphasize correct position of body and paper, correct procedure in forming letters, good spacing and indentions. Use the manual of the handwriting system in use in your school, but allow the children to proceed at their own rate, going on to other work as you approve their lessons. Encourage independent writing of sentences and paragraphs about other work being done in school in connection with reading, art, social studies, arithmetic, etc.

A large number of the practice periods should be devoted to writing those words and sentences which offer special difficulties in spelling, or which are connected with new ideas in social studies, arithmetic, or other work, and which are especially necessary for the children to express themselves in written English.

Independent Writing

To make independent writing efforts in the primary grades successful, the teacher must anticipate difficulties the pupils are likely to have with spelling, punctuation, and composition, and take steps to prevent them. One suggestion would be to have the pupils dictate what they wish to say, then prepare models for them to copy. Another way to prevent many such difficulties is to keep on the blackboard lists of words used in oral English. For example, during a unit on Indians, the children will be talking about them and their life. Write the words they use, such as *tepee*, *wigwam*, *brave*, *papoose*, *buffalo*, etc., on the blackboard so the children may refer to them easily as they write.

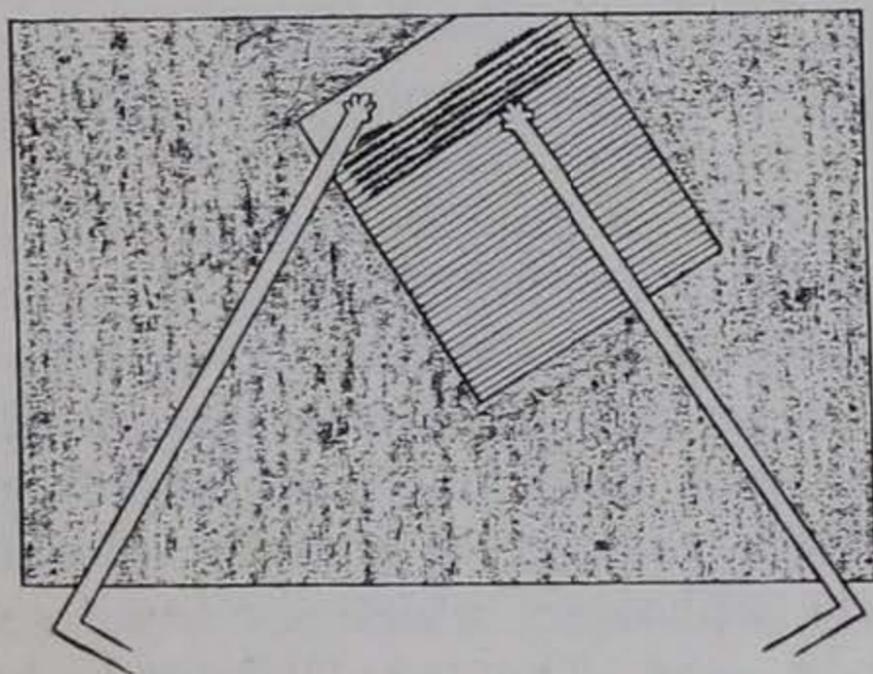
As much as possible watch this independent writing and use the problems it presents as teaching material in the next writing class. Isolate difficult letters for study, demonstrate the direction for writing each troublesome letter, and help children who have special difficulty in distinguishing similar letters to see in what details they differ. The teacher should make sure that each child understands the construction of the letter.

Transition from Manuscript to Cursive

Most handwriting systems provide detailed instruction on this point in their teacher's manuals. In general it is well to

remember that not all children will be ready to make the change at the same time. Nor is that necessary.

During the latter part of grade two encourage pupils to shift their paper (see manual for specific directions) so that their manuscript takes on slant. Be sure that left-handed pupils slant their papers with bottom to left and top to right so that they do not develop faulty habits, such as upside down or backward strokes. Watch carefully that good position and free movement are maintained. (See illustration below.)



Do not hurry the change, but when pupils have acquired slant show them, if necessary, how to join the letters. Watch again that free movement and good position are maintained. Encourage the pupils gradually to join letters in all of their written work. However, it is neither necessary nor desirable to drop manuscript completely or abruptly. Opportunities for its use will continue to arise in many phases of art work, in preparing material for the bulletin board, for displays, etc.

The chief new things which a child has to learn in making the change from manuscript to cursive writing are:

1. The slanting position of the paper
2. The slope of the letter
3. The connecting stroke
4. The loops on some of the letters which extend above and below the line
5. The form of some of the letters, especially *b, e, f, h, r, s, z*¹

¹Freeman, Frank N., *Print to Script*, Practice Book Two, Zaner-Bloser Co., Columbus, Ohio, p. 18, 1936.

THIRD GRADE

Continue along the same lines as indicated for the two earlier grades, with greater emphasis on the quality of words, sentences, paragraphs, and pages written. Work to improve margins, regularity in letter formation, words spacing, letter joining, and slant.

Introduction of Pen and Ink

During the latter part of grade three, introduce pen and ink. A steel pen with a fairly coarse point to prevent its catching in the paper is ordinarily most satisfactory. While there is no objection to the use of fountain pens, the quality of the pens provided usually interferes with their effective use in handwriting practice. If the fountain pen is a good one, the child's first efforts at practice with it are likely to injure its point. The style of the penholder used is very important. It should be large enough, and the place where it is held should be of wood or cork. Penholders made with a bulge at a point about an inch from the lower end help to keep the child's fingers from sliding. A cork tip also helps prevent sliding. Old style penholders which are small and have metal tips should not be used. They are difficult to hold and form an unnecessary handicap to the child. The paper should have a hard surface and ruled lines should be about a half inch apart.

