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STATE OF IOWA
1933

GUIDE FOR TEACHING GEOGRAPHY IN THE ELEMENTARY GRADES

Issued by Board of Educational Examiners
AGNES SAMUELSON, President

Prepared by
CLARA M. WALLACE, *Normal Training Supervisor*
OLIVE PEARL RITTER, *Demonstration Teacher*

Published by
THE STATE OF IOWA
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PREFACE

This bulletin has been prepared for the guidance of those engaged in training teachers to teach geography in grade or rural schools. It is intended primarily for supervisors of normal training in high schools and directors of elementary instruction in colleges, though teachers in service will also find it applicable to their classroom work. It deals solely with methods of teaching geography and is not concerned with questions of curriculum construction, courses of study, organization of courses of study, grade placement, or textbooks. It is planned to fit in any grade where the content is being studied; no reorganization of local courses of study is necessary to apply it to teaching situations.

Since it is supplementary to the Iowa elementary course of study, and geography is a subject designated by the department of public instruction for special emphasis this year in the state-wide program for improvement of instruction, its use in professional meetings and study centers and for credits for certificate renewal is recommended. It might well occupy a place in the working equipment of teachers and supervisors of instruction along with the elementary course of study, language, reading, safety, dictionary, and other recent bulletins supplementing the elementary course of study.

The dominant thought in preparing this bulletin has been to organize workable outlines directly suited to classroom needs. With that purpose in mind the authors have drawn upon several sources for material and advised with leaders in the field of geography and of elementary education. The thirty-second yearbook on the teaching of geography by the National Society for the Study of Education was used in order correctly to interpret modern trends in teaching geography. The elementary course of study manual served as the basis. The content of the geographies and references in geography in common use in the state were analyzed to make sure the topics selected would fit actual teaching situations. The lists of these texts and references were taken from the 1932 annual reports of the county superintendents to the department of public instruction.

Thanks to our library law, new books can be annually added to the school libraries. Wherever possible this year, it might be well to use this fund to secure additional new and up-to-date materials in the social studies, history being the subject for special emphasis this next year. Wherever the county superintendent deems it advisable, state aid for the standard rural schools may be used the same way. By taking advantage of these sources of aid, and of the facilities of the state traveling library commission and of local libraries, the necessary supplementary material for classroom instruction may be assured in every school.

Valuable advice and assistance were given the authors in this undertaking by Dr. Ernest Horn, professor of elementary education, and Miss Mabel Snedaker, extension supervisor, State University of Iowa; Miss Alison E. Aitchison, professor of natural science, and Miss Marguerite Uttley, associate professor of

natural science, Iowa State Teachers College. The cooperation of book companies in supplying texts and references is also appreciated.

We hope this bulletin will prove to be useful to teachers in training and to teachers in service. If it stimulates teachers to pay more heed to the assignment, to encourage pupils to read widely, to search for answers to problems, and to realize that geography is a study of the living world of which they are a part, it will more than have achieved its purpose.

AGNES SAMUELSON
President, Board of Eudcational Examiners

PRE-GEOGRAPHY IN PRIMARY GRADES

Introductory Statement

Children in the primary grades need to have many first-hand experiences. They also need to have many things carefully talked over with them. It has been called to our attention that some college students have been unable to tell in which direction shadows fall at noon in our own section of the country. Time after time we have talked with children who were unable to tell or show in which direction the sun comes up and in which direction it sets. While these concepts may appear to be very elementary, nevertheless, they are very important. Concepts seem to be of slow growth. Happy is the child who has been fortunate enough to have had rich experiences to help him form many concepts. If the child can later reach back to his primary experiences and draw upon the concepts formed there, he will become a better and wiser reader. The purpose of these guide lessons is to help the teacher to give these experiences to the children.

No attempt has been made to go into detail in planning these lessons. They are skeletons upon which the teacher may build. Full use should be made of all reference material available. Nothing, however, can take the place of first hand observation. The teacher must know what surrounds her if she is to teach children to see the many things of interest about them.

Tools in teaching are a necessity. A lawyer has his library, a dentist his instruments, and a doctor his equipment. Should a teacher have less? No one can assume full responsibility for having all tools for instruction ready and at hand but the teacher. It is her duty to engineer things in such a way that she has the necessary tools with which to work. Where there is a will and determination to get the necessary equipment, there surely will be a way.

First hand information is of more value than any other kind in these first few years of school life. Trips made to get this first hand information should be carefully planned. It is not necessary to take all trips during school hours. Trips may be taken before school, at noons and recesses, after school, and on Saturdays. Teachers should always have the consent of each child's parents and the school director before taking him. The teacher should always know what she intends to accomplish by taking the trip. She should have made the trip before taking the class to make sure that they will find the things for which they are looking. It seems fitting to add here that children should have set up for themselves safety standards to be observed by the group while on the trip. Great care should be taken to avoid accidents. A teacher who does not have control of her group in the schoolroom should never risk taking the group on a trip. Specimens brought into the school for study should always have a place carefully fixed for them. They should be well cared for and cruelty to them should never be permitted. Anything alive seems to interest children greatly. A little girl, whom we know, would put a doll aside in a few minutes, yet she would stand by the hour to watch some goldfish in a bowl. Interest seems to mount to the top of the scale when the live object is present.

The teacher is urged to make much use of pictures. Whenever first hand ex-

perience cannot be had, pictures are the next best. Every teacher should take pride in making a picture collection. Newspapers and magazines are good sources for pictures. There is much free material that may be had for the asking. Some books which may be obtained in department stores have valuable pictures in them.

Informal discussions are an indispensable part of the work in these grades. Children should be encouraged to contribute what they already know and to ask questions about what they would like to find out. Children who have had opportunities to express themselves, and who have had things carefully explained to them, do not talk or read in the way children do who have had no opportunities.

The scrapbook holds forth great possibilities. What person is there who has not at one time or another delighted in the making of scrapbooks? Children seem to enjoy scrapbooks very much. They furnish valuable material for the reading table.

Dictating summaries for the charts and booklets gives the children opportunity to express or tell about things they have actually experienced. This is the place where they may be taught to tell accurately the things they have observed. The sentences dictated furnish excellent reading material. They have meaning for the child since he has actually experienced what the words tell. If more material of this type were used in the first few years of school, perhaps we could almost eliminate verbalism.

According to the weekly teaching program in the elementary state course of study, children in the primary grades have a lesson once a week in pre-geography. However, to get the most out of this work, it is frequently necessary to use two or three minutes each day over a period of time. The lesson makes a starting point for these observations. Two or three minutes before school or at noons and recesses will often be all that is necessary.

The organization of these lessons for primary grades includes materials needed for each lesson, teacher procedure, pupil activities, and suggestions for correlating pre-geography with reading and language.

The teacher should have on hand the manuals and bulletins listed below. References are made to several of them at different places in the bulletin.

Iowa State Course of Study for Elementary Grades

Questions Teachers Ask About Primary Reading, Questions Teachers Ask About Reading and Study in Intermediate Grades, and Remedial Exercises for Reading and Study in High School Subjects, Clara M. Wallace, 1931

Poems to Memorize and Books to Read, Mabel Snedaker and Wilma Garnett, 1931

A Course of Study in the Use of the Dictionary, Fred D. Cram, 1932

Language Supplementary Bulletin, Clara M. Wallace, et al, 1932

Course of Study in Safety Education, Clara M. Wallace, et al, 1932

If any of these bulletins are missing, request additional copies from your county superintendent.

The Authors

Lesson 1

THE SUN IN THE FALL

Materials Needed

Pictures of sunrise	Colors
Pictures of sunsets	Paste
A piece of glass to smoke	Paper for booklets
A shadow stick	Paper for large class charts

* * * *

Aunt Louise called Betty and Mary Jane very early one morning in September. "Come children, wake up, I want you to see the sun come up. It is early dawn. There are some faint streaks of light in the eastern sky. We can watch through this east window."

The children scrambled out of bed and were soon at the window.