The transition from manuscript to cursive will not necessarily result in a loss of either speed or quality, although there may be a slight loss in some cases. The advantages of manuscript are still great enough to make its use desirable in the beginning grades. The shift to pen and ink will, in almost all cases, produce a temporary loss in both quality and speed. Allow pupils ample time to become used to this new material. Emphasize quality and form and good position. Leave the development of greater speed for a later grade.

When the change from pencil to pen and ink is made, it is especially necessary to watch that proper position and movement are maintained. Good supervision in the primary grades will prevent the necessity for extensive remedial work in the upper grades.

Transition

The writing should be smaller than in the second grade, and somewhat still smaller by the end of the year. At the beginning

of the year one-space letters may be one-fourth inch high or a little less.

As in the first two grades, the subject matter for much of the writing practice should be taken from school material—especially spelling, language, and numbers. A composition written in another class may well be copied in the writing period. While this is done, proper spacing, margins, paragraph indentions, and the use of capitals can be discussed.

In teaching the writing of numbers, care should be taken to teach not only the correct formation of the separate digits but also the arrangement of numbers in addition, subtraction, multiplication, and division. Some writing periods may well be devoted to teaching the proper way to write arithmetic problems.

Self-Analysis

In the third grade the pupil should be led to criticize his own writing and to analyze it to find the reasons for its faults. A child does not immediately or automatically recognize the differences between his own writing and the model he is trying to copy. He learns to see such differences only by practice, and his desire to improve will be greatly influenced by the teacher's sympathetic guidance in recognizing faults and her effective instruction for overcoming them. (See later section on remedial work.)

While this self-analysis should begin in the third grade, the teacher must remember that such ability to criticize develops slowly. She must not expect too much, but if she follows through with such instruction from grade to grade her pupils will show marked improvement.

Pupil Analysis

Having pupils read each other's spelling and language papers, etc., and encircling illegible letters, will help focus their attention on specific errors and will give purpose to remedial teaching of such letters. Occasionally pupils may mark each other's papers for slant, spacing, and alignment, as suggested in the sections on diagnosis.

Such checking emphasizes for the pupil the need for careful letter formation to insure legibility. He sees for himself that a poorly formed *d* may be mistaken for *cl*, a careless *a* for *o*,

an undotted *i* for *e*, an uncrossed *t* for *l*, and so on; and that such errors in letter formation may completely change the meaning of what he has written.

The child should be taught some specific points in regard to letter formation:

1. Certain letters are low letters—*a, c, e, i, m, n, o, p, r, s, u, v, w, x.*
2. Certain letters are high letters—*f, h, k, l.*
3. Certain letters are extended—*b, d, p, t.*
4. Certain letters begin with the same beginning stroke—
 - a. *a, c, o, d, q, g*
 - b. *b, f, h, k, l, t, p*
 - c. *m, n, v, x, y, z, r*
 - d. *e, i, j, r, s, w, u*
5. Certain letters end with the same ending stroke—
 - a. *b, v, w, r*
 - b. *a, c, d, e, f, j, i, k, l, m, n, p, q, r, s, t, u, x*
 - c. *g, j, y, z*

Groups of letters that need special attention are: *on, op, os, oa, ba, bi, oy, ot, oi, ok, wh, wr, wi, we, ws, ov, ow, ve, gh, ga, ay.*

Evaluation of Progress

Have a folder for each child's writing with a pocket at the bottom of each inside surface. In the left pocket the child may keep a weekly sample of writing selected from his writing lessons; in the right pocket, papers from other lessons or independent written work.

At regular intervals each child should examine his last papers, compare them with preceding papers, evaluate them, and determine with the teacher what statements should be made about his progress and improvement. The teacher should write this statement at the bottom of his last papers. Make sure the child understands the meaning and significance of such a statement.

INTERMEDIATE AND UPPER GRADE HANDWRITING

Aims

In general, the aims remain the same as those listed for the primary grades with a greater emphasis on legibility and

an emphasis on reasonable speed. More specifically, the aims may be listed as—

1. To develop a mastery of a tool necessary for success in all written work
2. To obtain a gradual improvement in skill from grades four through eight
3. To teach pupils how to diagnose and correct their writing errors

Materials and Equipment

1. 8½-in. by 11-in. standard paper for ink, ⅜-in. ruling
2. Wooden penholders, preferably those fitted to the fingers (Unless pupils can afford good fountain pens, it is better to use wooden holders.)
3. Steel pen points of varying size, depending upon grade and ability of pupils
4. Good quality, free-flowing, blue or black ink
5. Manuals for each pupil and the teacher
6. Seats adjusted to the individual pupils

Note:

If a child is not writing in the proper position, one of the following factors is probably the cause: height of the seat, height of the desk, distance of the body from the desk, poor eyesight, or bad habit. After ascertaining the cause, steps should be taken to alleviate the situation, since correct posture is a prerequisite to good writing.

No set standards can be made to fit all children because individuals vary widely in height and proportions, but the following generalizations should guide the teacher in her efforts to seat the child correctly.

Proper seating includes the comfortable height of seat and desk and distance between the body and desk only great enough to allow freedom of movement. The seat should be high enough to permit the feet to rest flat on the floor with the thighs extending parallel to the floor. If the seat is too low the knees will be elevated; if too high, the feet will not rest flat on the floor.

The height of the desk is equally important. The forearm should fall forward on the desk without necessitating the elevation of the elbows. The desk should be close enough to the body so the elbows rest easily on the desk without the body leaning forward. If the desk is too low or too far away, the child has a tendency to stoop in an uncomfortable position.

Even an accomplished penman finds incorrect posture a handicap to good writing. Knowing this, every effort should be made to seat the child at a comfortable seat and desk. A child often likes to sit in a "big seat," but until he has been trained to select the proper height of seat and desk, and until the teacher is certain he will apply this knowledge to the selection of his own seat, the child must not be allowed to choose his seat at random.

Teacher Preparation

The teacher should be able to set a good example. Few things lend one more prestige than the ability to write well. Letter formation and style should be in accordance with the handwriting system being taught. If a teacher cannot write well she should secure handwriting instruction in summer school or take a correspondence course. Most publishers of handwriting materials offer such courses at small cost. There is little excuse for the teacher who places poor writing before her pupils.

The teacher should be able also to diagnose difficulties and suggest remedies.

She should be enthusiastic throughout the writing period, and ought to be able to inspire in her pupils an enthusiasm for good writing at all times. Attendance at meetings of teachers of handwriting will help. Subscribing to a handwriting magazine may yield helpful teaching suggestions.

She ought also to be quick to recognize and commend pupils' improvement so that an attitude of success will prevail among them.

She cannot teach handwriting effectively unless she knows and can teach correct letter formation. To insure good teaching she must know and make good use of the teacher's manual for the handwriting system taught in the school. The cost of such manuals is so small no teacher need be without one.

The teacher should study the manual carefully and thoroughly so that she can teach the pupils just how to form each letter in the most efficient way. While there may be more than one way to form a letter, speed and style are almost certain to improve if the pupil follows the recommended procedure for forming letters. Pupils should know the processes of letter formation so well that they can describe the correct manner of making each letter in their own words.

If this phase of handwriting instruction is properly taught, the necessity for much remedial work later on can be largely prevented.

Individual Differences

This emphasis on correct letter formation, however, does not mean that the teacher's aim should be to have every pupil's writing look exactly like his neighbor's, hers, or the manual's. It means simply that each child should be taught to form letters correctly so that speed and legibility may be as good as possible. Even when pupils are taught to make letters according to a certain pattern there will be marked individual differences in the writing of different children.

¹"These concern all the different aspects of writing. The style of the writing reflects the person's general habits of movement. Graphologists believe that the style of writing reflects the person's character. While many of their ideas are probably fantastic, it is true that the form of the writing may reflect differences in temperament. It is therefore appropriate to allow different children to write in a somewhat different style provided their letters are legible and conform to the standard alphabet.

"There are also individual differences in the manner of writing which correspond with differences in style. There are minor differences in the position of the hand and the method of holding the pen. There are differences in the kind of movement which is used. Such differences may be due to variations in the structure of the arm and the hands, or to variations in the brain, nervous system, and the muscles which effect the movement. When we set up standards for position or for movement, we should recognize that individuals are not entirely alike in these respects. We should be able to draw the line between the essentials to which all children should conform and the nonessentials in which they may differ.

"Parallel to the differences in style and manner are marked differences in degree of skill which is attained by individual children. In a typical fifth grade we may find children whose quality of writing is equal to average eighth-grade or as poor as the average second-grade writing. These differences depend in part upon natural ability to learn the manual arts and may depend in part on differences in the appreciation of good form. Whatever the cause, every class gives illustrations of the existence of these wide variations.

"It is not possible to overcome the variations in skill so as to make all children write with equal quality or speed. Some children with no formal training whatever will do better than other children with the best training we can give them. We therefore cannot set up one fixed standard for a grade and bring every child up to it. However, it is pos-

¹Freeman, F. N., *The Classroom Teacher*, Vol. 8, The Classroom Teacher, Inc., pp. 126-127, 1929.

sible to lessen the gap between the extremes of skill by appropriate training.

"Individual children are somewhat specialized in the kind of skill which they possess. Some are better in regard to the form of their writing, and others in regard to speed. There may be various combinations of speed and quality. There are some children in whom they are balanced, and there are other children who write rapidly but poorly, or slowly but with good form. Since a very extreme emphasis upon either form or quality brings with it disadvantages, it is desirable to give special help to the child who shows such extreme emphasis by helping him to improve that aspect of writing in which he is deficient."

Motivation

Individual improvement records made by mounting or preserving in a folder samples of the same paragraph written by the child several times during the year are extremely effective in creating a desire for improvement, as each child can see not only his own progress but that of the other children as well.

Records of a pupil's handwriting should not be limited to drill material from the handwriting practice session, but should also include samples of his writing done in other classes, such as spelling, language, arithmetic. The handwriting grade should not be based on the improvement shown in drill materials alone, but on the complete record. Such an emphasis on writing in all the phases of school activity will prevent the contradictory situation of a pupil whose handwriting grade is good but whose handwriting in general is poor. Such records kept from year to year also are of great value.

Handwriting scales are published by most companies supplying handwriting materials. While such scales can be very effectively used, they are often confusing to persons untrained to their use. Unless you feel confident of your ability to use such a scale effectively, you will probably do better to base your evaluation of the pupil's work on the improvement he shows during the semester or year.

Many companies offer pins, certificates, club memberships, and so on as incentives for better writing. Write to your publisher if you are interested. While such motivation is inferior to that provided by the pupil's own desire to improve, such awards can sometimes be used effectively.