"Oh! Oh! What lovely colors," cried Betty, "I wish I could make a picture of it."

"Why, hear the roosters crow," exclaimed Mary Jane. "Do they always get up before sunrise?"

"Yes," said Aunt Louise, "chickens are very early risers but they are not the only ones. Just listen a moment."

"The birds! the birds!" shouted the children. "They are all singing."

"Yes," Aunt Louise replied, "the birds always wake me early on summer mornings."

The children and Aunt Louise watched the sun rise until they could see all of it.

Mary Jane said, "I never saw the sun look so round and red before."

"We will look at it at noon through a piece of smoked glass and see how it looks then," said Aunt Louise.

"Now, I think you will have time to jump back in bed and have another nap before mother calls breakfast."

At noon Aunt Louise called the children to come. She held in her hand a piece of smoked glass. "I know where to look," said Betty, pointing overhead. The children took turns looking at the sun through the smoked glass. If you want to know what the children saw, perhaps some noon you can look through a piece of smoked glass at the sun.

That night Aunt Louise and the children watched the sun set. They looked out of a west window. "Let's play a little game," said Aunt Louise. "We will see who can find the most colors in the sky."

"Fine," shouted the children.

Mary Jane found red, yellow, and green.

Betty named blue, purple, and gray.

Aunt Louise found pink, rose, lavender, orange, and brown.

"You found the most, Aunt Louise," said the children. "Wasn't it fun?"

"It is bedtime now," said Aunt Louise.

"I wish it were dark," sighed Betty. "It is so hard to go to sleep when it is still light."

Teacher Procedure

The essential things to be developed in this lesson are:

The influence of the sun on work, play, and rest

The position of the sun in the sky

This cannot be taught in one formal lesson. Frequent observations are necessary. It is important that these observations be started in the fall.

Ask the children to observe a sunrise and sunset. Ask them to notice the place along the skyline where it comes up and where it goes down. Let them look for different colors in the sunrise and sunset.

Teacher should have mounted pictures showing the sun rising and the sun setting.

Ask children to show where the sun comes up, where it is at noon, and where it goes down. (Children should be taught not to look directly at the sun. It is easy to note the position of the sun without doing this.)

Prepare a smoked glass for the children to look through to see the sun at noon.

Observe with the children where the sun comes in through the schoolhouse windows at noon in September, and carry this observation out once a month throughout the year. Make a record of these observations. This record may be a mark on the floor. (This observation will be necessary in order to let the children see that in winter the sun is farther south than in summer.)

Ask the children what they do in the morning before coming to school and what they do in the evening after supper. What does father and mother do before you start for school. What do they do after you get home in the evening? Bring out the length of the mornings and evenings. Record what the children say is done before and after school and save the record so that they may compare it with what they do in the wintertime before and after school.

Read "Bed in Summer" by Robert L. Stevenson. This poem is found in many readers.

Start some definite way of observing and marking shadows cast at noon. A shadow stick may be used. The ground may be marked where the shadow falls each day at noon.

Children should observe their own and each other's shadows. They should observe shadows of buildings, trees, and fences. From the observations should come the knowledge that the sun is always just opposite the direction of the shadow. Frequent observations are necessary to develop this. The teacher may say, "Our shadows are falling directly north of us. Point to the sun." "Our shadows are falling northeast of us. Point to the sun."

Read "My Shadow" by Robert L. Stevenson. This poem is found in many readers.

The following questions may be asked after observations and informal discussions.

Can you tell:
- where the sun rises
- where the sun sets
- when the sun is highest in the sky
- when the sun sets
- how often the sun rises in the east
- how often the sun sets in the west
- how many times the sun rises in a week
- when we can't see the sun
- what happens when the sun sets
- what happens when the sun rises
- what the time of day is called just before the sun comes up
- what the time of day is called just after the sun sets
- when we have night
- when we have day
- when you sleep
- when you work
- when you play

Pupil Activities

Let the children make a collection of pictures of sunrises and sunsets.

Let the children paint or color pictures of a sunset and a sunrise.

Let the children mount pictures for the bulletin board and for a reading table booklet.

Let the children paste in a booklet, for the reading table, stories and records that they have dictated to the teacher in class.

Have the children observe at frequent intervals the place of the sun in the sky.

Let the children observe shadows in the morning, at noon, and in the evening.

Pre-Geography Correlated with Language and Reading

Let the children tell about the sunrises and sunsets they have observed. Teacher may record what the children tell.

A record may be made of what the children do in the morning and evening.

Teacher and children may make a record of the things noted about shadows. (See primary language bulletin.)

Lesson 2

INSECTS IN THE FALL

Materials Needed

Cocoons and chrysalises
Caterpillars
Grasshoppers
Boxes and netting for making insect cages
Pictures of insects

* * * *

We are going to study about insects and how time of year affects them. Let us see if you know the names of any insects. Some of the ones which we see these days are flies, grasshoppers, caterpillars, butterflies, bees, and ants. Where do you see these and other insects? You see them every place you go; in the streets, the parks, the yard, and the fields. Do you see them in the winter?

What do you think insects eat? They eat all kinds of grass, plants, and leaves of trees. Let us see what kinds of insects we can see on our way to and from school and also at home on Saturday. What kinds do you think we might be able to find here at school?

Nearly all insects are hatched from eggs. When they first hatch out some insects look like caterpillars. They eat a great deal and become quite large. They shed their skins several times while growing. They then rest during the winter and do not awaken until spring. Before the moth caterpillar rests it spins a cocoon around itself. We will see if we can find some of these. The cocoon does not open until spring. Then the insect comes out. It is sometimes a beautiful butterfly.

We want to find some caterpillars to study. Let us see what kinds we can find.

We will make a house for them and then notice how they walk and climb. We will also see how they eat, what they eat, and how they make their cocoons.

We also want to study grasshoppers. Let us first make a cage for them and then catch a few to look at.

Teacher Procedure

For studying this lesson secure some insect cocoons and chrysalises. Place them in a cage where the children may watch them during the winter. Do not let the cocoons get too dry. A little water sprinkled about the cage will help.

In teaching this unit we wish to bring out:

how insects pass the winter
why so many insects sleep during the winter
what is happening during this rest period

Secure some caterpillars so that the children may see them move about, eat, and go into the resting stage. Be sure to supply them with food and some moisture.

Have the children make several insect cages. They may be made of shoe boxes or of small wooden boxes. Put some sod in the bottom of the box and mosquito netting or window screen wire over the top.

Let the children hunt for grasshoppers. Then talk with them about where they were found, how hard they were to catch, what they did after they were caught, how they escape their enemies, how they fly, with which legs they jump, and so on.

Call attention to:

the grasshopper's protective coloring
production of "tobacco juice"
strength of the grasshopper

Seat Work and Activities

Let the children make insect cages for caterpillars, cocoons, and grasshoppers.

Let the cages be observed every day.

Take walks at noon for the purpose of collecting insects.

Find pictures of insects for putting on reading and language chart.

Lesson 3

HOW WEATHER INFLUENCES US IN WHAT WE DO

Dew and Frost

Materials Needed

Bucket of water on a warm day or in a warm room
Paper for chart

* * * *

Teacher Procedure

Introduce this lesson after a heavy dew.

Children may wash doll clothes and hang them out to dry. Call attention to the fact that when the clothes are dry the water is gone from them. Ask the children where the water went and if they can see it.

Encourage the children to watch the teakettle at home when mother has the water boiling in it. Ask the children if they can see where the steam goes.

Let the bucket of cold water stand on a warm day. Call the children's attention to the drops on the outside of the bucket. Let them try to explain where the drops came from.

Call attention of the children to the fact that the air has water in it. The water in the air is called moisture. The air can hold much moisture. The drops on the outside of the bucket came from the air. The drops are the same as dew.

Let the children tell what they think becomes of the dew. Encourage them to give answers; not say "It goes away."

The children may tell where they think frost comes from. They may tell what they like to eat, wear, and play when it gets cold enough to frost.