Regular periods of practice help keep up enthusiasm and interest in progress. A system of passing out materials which

avoids confusion will help to set up a situation in which the pupils are relaxed and ready for work.

Style of Letters

The style of the letters which the pupil learns to make depends chiefly on the model given him. The alphabet, both small and large letters, should be written across the top of the blackboard or displayed on a large chart in the room. Of course the same style alphabet should be taught in all the grades where cursive writing is taught.

Speed

While legibility is more important than speed, speed is a decided advantage if the legibility is satisfactory. It is difficult to set up definite standards of speed and say that they must be attained at any certain grade level. A speed of sixty-five letters a minute seems to be accepted as reasonable for the average elementary school pupil. If he attains this speed by the time he finishes grade six, the demands of later grades or his occupation will probably increase it as much as is necessary.

Activities

Exhibits for the last of the year can well be planned in the fall. Set a tentative date and discuss plans with the children. Some companies offer booklets of plays to be used on such occasions. Such an exhibit and program can provide good motivation for the pupils. It will also be of great interest to the parents.

Writing invitations, newspaper items, secretarial reports, etc. encourages good penmanship. Good Writing clubs may also be very effective. One or two class periods a month could be devoted to a club meeting. Some related topic, such as the history of handwriting, could well be taken up for study at such meetings.

Correlation

Writing should be taught, not as an isolated skill, but as a tool for all written work. There is probably not another subject in the curriculum that can be more readily and effectively correlated with other subjects. Standards should be set up by the teacher and pupils, and the pupils should be held to

them for all their written work. (Ink should be required for most written work, even in the intermediate grades.) The measure of handwriting skill is to be found in its application in the writing done in typical home and school handwriting situations. The purpose of the special handwriting period is to improve the skills shown to be needed by the individual pupil in his daily written work.

Any period when written work is being done ought to be supervised if that is at all possible. Pupils who are writing well should be commended. Illegibly written spelling words should be marked wrong and deficiencies in written work made the subject of special remedial instruction. Be sure that the pupil understands what makes his writing illegible or otherwise unsatisfactory, and make sure that the instruction in subsequent writing periods teaches him how to correct his specific errors.

Letters that serve an actual purpose and are mailed provide useful integration. Language classes enjoy writing letters to friends, relatives, or to pupils unable to come to school because of illness.

Arithmetic should not be neglected in the handwriting class. The legibility of numerals is very important, and their formation and writing should be taught as carefully as that of the alphabet. The legibility of numerals depends also on the spacing between them. The most common fault is to crowd them. If numerals must be written in a small space, they should be made small enough to prevent crowding. Some periods in handwriting class may well be spent in writing the arithmetic assignment.

When some new thing has been taught in writing class, make a conscious effort to have the pupils apply it in all of their written work. For example, after a lesson on ending strokes, have the class check its spelling, geography, or other papers to see how well they have applied what they learned about ending strokes.

Procedure

It is not necessary that every pupil in a class be working on the same lesson, except as some new point is presented by the teacher, or unless the entire group needs some kind of remedial work. During many of the periods pupils may be

working on written assignments for other classes; for example, they may be writing their spelling words or putting a theme into final shape. Individual pupils requiring special help in some phases of writing can be working on their own problems during the regular writing period. Of course, all this work must be carefully supervised by the teacher to insure effective learning.

Sample Lesson

This lesson is designed to teach correct letter formation. In the upper grades the aim would be stated as to improve rather than to teach letter formation. Otherwise the lesson applies equally well to all grades above the fourth.

Before beginning the lesson the teacher should make sure that she can analyze the letter to be taught, that she can give the proper descriptive count for it, that she knows on what page in the manual helpful drills may be found, and that she can help the pupils to correct their errors.

The pupils, too, should be prepared for the lesson. They should know the correct position; they should have previously learned the proper slant of letters; they should have all their writing material on hand and in working order.

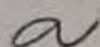
Introduce and conduct the lesson in a manner similar to the following:

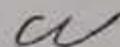
"We are beginning a new unit in the study of letters that make up the *a* family; that is, *a*, *d*, *g*, and *q*. Today we shall begin by studying the letter *a*. First let us analyze the letter. (Use the blackboard.) The letter *a* is composed of three movements: (1)  the egg-shaped closed loop; (2)  the down stroke on the same slant as your two-space, up-and-down drill; (3)  the swing-up ending.

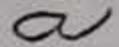
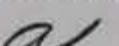
"Here you see the three movements of the letter. Have you any questions? If not, take your pens. Are you in position? Let us practice the first movement—the egg-shaped closed loop. Retrace it five times while I count. Ready. One, two, three, four, five. Now the down stroke. Watch the slant. Ready. One, two, three, four, five, swing up. (Repeat a number of times.) Now practice the entire letter while I repeat the descriptive count. (Illustrate on blackboard.) Ready. Around, stop, down, up. (Repeat. Ask a capable child to count with you; then have the whole class take up the count so as to free you to move about the room, giving help where it is needed.)

"Now open your manuals to page —, to the exercise on the small letter *a* grouped five in a group, three groups to a line. Practice the

first line while I count. Ready. Around, stop, down, swing, stop, around, stop, down, etc. (By watching the pupils' pens you can count to promote the best free movement.) Now each may make another line across the page (with the pupils counting silently). (After repeating this drill several times, have the pupils compare their work with the model in the book.) Do you have any of these common errors? (Illustrate the following errors and their correction on the board.)

"Is the final stroke faulty because the down stroke is not on the same slant as the two-space, up-and-down drill? Thus:  By stopping at the top after closing the loop, the pen may be guided downward at the right slant.