Some morning when the windows are covered with frost, call the children's attention to this. Scrape some frost from the windows and let the children examine it. Talk about how frost is formed.

Pre-Geography Correlated with Reading and Language

Children may dictate sentences telling what they have found out about "dew" and "frost." (See primary language bulletin for ways of recording.)

Lesson 4

HOW PLANTS GET READY FOR WINTER

Materials Needed

Flower bulbs
Bowl
Pebbles or coarse gravel
Knife
Window box
Some paper for making a flower chart

* * * *

Soon Jack Frost will come and what will happen to the flowers which are still growing in woods and in your garden? Some flowers have made seeds and have already died. Some plants have stored up food in bulbs underground. These bulbs are ready to grow next spring.

We will plant some bulbs in water so we can watch them grow.

We will take a walk and watch for the flowers that have seeds, and flowers that have their food stored in bulbs underground.

Teacher Procedure

The teacher should know where she can find the things she wants the children to see. She should have made the trip first.

Take a walk with the children and note how flowers prepare for winter. This walk may be taken at noon, at recess, or after school.

Some of the plants to be observed may be: goldenrod, wild sunflowers, dahlias, asters, holly-hocks, cat-tails, gentians, sweet peas, nasturtiums, zinnias, cosmos, and daisies.

Prepare a chart on which the names of flowers with their pictures may be recorded. Save this chart to compare with the flowers which come in the spring. Call attention to the bright colors of fall flowers.

Bulbs may be planted in window boxes. Bulbs may be grown in water. If this is done, pebbles will be needed to hold the bulbs in place. Do not cover the bulbs with water. Set them in a dark cool place for about two weeks. Then bring them out to the light and warmth. Look at them every few days to see if they are beginning to grow. Observe the roots among the pebbles. Narcissus bulbs are the best ones to grow in this way. The paper white narcissus, the Chinese sacred lily, and daffodil may be grown this way. Other kinds of bulbs that blossom in the house in winter must be planted in soil.

Seat Work and Activities

Let the children cut open some bulbs and observe the inside structure (onion bulbs may be used.)

Teacher and children may plant bulbs in a window box and in water.

The teacher and children may watch the bulbs day after day while they are growing.

Pre-Geography Correlated with Language and Reading

Children may tell how some flowers get ready for winter.

Children may tell how they planted bulbs.

Children may help the teacher keep a record of the growth of the bulbs into flowers.

Lesson 5

GATHERING SEEDS IN THE FALL

Materials Needed

Various vegetable, flower, fruit, and weed seeds

Bottles or envelopes for storing seeds

* * * *

Fall is the time when seeds are gathered. A plant has seeds so that there will be more plants like it the next year. Seeds are different sizes. What are the tiniest seeds you have ever seen? What are the largest seeds you have seen? Some garden seeds are very small. Lettuce seeds are tiny little black things no larger than the point on your pencil, yet each one may grow into a large head of lettuce. Then there are larger seeds like pumpkin seeds and watermelon seeds, and even plum and peach seeds.

How does your mother get peas, beans, radishes, and other vegetables started in your garden? We will save some seeds this fall and will plant them next spring. Seeds rest all through the winter and are ready to grow in the spring. You may see what seeds you can collect from your gardens at home. We will then tie them up in packets until next spring when we will plant some of them and watch them grow. Let us also see what flower and weed seeds we can collect.

The seeds of a plant are always formed in the flower. The seeds of some plants are covered by a pod. This makes it easy for you to see where the seeds are. Some of the seeds found in pods are peas, sweet peas, and beans. Apples and peaches have their seeds buried deep in the fruit.

If you plant radish seeds what will grow from them? Seeds always start plants of the same kind.

Teacher Procedure

Have the children bring some seeds from home. They may also collect seeds on or about the school yard and on the way to and from school.

Show the children how seeds are scattered by wind and animals. Call attention to the fact that burdocks and sticktights are seeds which have little claws that stick to the clothes and to the fur of animals.

Try to collect samples of the following seeds: various garden and flower seeds, acorns and nuts, weed seeds, sunflower seed, pumpkin and melon seeds, dandelion and milkweed seeds, burrs of different kinds, tumble weeds, various grains and others. The children will be interested in these seeds and how they are scattered.

Emphasize the fact that seeds start plants of the same kind and also the fact that the seeds rest through the winter.

Seat Work and Activities

Let the children collect garden seeds, make into packets, and label.

Have children collect weed seeds.

Let children collect flower seeds.

Have children cut fruits such as apples and pears to observe the seeds.

Observe peach and plum seeds.

Notice that nuts are seeds as well as fruits.

Lesson 6

HOW TREES CHANGE IN THE FALL

Materials Needed

Colored leaves

Cardboard for a leaf chart

Samples of nuts

* * * *

Fall is here and the trees are beginning to look different. The sun is not so hot, the days are shorter and cooler.

As you are going to and from school be sure to notice the color of the leaves. Have you noticed that some of the leaves are falling from the trees? I should like each one to see how many different colored leaves he can find. Of course you will want to know from what kind of trees some of the leaves come. Then perhaps we will be able to make a pretty leaf chart.

How do the lawns look? What does father do with the leaves which are on the lawn?

Have you ever gone nutting? Where did you go for the nuts? What kinds of nuts did you find? What did you do with them? What time of year do we go nutting? Let us see what kinds of nuts we can find to bring to school. Can you name other things which we get in the fall from the trees at home?

Teacher Procedure

Emphasize the effect of the season upon the trees.

Make sure that the children are able to identify at least three leaves. These might be the maple, elm, and oak.

Encourage the children to play in the leaves at intermission times and to find

beautiful leaves. Let them be saved for mounting on a chart. Be sure that the children know the names of the most common leaves.

If necessary, take a walk to see the beautiful leaves.

Let the children trace and color leaves being sure to name them.

Name the nuts brought to school. Notice the hulls and shells. Children may draw and color nuts.

Talk about some of the common things we get from trees such as:

fruit—apples, nuts
shade
sap—e.g. maple sap for making syrup and sugar
homes for animals
lumber
wood

Help the children make a list of the leaves which they find.

Seat Work and Activities

Let children collect, draw, and color leaves.

Let them take walks to find colored leaves.

Help the children make a leaf chart of the most common leaves. The leaves may be covered with cellophane paper to protect them when they dry. The children name the leaves and the teacher prints or writes the label under each.

Let the children draw pictures of the nuts brought to school. These may be colored.

Pre-Geography Correlated with Reading and Language

The results of the study of trees in fall may be summarized in sentences by the children as a language lesson and placed on the blackboard and a chart. They may then read the material and decorate the chart with pictures of leaves and nuts.

Lesson 7

HOW SOME BIRDS GET READY FOR WINTER

Materials Needed

Colored pictures of birds
Paper for making a scrapbook
Brown wrapping paper for chart

* * * *

About this time of year some of our birds are getting ready to take a long journey. They fly to the warm southland where there is no snow or ice. This is the way some of our little feathered friends get ready for the long cold winter.

The robin spends the winter in the southern states. We are always glad to hear his clear cheerup, cheerup and we miss him in the fall when he has gone away from us.

The robin eats sweet berries, red cherries, big fat grubs, roly-poly earthworms, and many insects. He finds much of his food in our gardens and on our lawns. When everything is covered with snow and ice he cannot find these foods. So the robin takes a long journey to the south where he may find plenty to eat while we are having our winter fun.

The blackbirds get their food from the fields and gardens. They eat worms, grasshoppers, beetles, and weed seeds. When we see a flock of blackbirds fly down into a field or garden, we know that they are hunting food. In the winter the blackbirds cannot find these foods to eat so they leave us and go to the sunny south where they can still find things to eat. In the fall we see great crowds of blackbirds pass over our heads. We hear their constant chattering before they go to sleep in the top branches of trees. The blackbirds seem to be telling us goodbye and in a short time they will be gone. The blackbirds are happy in the south. They can find the food they need. We will wait for their reutrn in the spring.