"Is the *a* open at the top? Thus:  If so, you must remember that the count 'around' is not completed until the loop is closed.

"Is the top part of the *a* distorted? Thus:  If so, practice the loop, giving care to the direction of the movement in the beginning of the first stroke. Thus: , not .

"Now practice the above exercise again, taking care to correct your previous errors." (Continued the descriptive count. Be quick to praise improvement.)

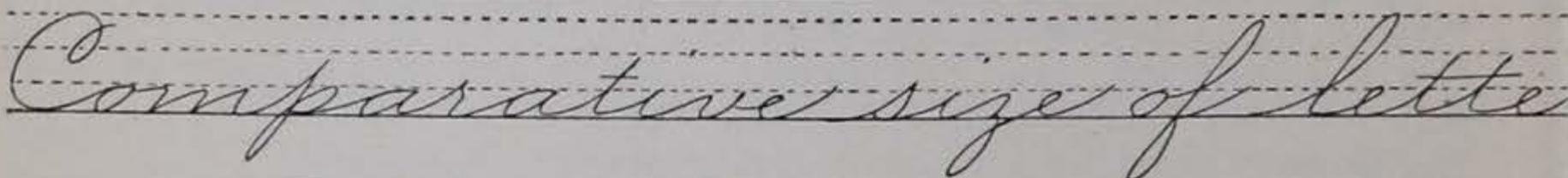
The class may then well proceed to an exercise of words in which the letter *a* is used. Be sure the words practiced have meaning and usefulness to the pupils.

During other written lessons which follow remind the pupils to watch their construction of *a*. The next writing lesson may continue in similar fashion with other letters of the *a* family.

Diagnosis

Too much stress cannot be placed upon the teacher's ability to diagnose writing and to develop this ability in the pupils. Before his writing can be improved, the child must be able to look at it critically; he must know the probable causes of his errors, and he must know how to go about correcting them. Blackboard diagnosis is often beneficial here. It is better for the pupils to do much watching and listening while the teacher explains and demonstrates than for them to do a great deal of monotonous drill. The following factors should be considered:

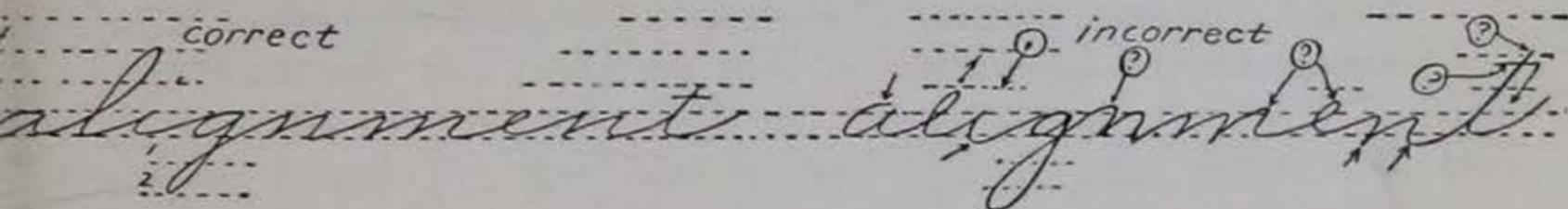
1. *Letter height.* There are three heights of letters. Thus:



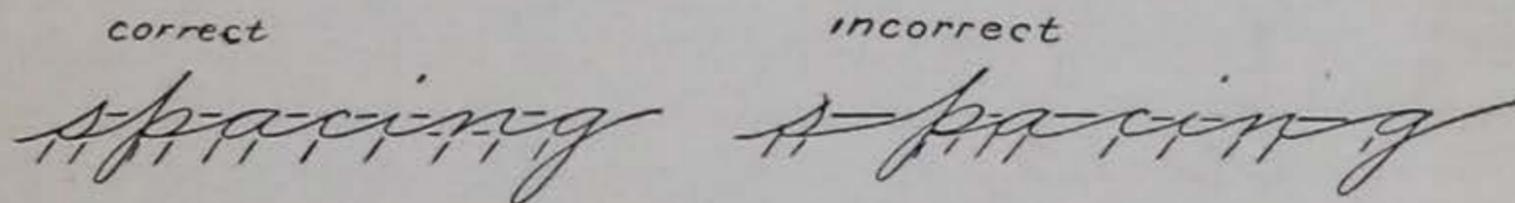
Encourage intermediate grade pupils to make the tallest letters almost a full space high so that with the increase in speed in the

upper grades the tall letters will not lose their identity; for example, *l* becomes *e*.

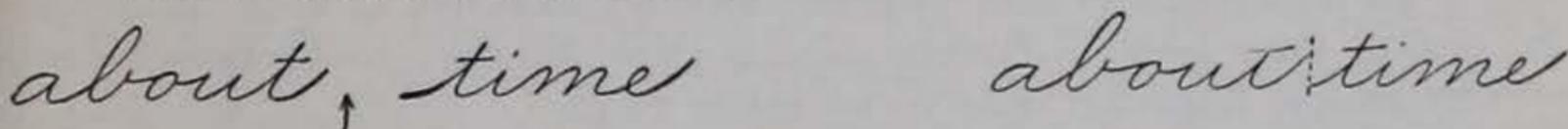
2. *Alignment*. Letters should be written on the line—neither above nor below it. Pupils who have trouble with alignment may find blackboard work with a music staff liner using chalk in four consecutive holders to be helpful. This liner will divide a space similar to the space between lines on paper. Have the pupil practice writing between the lines according to the three heights of letters.