The bluebird lives mostly on insects. He cannot find insects to eat in the winter time. So he flies away in November to the southern states where he finds the food he needs during our winter months. We will miss the beautiful little fellow during the winter, but with what joy we will welcome him back in March.

Teacher Procedure

As an introduction to this lesson let the children tell the things that father and mother do to get ready for winter. What do boys and girls do to get ready for winter? Show pictures of the robin, blackbird, and bluebird. (It is very important that these birds will have been seen and watched before this lesson is taught.)

After reading the story let the children name other birds that go south for the winter.

Pre-Geography Correlated with Reading and Language

Record or summarize on the blackboard and finally on a chart sentences which the children give on this lesson. This may be done in a language or reading lesson. The following are samples of sentences which may be expected. (See primary language bulletin.)

How Some Birds Get Ready for Winter
Some birds fly to the sunny south.
They can find food there.
The robin goes south in the fall.
The blackbird goes south in the fall.
The bluebird goes south in the fall.
There are other birds that go south in the fall.

Lesson 8

HOW SOME OF OUR TAME ANIMALS PREPARE FOR WINTER

Materials Needed

Paper for charts
Paper for booklet

* * * *

What do you do to keep warm in the winter time when you are outdoors? You

stand in the sun. You run. You put on more and heavier clothes in the winter. Almost all animals put on more clothing for the winter, too. The hair on the horses and cows gets thicker and longer. The fur on the dogs and cats gets heavier. The chickens get new coats of feathers. A few feathers are lost day by day in late summer and gradually replaced by new ones. In very cold weather you have seen chickens fluff out their feathers. They are doing this to keep warm. Feathers are much warmer when fluffed out in this way.

Tame animals do not build homes or store food away for the winter. Can you tell about their winter homes? What foods do they eat in the winter? How do they get their food?

Teacher Procedure

Discuss with the children and bring out the following points:

that animals get heavier coats for winter

that tame animals are very dependent on man for shelter and food in the winter time

Seat Work and Activities

Let children make a booklet of tame animals and their homes.

Pre-Geography Correlated with Language and Reading

Let children tell about domestic animals. They may tell about their homes, food, and what they do. (See language bulletin.)

Lesson 9

HOW SOME WILD ANIMALS PREPARE FOR THE WINTER

Materials Needed

Pictures of squirrels, chipmunks, turtles, frogs, toads, woodchucks, and raccoons

An aquarium

Food for the turtle in the aquarium (beef, berries, lettuce, leaves, earthworms, and insects)

Material for scrapbooks

Paper for charts

* * * *

Squirrels often have two homes, a winter home and a summer home. In the summer, they live in nests made of twigs in the tree-tops. Sometimes they build upon empty crow or hawk nests. In the winter, their homes are often in hollow trees. Their nests are made quite cozy and are built out of moss, twigs, leaves, dried grass, and root fibers.

Squirrels are very fond of butternuts and walnuts. They prepare for winter by hiding nuts here and there in the forks of limbs, under rails and in the ground They also eat the seeds found in pine cones.

Squirrels carry nuts in their teeth, but small things they carry back in their mouths. Watch the squirrels and some day you will see one with cheeks sticking away out because his mouth is so full.

October seems to be a happy month for the squirrels. It is at this time that

we can hear their mad chatter almost any time and place. They seem to be very gay and happy as they gather their food for the winter.

Can you name any other animals that store away their food for winter use? (Children will probably suggest the mouse and the chipmunk.)

Some animals do not put food away for winter time. They go to sleep and sleep all winter long and so do not need food to eat.

Turtles bury themselves in the soft mud at the bottom of streams and ponds to keep from freezing. Their foods are insects, small fish, and earthworms. Some turtles that live upon the land eat tender grasses and plants.

Some other animals that bury themselves in the mud and stay during the winter are frogs, toads, and snakes.

There are animals that store food for winter in a way you never could guess. They store the food away for winter by eating it. They eat so much food in late summer that much of it is turned into fat. When they have stored up much food in their bodies they go to sleep for the winter. While these animals are sleeping the fat is used up for food.

The woodchucks are animals that store their winter food in the form of fat in their bodies. In the late summer the woodchucks or groundhogs, as they are sometimes called, eat almost all of the time. They get very fat. In October they go into their dens and sleep until spring. When they come out of their dens the fat is gone and they are very thin. Some folks still believe in the old saying that if woodchucks come out on Groundhog's Day and see their shadows, they go back and sleep for six weeks more. We then have six weeks more of winter. However, we know this is only a saying and is not true. Woodchucks sleep until their fat is gone and then wake up.

The coons or raccoons eat much in the summer and store up fat in their bodies for winter. They sleep most of the winter, often in hollow trees. When they awake in the spring they are very thin.

Can you name some other animals that hibernate in the winter?

Teacher Procedure

Observe the squirrel with the children. Make a list of the questions children ask about the squirrels. The chipmunks may be observed too.

A turtle may be secured and kept in an aquarium. There should be some solid object projecting above the water for the turtle to climb out upon. If plenty of dirt is provided the turtle may bury itself. Keep it in a cool protected place.

The main things to bring out in this lesson are:

some animals sleep in the winter.

some animals stay in the ground all winter.

some animals build winter homes.

Seat Work and Activities

Let the children observe the squirrel in his own environment.

Let the children observe the chipmunk.

Let the children help build an aquarium and secure a turtle.

Let the children make a scrapbook of animals. This may be divided into three parts:

Animals that sleep in the winter

Animals that stay in the ground

Animals that build winter homes

Have children collect the things out of which squirrels build their nests and label each.

Pre-Geography Correlated with Reading and Language

After the lesson has been carefully taught, let the children dictate a summary of the lesson. This summary may be placed on a large class chart and copies of it may be given to each child to paste in his scrapbook.

Lesson 10

HOW WE GET READY FOR WINTER

Materials Needed

Some scraps of cotton, silk, wool, and fur
Three or four apples for drying
Paper for making booklet
Crayons, paste, and scissors
A knife
Cans for soil
Paper for making chart

* * * *

We have been learning how animals, plants, and insects get ready for winter. Boys and girls get ready for winter, too. Fathers and mothers, our friends and neighbors all get ready for winter. What do we wear in the winter that we do not wear in summer? Children may name the following:

woolen underwear
woolen dresses
mittens
furs
leggings
heavy stockings
caps
galoshes
coats

People wear heavier clothing to keep warm and they prepare for winter by getting this clothing ready.

People have another way of keeping warm in winter besides wearing heavy clothing. They live in homes which they can heat. It takes fuel to make heat. Most people get their fuel ready in the fall of the year. Can you tell the kind of fuel your father and mother burn to keep your house warm? (Children may name: coal, wood, cobs, kerosene, gasoline.) Most people buy their coal in the fall and put it in sheds or basements for winter use. The farmer cuts his own wood and then saws it into sticks of the right length. You may have watched some farmers doing this. The farmer buys kerosene and gasoline in gallon cans or barrels. Cobs are often stored away for winter use.

Some mothers prepare for winter in another way. They know boys and girls get very hungry when the weather is cold. So they put away food for the winter. Can you tell how they do this? Children may say:

mother cans fruit
mother cans vegetables from our garden
she makes preserves and jelly
she makes catsup and pickles
she dries apples
she stores some fruits and vegetables in the cellar

Some mothers do not put food away for winter use. They do not have the fruits and vegetables to can or store away. These mothers buy everything they need to eat at the store. Big canning factories canned the fruits and vegetables for the stores.

Find out if mother can buy fresh vegetables and fruits at the store in the wintertime.

Teacher Procedure

Discuss with the children how we prepare for winter (clothing, fuel, and food).

Pupil Activities

Children may collect cloth good for winter clothing and cloth good for summer clothing. These may be mounted on cards and labeled.

Let children fill three cans with soil. The soil should be well moinstened. Let the children place a woolen cloth over one, a piece of fur over another, and a piece of cotton over another. The children should watch to see where they find dry soil first. What does this experiment show?