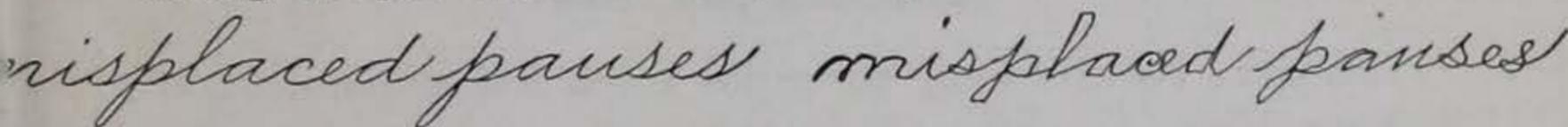
3. *Space within words*. Even spacing within words gives a rhythm to writing. The habit of swinging up or completing the stroke helps to develop correct spacing within words. Illustrate on the board how irregular spacing detracts from and regular spacing adds to the appearance of writing.



4. *Space between words*. The "follow through" that carries the eye of the reader along depends on the regularity of the intervals between words. A slanting line drawn at an approximate angle of forty-five degrees should connect the ending stroke of one word with the beginning of the next.



5. *Misplaced pauses*. Sharp points or broken lines are signs of poor movement. By developing a swinging movement that will carry through the entire word, and by refraining from marking over or raising the pen within a word, these pauses can be eliminated.

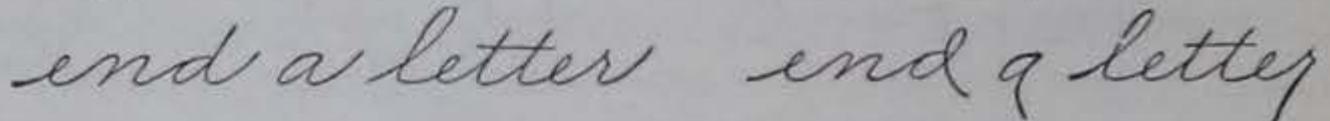


6. *Slant*. Every letter except *a*, *e*, *o*, and *s* has one or more down strokes that determine the slant of the writing. Short periods of drill on the two-space, up-and-down exercise may help to develop slant. Observe carefully a pupil who is having difficulty with slant. Are his paper and his hands in correct position? Is he pulling his hand back as if he were pulling it into his sleeve to make the down stroke? Is he writing too rapidly? Have pupils mark the slant of blackboard writing with colored chalk. Have them mark each other's papers with red pencil and ruler. In this way all will become conscious of the down stroke which forms the slant and

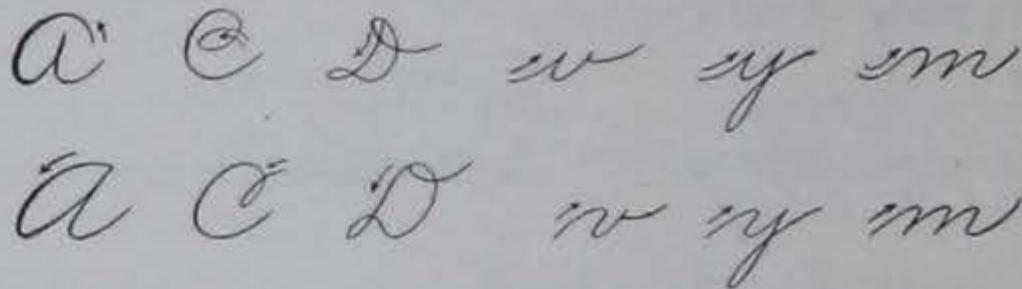
of the proper direction of this stroke. Notice the effect of slant on the quality of writing:



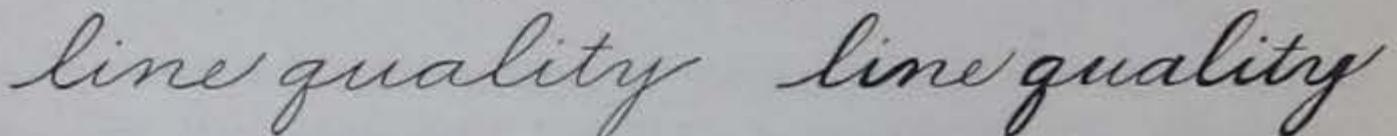
7. *Ending strokes.* The ending stroke of a letter should swing up about as high as the small letter *a* or *o*. Avoid swinging up higher since that spoils the quality of the writing. Ending of *y*, *g*, and *s* are the only ones that may be dropped. Illustrate the effect of faulty endings on the blackboard so that the class may see the effect:



8. *Beginning strokes.* Often letter formation is spoiled by a faulty beginning stroke. When teaching letter formation emphasize the direction the pen must move for the beginning stroke. Common errors are:



9. *Line quality.* This should improve with ease and freedom of movement. Encourage fine lines and a light touch. Call attention to the fact that finger writing can always be detected by the line quality of the writing it produces. Provide a variety of pen point sizes from which pupils may choose. As they improve in skill, they will select finer points. Rarely does a pupil become so proficient that he makes lines too light to be easily read.



Remedial Exercises

The time required for remedial work will depend upon previously formed habits. It is far better to spend much time in the early grades on correct letter formation than to let poor supervision in the primary grades necessitate much practice of a remedial nature in the upper grades.

Letters may be grouped according to similarity of movements and taught as a group; for example, the *a* family, the space high letters, the capitals formed from a direct oval, those formed from an indirect oval, the cane stroke letters, the over stroke letters, the letters falling below the line, the capitals

beginning below the line, the letters having a retraced movement.