Let children name the different ways mother has for cooking and heating.

Children may prepare and dry two or three apples.

Pre-Geography Correlated with Language and Reading

Children may tell how people get ready for winter.

Children may tell how they dried apples.

The children's sentences may be placed on a large class chart and in a booklet for the reading table. (See primary language bulletin.)

Lesson 11

HOW FOOD IS PREPARED FOR WINTER

Materials Needed

Old seed catalogues
Paper for making booklets
Paper for making a large class chart

* * * *

"It is time to gather our vegetables from the garden," said Mary Jane's father one autumn day. "I think we will dig potatoes first of all."

When the potatoes were gathered, father stored some in the cellar for winter use. Some he took to town and sold.

Beets, turnips, carrots, onions, cabbage, pumpkins, and squashes were soon stored away in the cellar for use in the cold winter.

Mary Jane asked father if he would take her to the woods to gather nuts. Of course, father was willing. Mother went too. As they were gathering nuts they saw someone else hard at work. He was gathering nuts too. Do you know who it was? It was a squirrel. Father, mother, and Mary Jane gathered walnuts, hickory nuts, and butternuts. When they arrived home Mary Jane spread the nuts out to dry.

"It is so nice to have nuts to crack in the long winter evenings," said Mary Jane.

"It is more fun to eat them," laughed father.

"Nuts make candy and cake very good," said mother.

The next morning Mary Jane found mother counting and labeling the jars in the cellar. Mary Jane looked at the rows of jars filled with vegetables. "How many kinds have you canned, mother?" asked Mary Jane.

"Let me see," said mother. "Here on these shelves are tomatoes, green beans, beets, corn, and peas."

"What are in all those cans," asked Mary Jane, pointing to some shelves close by.

"Fruit," said mother. "There are some cherreis, strawberries, gooseberries, raspberries, blackberries, apples, plums, grapes, pears, and peaches in those jars."

"And over here on these shelves are pickles and jams," said mother.

"I guess we will have plenty to eat this winter; we have such a full cellar, but what do people do in the winter who don't have a cellar filled with good things to eat," asked Mary Jane.

"They must buy all their food from the store," said mother. "Some people do not have food to put away and if they bought it, they would have no place to put it."

"I like the fall of the year," said Mary Jane. "It is so much fun to help put things away for winter."

Teacher Procedure

Do you know what vegetables we get from gardens? How many can you name? Which ones are sometimes stored in cellars for winter use?

What vegetables are often sealed in glass jars and kept in that way?

What fruits can you name? What ones are often stored in barrels and bins to keep for winter? What fruits are sealed in glass jars to keep them?

What kinds of preserves have you eaten?

What kinds of pickles?

What kinds of dried fruits have you eaten? What kinds of dried vegetables?

Seat Work and Activities

Let children make a vegetable booklet. They may cut the pictures from old seed catalogues. Let them label the pictures.

Let children make a fruit booklet. They may cut the pictures from old seed catalogues. They may label the pictures.

Take the children to see a garden in the fall.

It may be possible to take them to see a cellar after fruits and vegetables have been stored in it.

Take the children to the woods and gather some nuts.

Pre-Geography Correlated with Language and Reading

Children may tell how vegetables and fruits are gathered and stored for winter use.

Children may tell about their trip to gather nuts.

(See language bulletin for ways of recording.)

Lesson 12

THE SUN IN WINTER

Materials Needed

Booklets and charts made after lesson 1 was taught in the fall.
Concave lense (The lense of a flashlight works well for this experiment.)
Paper for booklets
Paper for large class chart

* * * *

Teacher Procedure

The essential ideas in this lesson are:

that the sun gives heat
we get less heat from the sun's rays in the winter time
man has different activities in winter than in summer

Children should read booklets and charts which have records and summaries of observations made after lesson 1 was taught in the fall. These may be discussed as an introduction to this lesson.

Children may stand in the sunshine coming through the windows and see how much warmer it is than when standing in a shadow.

Teacher and pupils may use a concave lense and let the sun's rays pass through it. Let children feel the spot where the sun's rays strike. The spot will be very warm.

Ask children to observe cattle and chickens on a cold sunshiny day. Where do many of them stand? Why do you suppose they stand in the sun?

Let children look out of the window and name things they see which tell them that the sun's rays are not as warm this time of the year as they were last fall. Some of these may be:

men wearing overcoats
houses have storm windows
people walk quickly
people's breath can be seen in the air
no one is working in the fields
a team is blanketed
chickens have their feathers ruffled
smoke is coming from chimneys
grass is not green
no flowers in bloom

Children may observe melting ice and snow on some warm day in winter. The teacher may call attention to where the heat comes from to melt the ice and snow. On which side of a building snow and ice melts first.

Read the fable of the "Wind and the Sun" found in many readers.

Seat Work and Activities

Let the children make pictures to show that it is winter.

Have the children paste the records and summaries in a booklet for the reading tables.

Let the children make free-hand illustrations of the story "The Wind and the Sun."

Have children make pictures of what they do after supper in the winter.

Have children make pictures of what they do in the morning before starting to school.

Pre-Geography Correlated with Reading and Language

Place sentences dictated by the children on "The Sun in Winter" on the blackboard and later on a chart for reading.

(See primary language bulletin.)

Lesson 13

HOW OUR TAME ANIMALS KEEP WARM IN THE WINTER

Can you guess these riddles?

I live on a farm.
I get a heavy coat of hair in the fall to help me keep warm in the winter.
I stand behind barns and trees when the cold wind blows.
Sometimes the farmer puts me in a shed to shelter me from the cold.
He feeds me corn and hay. This helps to keep me warm.
I give him milk in return.
What am I?

* * * *

I live on a farm.
I get a heavy coat of hair in the fall to help me keep warm in the winter.
I stay in the barn on very cold days.
Sometimes the farmer puts a blanket on me when I must stand in the cold.
What am I?

* * * *

I get a heavy fur coat in the fall.
Sometimes I sleep in a kennel.
Sometimes I sleep in the barn or woodshed.
The farmer gives me bones, meat, and bread to eat.
The good food helps to keep me warm.
I go when my master calls.
What am I?

* * * *

I get a new coat of feathers in the fall.
I sleep in a house.
I ruff my feathers when it is cold.
The farmer's wife feeds me corn, oats, and wheat.
Who am I?

Teacher Procedure

Teacher and pupils may make up other riddles. These may be recorded and kept for further reference.

Seat Work and Activities

Children may illustrate the riddles.

Lesson 14

HOW WEATHER INFLUENCES US IN WHAT WE DO

Snow and Ice

Materials Needed

Snow
Microscope
Pan
Paper for making class charts
Paper for making bulletins
Calendar

* * * *

Teacher Procedure

This is a cold snowy day. How many different kinds of days can you name? Children may name:

warm rainy days
warm sunny days
clear cold days
cold snow days
clear warm days
mild days
frosty days

The teacher may write these on the blackboard as the children dictate them.

Let the children tell what they do in clear warm days.

Let them tell what they do on warm rainy days.

Today is a cold snowy day. What did you do today? Some answers which may be expected are:

shoveled snow
came to school in a sleigh
played in the snow

Can you tell in what kind of weather:

you go picnicking
you wear rubbers and carry an umbrella
you go to the park
you see heavy smoke coming from people's chimneys
you wear as few clothes as possible
you wear woolen clothes
you go nutting
the farmer chooses for planting corn
mother hangs quilts on the line
we stay indoors most of the time
we put food out for the birds
it takes more coal and wood

Let snowflakes fall on a dark cloth and observe the shape and size. If the teacher has a small microscope the children will enjoy looking through it at snowflakes.

Children may bring in a pan of snow and let stand until melted. How much

water does the snow make? What must be in snow besides water? (air) What does the snow do for us? How does it help us?

Children may place a pan of water outside the window and watch it freeze. What part freezes first? (top part) Deep streams and ponds never freeze to the bottom. Can you tell why this is a good thing? Many children who live on a farm will probably say that cattle can get water from rivers in the winter when a hole is chopped in the ice or that they can skate on the ice. The real reason, however, is that many plants and animals which live in the bottoms of lakes and rivers do not freeze since deep rivers and ponds do not freeze to the bottom but only on the top.