Analyze the troublesome letter with the pupil. Make sure he knows how to form it, and provide practice in its use. Encourage him to examine written work for other classes for signs of improvement in writing. Call attention to the similarities of letters in a group and practice them together, noting also the differences that distinguish them.

Investigation shows that certain defective letters cause a large percentage of all writing illegibilities. Newland, in a study of handwriting illegibilities found that *a* contributes 11%; *d*, 9%; *e*, 12%; *r*, 12%; *t*, 10%; *b*, 6%; *h*, 6%; *o* 5%. Thus, of the deficiencies in writing, these eight letters make up 71% of all illegibilities. Certain types of confusion result from these difficulties. For example, *a*, if not properly closed, may be mistaken for *ei*, *o*, or *u*. Similar types of confusion characterize each of the remaining letters which give trouble.

The following table gives the relative frequency of illegibility for all letters in the alphabet.

TABLE III¹

Frequencies Per 100,000 Running Letters With Which Each Letter Appeared Illegible and the Percentages of the Totals of Illegibilities of Each Letter Represented

Letter	Elementary Frequency	Per Cent
a	153	11
b	89	6
c	16	1
d	126	9
e	167	12
f	39	3
g	31	2
h	80	6
i	57	4
j	1	—
k	19	1
l	34	2
m	16	1
n	55	4
o	73	5

¹Newland, T. Ernest, "An Analytical Study of the Development of Illegibilities in Handwriting from the Lower Grades to Adulthood," *Journal of Educational Research*, December 1932, 26:249-58.

p	15	1
q	1	—
r	167	12
s	47	3
t	134	10
u	23	2
v	11	1
w	22	2
x	—	—
y	10	1
z	1	—
Total	1,387	

Furthermore, certain groups of letters have common difficulties because of similarities in their formation. Four types of difficulties cause over one half of all illegibilities. These are: (1) failure to close letters, (2) closing of looped stroke as in *e*, (3) the looping of non-looped strokes, and (4) using straight up-strokes rather than rounded strokes, as in *m* and *n*.

Examine the following table from Newland's study and see that these letters are well taught. If these errors already appear in written work, give remedial drill to stress correct letter formation.

TABLE V¹
Analysis of Letter Malformations

Type	Percentage Elem.
1 Failure to close letters (<i>a, d, f, g, j, k, o, p, q, s, y, z</i>)	24
2 Top loops closed ("I like t," "e like i")	13
3 Looping non-looped strokes ("i like e")	12
4 Using straight up-strokes rather than rounded strokes ("n like u," "c like i," "h like li")	11
5 End stroke difficulty (not brought up, not brought down, not left horizontal)	11
6 Difficulty crossing <i>t</i>	5
7 Difficulty dotting <i>i</i>	3
8 Top short (<i>b, d, f, h, k, l, t</i>)	6

Note:

²In Arabic numerals, too, there are certain numbers which cause most of the difficulties. The 6, 5, 7, 0, and 2 usually need specific attention.

¹Newland, T. Ernest, "An Analytical Study of the Development of Illegibilities in Handwriting from the Lower Grades to Adulthood," *Journal of Educational Research*, December 1932, 26:249-58.

²Newland, T. Ernest, "A Study of Specific Illegibilities Found in Writing of Arabic Numerals," *Journal of Educational Research*, March 30, 21:175-85.

Discussion of Detailed Movements Involved in Correct Letter Formation

Writing is made up of only a few movements, and letters differ because of various combinations of these movements.

To avoid common errors mentioned in the table above, the child should be able to analyze the letter and put the combination of movements used in making each letter into words. In this way the teacher can be sure that the child is visualizing the letter and actually seeing it as it is. The following discussion on letter formation is given in an effort to aid in formulating a description of those letters which cause the most common illegibilities.

Pupils should be well aware of the primary movements that are used over and over in the formation of letters; for example, the down stroke which occurs in all letters except *c*, *e*, *o*, and *s*, and for which the two-space high, push-pull drill is supposed to establish the fundamental slant and movement.

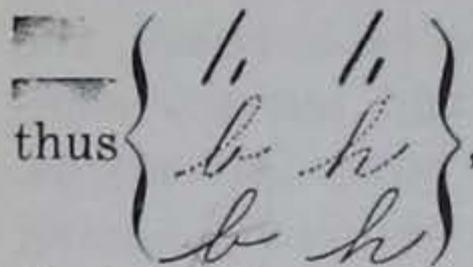
Another common movement is the over stroke used in beginning the letters *m*, *n*, *r* (some methods), *v*, *x*, *y*, *z*, and used within the *h*, *k*, *m*, *n*, and *p*. Many times this stroke is made under and the letters are pointed at the top, with the result that *n* is confused with *u*, and *h* with *li*, etc.

Letters beginning with the under stroke are *b*, *f*, *h*, *i*, *j*, *k*, *l*, *p*, *r* (some methods), *u* and *w*. If this beginning stroke is made straight instead of curved under, the result is an oblique line that breaks slant that distinguishes good writing. If, for example, the beginning stroke of the letter *t* is made as a straight line, then the following movement must be curved which eliminates the fundamental slant of this letter. It is well to stress that *b*, *f*, *h*, *i*, *j*, *k*, *l*, *p*, *u*, and *w* begin with this curved under stroke that is followed by a down stroke that gives the fundamental slant to each letter.

When used in a word, the letter *t* is crossed after the word is written to prevent a break in the movement while writing the word. The cross is short and parallel to the basic line (the line of the ruled writing paper on which the word is written). If two *t*'s appear together in a word they are crossed with two lines rather than by one long one. The letter *i* is not completed until it is dotted. When used in a word this is done after the word is written.

The loop below the line on the *g*, *j*, *p*, *y* and *z* should come back up and cross the down stroke at the basic line (of the ruled writing paper).

Teach the child that the letters *b* and *h* have parallel lines ;

thus  , and the letter *h* stands on two legs. Be sure

that the down stroke (second movement) in each of these letters is not rounded causing the first loop to cross too near the basic line. Make large blackboard diagrams to illustrate the retraced or tick movement of the final movement of the *b*, *r* (some methods), *v* and *w*, and of the first movement of the letter *c*. Show also the danger of retracing too far.

Unless the loop of the *a* is closed it is easily mistaken for two letters. The same is true in making letters that include the *a*, such as *d*, *g*, and *q*. To avoid this confusion specific directions for letter formation should be given beginning with the count around-up-touch. Emphasize the fact that this part of an *a*, *g*, *d*, or *q* is not complete unless the loop is closed. To make the pupil conscious that the loop must be closed practice this movement with the descriptive count. A slight pause following the touch is helpful. In the *a*, *g*, and *q*, the second movement following the slight pause at the closing of the loop is the down stroke on the fundamental slant. Be sure that this movement leaves the loop and does not follow it down to the line. In making the letter *d* whether the movement following the oval part described as around-up-touch is an open or closed loop depends upon the writing system adopted and is relatively unimportant. But it is necessary that the down stroke be on the fundamental slant and cross at or touch the oval part of the *d* at the point where it closed. The chief things to remember in making any of the letters in the *a* family is that the oval loop must be closed and that the down stroke is on the fundamental slant.

By pausing at the top before beginning the down stroke the loop at the top of the *t*, *j*, *p*, and *i* can be avoided, and by thinking of the *l* and *e* as being made by curve under-over-down, with emphasis on the over, *l* need not be mistaken for *t*, or *e* for *i*. The final movement in the *i* or *j* is the dot, and

a word containing either is not complete until the dot is made.

Attention should be called to the fact that all the lines in the letter *f* do not cross or meet at the same place. The first movement is identical with that used in making the letter *l*, except that the fundamental down stroke is continued below the line and is brought back up as a loop which touches the down stroke at the basic line before swinging up for the ending. Neither in the *f* nor the *q* should the lower loop ever cross the down stroke, but instead should merely touch it at the basic line.

As in the case of the *a* family; namely, *a*, *d*, *g*, and *q*, the loop of the *o* must be closed, and the first movement is not complete until it is.

The ending stroke of a letter is an important means of carrying the eye through a line of writing. Either too high or dropped endings detract. Most letters end with a swing up about the height of small letters such as *a*, *c*, *e*, etc. The exceptions are *b*, *o*, *r* (some methods), *v*, and *w*, which end by swinging out and slightly up. It is important that the correct ending stroke be used in all writing since this same movement carries over as a connecting stroke between letters and thus has a great influence on writing quality.

A definite standard in the height of letters should be established in making the *b*, *d*, *f*, *h*, *k*, *l*, and *t*. Most people agree that the *d*, *b*, *t*, and *p* are extended letters that are higher than the small letters *a*, *m*, *n*, etc., but not as high as the *f*, *h*, *k*, and *l* which approach full space. The teacher should be guided by the manual adopted in her situation, but must demand that the pupils push these letters up to that standard as one factor in developing legible writing.

If the teacher will follow the letter formation of each letter in her manual as she reads the respective letter descriptions above, she will more fully appreciate the attempt that is being made to help the child visualize each letter by describing the movement in words. With a little initiative the teacher will be able to describe other letters and with the use of diagrams and analysis on the blackboard can impress a mental picture of well-formed letters on the minds of the pupils. After this is done it is essential that the teacher re-

quire continuous use of well-formed letters in all written work to produce a high quality of legible writing.

Other Problems

Most handwriting problems are mental and require patience, continued effort, frequent successes, and encouragement to produce relaxation and assurance. Constructive criticisms and quick commendation of improvement are inspiring to the pupil and help him overcome his writing difficulties.

A very few pupils suffer from a lack of muscular coordination so that the quality of their writing remains inferior. Such a lack of coordination will be apparent also in other school and play activities. When such pupils have mastered proper position and movement, they should be allowed to feel successful even though the quality of their writing remains poor.

Left-handed pupils present a problem for many teachers. Often they are neglected because a right-handed teacher feels helpless. Handedness is definitely a problem of the first grade. When handedness is established, watch especially that the paper is always turned in the proper direction on the desk (lower edge to the right for right-handed pupils, to the left for the left-handed). The left-handed pupil should be taught to pull the hand down as if he were pulling his hand into his sleeve on the down strokes of all letters.

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The Instructor, F. A. Owen Publishing Company, Dansville, N. Y.

The Grade Teacher, Educational Publishing Company, Darien, Connecticut.

The Elementary School Journal, Department of Education, University of Chicago, Chicago, Illinois.

Childhood Education, Association for Childhood Education, 1201 Sixteenth Street, N. W., Washington, D. C.

Elementary English Review, Box 67, North End Station, Detroit, Michigan.

Journal of Educational Psychology, Warwick and York, Publishers, 10 East Center Street, Baltimore, Maryland.

Journal of Educational Research, A. S. Barr, Editor, Department of Education, University of Wisconsin, Madison.

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