Fill a bottle with water and cork tight. Place outside on a very cold day. When the bottle breaks, ask the children if they can explain it. The real reason is that water expands as it freezes. Let the children tell of any experience they have had with freezing and breaking. Some of these may be: milk bottles, the radiator of father's car, and water in a glass. Perhaps children will be able now to explain why there are cracks in rocks and sidewalks. What would happen to a plant if the water in it would freeze?

Teacher should prepare a weather chart and work out with the children symbols for marking the chart. A large calendar may be used. An example of one is given below:

NOVEMBER

Sun.	Mon.	Tues.	Wed.	Thur.	Fri.	Sat.
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

blue —rainy
orange—warm and sunshiny
yellow—cold and sunshiny
white —snowy
brown—cloudy

Each morning the weather may be observed and the children may color the square to show the kind of day it is.

When the record has been kept for one month, questions such as the following may be asked:

How many sunshiny days were there in November?
How many cloudy days?
How many rainy days?
How many snowy days?
How many cold days?
How many warm days?
How many rainy and snowy days?
How many cloudy and rainy days?
What did we play this month?
What did we do after supper?
What kind of clothes did we wear?
What did father and mother do in November?

Seat Work and Pupil Activities

Let children make pictures for a weather booklet showing some things they could do on each kind of day listed above. These may be pasted in a booklet for the reading table.

Let each child dictate the story his picture tells. Teachers may take the story down as the child tells it. The child may be given a copy of it to paste beside his picture.

Let children cut and mount in the booklet pictures of snowflakes.

Let children observe water as it freezes.

Let children bring a pan of snow into the house and see how much water there is when it is melted.

Have children mark the weather calendar each day.

Have children find out through observation whether snow melts first, on the north or south of a building.

Children may find pictures of snow and ice and mount in their weather booklet.

Children may be encouraged to bring clippings from papers at home telling about snow and ice.

Pre-Geography Correlated with Reading and Language

Children may dictate what they do on a cold snowy day.

Children may tell what father and mother do on a cold snowy day.

Children may tell what they see others doing on cold snowy days.

This record may be put on a large chart and children may be given copies of it to paste in a weather booklet for the reading table.

Lesson 15

CLOTHING WE WEAR IN WINTER

Wool

Materials Needed

- Raw wool
- Wool carder or comb
- Paints or dye
- Paper for charts and booklets
- Pieces of woolen cloth
- Scraps of wool yarn
- A loom
- Old magazines and catalogues

* * * *

Teacher Procedure

Introduce this lesson by reviewing lesson 10. Let children read from their booklets and class chart the parts about clothing.

Find out from the children what kind of clothing they like to wear in winter, in summer, on a rainy day.

How many kinds of materials can the children name from which our clothing is made?

Have samples of silk, cotton, and wool for the children to see and examine.

Let the children examine carefully pieces of woolen cloth. Pull them apart and find the threads. Call their attention to the curly hairs. These curls help to make the wool warm. Have them run their fingers over other woolen garments to see if they can feel the curls.

Have the children name everything they can think of that is made from wool. The list may be written on the board.

Get from the children the time of year when we use clothing made from wool.

Take the children to a farm to see sheep. They are raised in most localities now so this trip is usually possible. The farmer will be glad to explain to the children how he cares for the sheep. In most places he will gladly cut some wool from the sheep to give to the children. They will then be able to see where the wool comes from.

The children should be given this raw wool to work on. They may clean, card, dye, and spin some of it. This will not only give them a greater appreciation of the work of our ancestors, but will increase their respect and appreciation of the skill of our workmen today who do this work.

The wool should be washed in hot soapy water and rinsed well. It should then be allowed to dry thoroughly. One little boy, on seeing wool come out a beautiful white after washing, exclaimed, "My ain't that wonderful." The carding may be done with a small hand carder or a coarse tooth comb. Natural dyes made from walnuts, onion skins, and cranberries may be used to make a dye bath. Children may twist the strands of wool together with their fingers. They should be able to make a small ball of yarn.

Children may bring scraps of yarn thread to school to weave into a small rug which may be used for the doll house. The teacher should set the loom up for the children. This may be very simple. It may be set up on a shoebox lid.

Seat Work and Activities

Let children wash, card, dye, and spin some wool.

Children may make a booklet on wool for the reading table. This booklet may contain samples of wool taken from the sheep before anything is done with it, samples after washing, samples after carding, samples after dyeing, and samples after spinning. The samples should all be carefully labeled.

Let children weave a rug from some wool yarn.

Children may cut from old magazines and catalogues pictures of things made of wool. These may be pasted in the booklet.

Children may collect samples of woolen cloth and put in booklet.

Children may paste in booklet the stories dictated in language class.

Pre-Geography Correlated with Language and Reading

Children may tell about the trip to the farm to see sheep.

Children may tell what they have found out about the care of sheep.

Children may tell how they made woolen yarn.

(This should be class work. The children dictate sentences and the teacher writes them on the board. See primary language bulletin for ways of recording.)

Lesson 16

OUR HOMES

Materials Needed

Paper for making booklet
Paper for making charts
Crayons, scissors and paste
Mounted pictures of homes
Kodak and film
Catalogues and magazines with pictures of homes, rooms, and furnishings

* * * *

Teacher Procedure

Where do you live? Teach children to give their addresses correctly. What do you live in? Can you tell why we build houses to live in? Get from the children such reasons as:

to shelter us when it storms
to shelter us from the hot rays of the sun
to keep us warm in cold weather
to have a place to store food and clothing for winter

Can you tell some things we do in our homes? Teachers may write them on the board as children name them.

In our homes we:

sleep	sew
wash ourselves	play
cook food	read
wash clothes	work

Teacher should show pictures of different homes of the types found in that locality. Have children point out the roofs, the outside walls, and the foundations of the houses in the pictures.

Teacher may take pictures of children's homes in the community. Children may bring snapshots of their homes to school. A scrapbook of our homes may be made.

Children may find or draw pictures of the different rooms in their own homes.

Children may find pictures of the following rooms:

kitchen	dining room	living room
bedroom	bathroom	closets
attic	pantry	library
solarium	front porch	back porch
den	basement or cellar	

Let children show and name what is found in each room. (Teacher should mount several large pictures of each room given above.)

Children may tell for what each room is used.

Discuss with the children things we do to make our homes attractive. How can boys and girls help?

Pre-Geography Correlated with Reading and Language

Children may dictate a summary of this lesson. See primary language bulletin for ways of recording.

Lesson 19

HOW SOME ANIMALS LIVE IN WINTER

Materials Needed

Materials for making scrapbooks
Materials for large class chart
Pictures of different animals which hunt their food in the winter.

* * * *

We noticed some tracks in the snow this morning.

(Teacher draw picture of rabbit tracks here)

We decided they were rabbit tracks.

Rabbits do not sleep in the winter time; neither do they store up food for winter use. They eat food as they find it. In the winter, the rabbits eat winter buds, bark of trees, and dead grass. They often visit our gardens and eat cabbage and carrots. It has also been found that rabbits are fond of sweet apples.

Some rabbits make their homes under brush or briars while others make their nests in burrows down under the gound.

Rabbits wear coats much the same color as the surroundings. They are brownish gray on the back, lighter along the sides and whitish below. The under part of their tails is round white fluff. As mother rabbit runs at night the baby rabbits are able to follow by watching this ball of white fluff. In the far North some rabbits wear coats of white.

When rabits hear or see danger they sit very still. We say they ''freeze.'' How does ''freezing'' save rabbits in time of danger?

Rabbits are able to keep warm in the winter because they wear thick fur coats. They even have hair on the bottom of their feet. This keeps their feet warm when they sit for long periods on the snow.

Muskrats build their homes in banks of rivers with passages to the water below. When the ponds and streams are frozen, they go down to the bottom and feed upon the roots and plant life there. They are known to store some food. What other anmials do you know that hunt food all winter long?

Teacher Procedure

Observe with the children rabbits when they run and when they ''freeze.'' Look closely at the tracks they make.

Show pictures of rabbits.

Discuss the above information with the children. Children should be encouraged to contribute the information they have.

Explain the words ''herbs,'' ''burrows,'' and ''freeze'' as used in this story.

Read to the children the story of ''Raggylug'' and the ''Tar Baby.''

Seat Work and Activities

Let children make a scrapbook of animals that hunt for their food in winter.

Pre-Geography Correlated with Language and Reading

Children dictate a summary for their scrapbooks. This may be placed on a large class chart first. (See language bulletin.)

Lesson 20

HOW SOME BIRDS LIVE IN WINTER

Materials Needed

Colored pictures of birds
Piece of board for making a feeding table
A few can lids for putting on the feeding table
Brown wrapping paper for making a chart in the language class

* * * *

Some birds go south in the fall. Others such as cardinals, blue jays, sparrows, nuthatches, some woodpeckers, and chickadees stay here all winter. These birds, like some animals, need help in getting food when there is snow on the ground.

The chickadee is a small, gray bird with a black cap and bib. He stays here all winter. He says chick-a-dee-dee-dee and seems very happy and good natured even in the coldest of weather. He usually lives in the woods in summer and eats insects from the bark of trees, but stays about buildings in search of food in the winter. When there is deep snow on the ground the chickadee cannot get enough to eat. He then suffers unless food is placed outdoors so he can get it. Some children make feeding tables for the winter birds and keep them covered with crumbs and seeds during the cold weather. Others put food on the window sills for them.

Teacher Procedure

As an introduction to this lesson read and discuss briefly lesson number 7 on the migration of birds.

Discuss ''How Birds Live in Winter'' with the children. Try to draw from them the fact that we should help the birds to find food in winter.

Show a picture of a chickadee and talk about its color.

Show pictures of other winter birds.

Talk about how to make a feeding table for winter birds and encourage the children to want to make one. A piece of board may be used for the table. Can lids may be nailed down to the board and filled with crumbs. Other can lids may be fastened by driving nails around them. They can be filled with water. The table may then be nailed to the top of a post or be placed on the low limb of a tree where the children will be able to place the food, and watch the birds as they come to eat.

After the children have made a feeding table, help them record the number

and kinds of birds which eat at their table.

Talk about why birds do not nest in winter.

Seat Work and Activities

Let the children make a simple bird feeding table and place it in the school yard where it may be seen from the window.

Pre-Geography Correlated with Reading and Language

Record or summarize on the blackboard and finally on a chart sentences which the children give on this lesson. This may be done as a language lesson.

The following are samples of sentences which may be expected. See primary language bulletin.

How Birds Live in Winter

Some birds go south in the fall. (Children may give the names of some of them.)

Cardinals, blue jays, and chickadees stay here all winter.
The chikadee is gray with a black cap and bib.
He lives in the woods in summer.
He stays around buildings in winter.
Snow sometimes covers up all the food.
We made a bird feeding table.
Chickadees, cardinals, and woodpeckers ate at our table.
It was fun to watch the birds.

Lesson 21

TREES IN WINTER

Materials Needed

A few twigs from trees for observing buds
A few sprigs of evergreen trees
Pictures of leaves

* * * *

Have you noticed that nearly all of the trees have lost their leaves now? They will be without leaves until spring time. The tiny buds are asleep on the branches of the trees waiting for spring to awaken them. They are packed full of food and will open quickly when spring comes.

Have any of you evergreen trees at home? Where are there evergreen trees in the neighborhood? There are different kinds of evergreen trees. Some of them have long leaves and some have short leaves. Some have very slender leaves called needles. Pines have longer needles than any of the other evergreens. The leaves or needles do not drop off at the same time so the tree always has some green leaves. This is why it is called an evergreen tree. Can you tell for what evergreen trees are sometimes used in the winter? Some other Christmas greens are the holly and mistletoe. Holly does not grow here but in the south or far west. If you get some holly or mistletoe Christmas

perhaps you would like to bring some of it to the school so that we may all look at it.

Teacher Procedure

Emphasize what the trees do in winter.

Let the children observe the trees in the yard and tell how they look.

Secure buds from the trees and examine them. Remove the scales carefully with a knife to find out what is inside. Let the children decide what may be expected in the spring.

Bring to school or have the children bring a small branch from an evergreen tree. If possible get one with needles.

Get pieces of holly and mistletoe for observation if possible.

Seat Work and Activities

Let children collect all the green leaves possible in the winter. What house plants have they at home?

Let children make drawings of holly, mistletoe, pine needles, and so on.

Children may also draw and color Christmas trees.

Pre-Geography Correlated with Reading and Language

The results of the study of trees in winter may be summarized in sentences by the children as a language lesson. It may be first placed on the blackboard as the children dictate it and later placed on a chart. The material may then be read.

Lesson 22

THE SUN IN THE SPRING

Materials Needed

Booklet and charts made after lessons 1 and 12 were taught
Two plants (geraniums are good for this)
A way to mark where the shadow falls at noon at various times throughout the year
A white sheet for making shadow pictures
Some seeds to plant (corn, oat, wheat, or grass seed)
A box filled with earth and placed so that the light comes from one side (A sand box or table may be used for this.)

* * * *

Teacher Procedure

The essential ideas to be developed in this lesson are:

the sun is the source of light and heat
light is necessary to growth of plants
the days are getting longer and warmer
the sun is not as far south as it was in the winter
light can go through some things and not others

Call attention in early spring to the melting ice and snow. What makes it melt? Why must the ice and snow melt before plants can grow? (Plants need water.) The sun rays warm the earth and air. Plants need warmth to grow.

Children may read and discuss with the teacher the records and summaries in booklets made after lessons 1 and 12.

If possible, have two plants very much alike, keep one in the sunshine and the other in the dark. Care for both plants in the same way. Both should be carefully watered. Compare the two carefully after a couple of weeks. Lead children to see that light is very necessary to the life of plants.

Children should observe their own shadows and shadows of buildings, trees, and fences. From their observations they should be able to answer the following questions:

When the shadows fall to the northeast, where is the sun?
When the shadows fall northwest, where is the sun?
When the shadows fall to the east, where is the sun?
When the shadows fall to the west, where is the sun?

Make use of shadows cast at noon in September and December. Observation should now be made in the spring. Through these observations the children should be able to answer such questions as:

Where is the sun in the sky at noon in the fall?
Where is the sun in the sky at noon in the winter?
Where is the sun in the sky at noon in the spring?
Show where the sun is in the sky when it is warm.
Show where the sun is in the sky when it is cold.

When do you have more time to play after supper, in the winter or spring; fall or winter; winter or summer?

When do you have more time to get ready for school, in the spring or winter; winter or fall?

Children may make very interesting shadow pictures by hanging a white sheet in front of a window on a sunshiny day. The children walking between the sheet and the window will make shadows which can be plainly seen by the children on the other side. Children have much fun doing this. Let children explain why they can make shadows in this way. (Light shines through the window and sheet but cannot shine through the body.) Let children name things that the light can shine through. Let them name things it can't shine through. Why do people put windows in houses, barnes, and chicken houses?

Let children plant some wheat, corn, or oats in a sand box. As they grow watch how they bend toward the light. Why do they do this?

Let children examine some of the wheat, corn, or oats when they are sprouting in the ground. Lead them to see that the sprouts always point upwards. Why do they do this?

Children may place a geranium plant in a dark corner and after about two weeks bring it out in the sunlight. What happened to it. In what ways does it look different than when it was in the sunshine? What must plants have in order to grow? (light) From where does this light come? (the sun)

Teacher and children may compare the direction and length of shadows at noon in September, in December, and in March.

Let children observe their own and other's shadows.

Let children make shadow pictures.

Pre-Geography Correlated with Language and Reading

Children may tell about the experiment with the two plants.

Children may dictate what they found out through observing the shadows.

Children may dictate what they found out about the grain planted in the sand box.

See language bulletin for primary grades.

Lesson 23

HOW THE WEATHER INFLUENCES US

The Wind

Materials Needed

Paper and paste for making booklet
Crayons or paints
Large paper for chart

* * * *

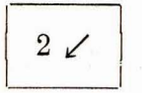
Teacher Procedure

A windy day in March is a good time to teach this lesson. Listen to the sound the wind makes. What does it seem to say?

Look out of the windows. Let children tell everything they see the wind doing.

What are some things you can do on a windy day?
What are some things the wind does that you do not like?
Can you think of any way the wind helps us?
Does the wind ever do any harm?
Have children step outside and see if they can feel the wind.

Children may keep a record of the directions from which the wind blows through the month of March. A very simple way to do this is as follows: On a large calendar an arrow may be used to show the direction the wind is blowing. This record tells that the wind is blowing from northeast to the southwest.



Seat Work and Pupil Activities

Let children observe the work of the wind. Some things they may note are:

it dries our clothes
it shakes dust out of rugs
it blows dirt away
it flies kites
it piles up dust and dirt
it scatters leaves
it blows the windmills
it bends trees
it blows smoke away
it moves clouds

Children may make pictures to show the things the wind does

Children may tell the stories their pictures tell.

Children may paste stories and pictures into a booklet for the reading tables.

Let children watch the way the smoke blows in order to find out the direction the wind is blowing. They may then mark the direction the wind is blowing on the weather chart.

Pre-Geography Correlated with Language and Reading

Children may dictate what they have found that the wind does.

(See language bulletin for way of recording.)

Lesson 24

TREES IN THE SPRING

Materials Needed

Some flower buds from the maple trees

Pussy willow twigs

* * * *

Spring is here and we shall soon see a difference in the trees. They have had food packed away in the buds ready and waiting for spring and warmer weather. These buds formed last year are now opening and will soon grow into leaves. We will watch the trees as their buds open. What color will these new leaves be?

Later we will look at the blossoms on the fruit trees. We will notice their colors and fragrance.

We will also look at some pussy willows. What is the color of the "pussies?" Do you see the brown bud scale at the lower part of each "pussy?" See if you can find some small pointed leaf buds on the twigs. We are going to see what change takes place in the "pussies." We will keep these pussy-willow twigs for several weeks to see what grows from the pointed leaf buds.

Teacher Procedure

Review the lessons on "Trees in Fall" and "Trees in Winter."

Take the children for a walk, perhaps in the school yard, to observe the buds on the trees. Note the flower buds on the maple trees which open early. Notice the pretty fringy flowers and the little green winged fruit which later develops from the red flowers.

Get a few pussy willow twigs as early as possible and let the children watch for the changes in the "pussies." Keep the twigs in water so that the children may observe what grows from the pointed leaf buds. Let them note what is found on the part of the stem that is in the water.

Branches from other trees may be brought into the schoolroom and observed in the same way.

Seat Work and Activities

Let children draw pictures of pussy willows.

Let them draw and color catkins.

Children may set out some pussy willows. The twigs should be kept in water

until they develop roots. Make a hole about five inches deep for the twig. Press the soil firmly around it. Water it for a few weeks. If the weather is dry, it may need to be watered all summer.

Lesson 25

BIRDS IN SPRING AND SUMMER

Materials Needed

Pictures of spring and summer birds

Stiff cardboard for making a bird chart

* * * *

Last winter you made a bird feeding table and watched the brave birds which stay all winter feeding at it. What birds did you see? Now that spring is here you will see many new ones. Robins, bluebirds, meadow larks, flickers, and native sparrows come from the south early in March. It will be fun to see who will see the new birds first. Watch for them on the way to and from school and in the yard at home. We will also watch for the spring birds here at school.

We have a bird chart with the pictures and names of some of the early spring birds on it. (Show chart to the children.) When you see one of these birds we will put your name and the date, when you saw it, under the picture.

Here are some things for which you will want to watch this spring:

1. Do you see the mother or father robin first?
2. How does the first robin you see, look?
3. What do you see it eating?
4. What is a robin doing when it stands quietly with its head cocked on one side?
5. Where do robins build their nests?
6 How many eggs does the robin lay and what color are they?
7. What color are young robins?
8. How do young robins get food?
9. What is the robin's song?
10. How does a flicker look different from the red-headed woodpecker?
11. What does the flicker eat?
12. Where does the flicker build its nest?
13. What helps the woodpecker or flicker to climb trees or posts?
14. What do bluebirds eat?
15. Where do bluebirds build their nests?
16. How early do we first see bluebirds?

Teacher Procedure

Review with the children the lessons on fall and winter birds calling attention particularly to the effect of the seasons upon the birds.

Discuss with the children this lesson on spring and summer birds and emphasize especially their return in the spring.

Show pictures of early spring birds.

Bring out the fact that birds make their nests in the spring.

Have the bird chart prepared and ready for use.

Pictures of birds (Put on as children observe them.)
Names of birds
Spaces for writing in names of children
and dates when the birds were first seen

Seat Work and Activities

Help each child to record on the chart each bird he sees and when he sees it.

Pre-Geography Correlated with Reading and Language

A chart may be made in the language class by having the children dictate sentences about the spring and summer birds in much the same manner as was done following the study of the winter birds.

Lesson 26

HOW SEEDS ARE USED IN THE SPRING

Materials Needed

Egg shells for gardens
Boxes for gardens
Soil
Seeds

* * * *

Do you remember how you gathered flower and garden seeds last fall just before winter came? Spring is here and it is time for us to plant some of the seeds you saved. We will first make some egg shell gardens. Do you know what you will need for making an egg shell garden? (Children will no doubt reply "Some dirt.") Yes, and we'll need some egg shells to hold the dirt. (Show such a shell as will be needed.) Ask your mother to save for you the shells of the eggs she uses. Ask her to break off about one-fourth of the small end of the shell and leave the rest.

We will also need the dirt or soil that you have mentioned. Each of you may get a small paper sack of soil. Perhaps you can get it from your garden. You may also each decide what you wish to plant.

After you have made your egg shell gardens we will use any soil that is left for making a larger garden in a box which we can put in one of the windows.

Teacher Procedure

This lesson should be a continuation of the lesson on seeds studied in the fall. The children should have a chance to see what plants come from the seeds and how the warmer weather affects the seeds and plants.

Egg shell and box gardens for the windows furnish excellent spring activities. The best seeds to plant in egg shells are radishes, lettuce, beans, pansies, balsams and nasturtiums. Fill the egg shells about three-fourths full of soil and put two seeds in each. Cover the seeds with a little soil. The egg shells may then be put in sand in a shallow box. The sand should be kept moist. Let the children water and turn the plants toward the sun. Each child may identify his egg shell by writing his name on it.

The plants may later be taken home and the egg shells broken off without disturbing the plants and set out in the garden. Some of the plants may be transplanted at school.

You may be able to go on a little trip with the children to watch young plants starting to grow.

Seat Work and Pupil Activities

Let the children make egg shell and box gardens using the seeds saved last fall for planting.

Let the children plant seeds in water in a container and watch them sprout.

Pre-Geography Correlated with Reading and Literature

Let the children dictate the story of how they made their gardens. This may be transferred from the blackboard to a chart or booklet.

Lesson 27

HOW PLANTS WAKE UP IN THE SPRING

Materials Needed

Cans for transplanting some flowers
Seed catalogues
Paper for large charts

* * * *

Teacher Procedure

Keep a spring flower chart. Record on this the spring flowers as they are observed. Take the children to see the flowers. Point out to them that we should not pick wild flowers unless we know there are plenty of others just like them.

Transplant a dandelion and watch the life cycle: bud, blossom, seeds.

Transplant some violets and watch the life cycle.

Note places where the wild flowers grow. Encourage children to plant flower seeds at home.

Some wild flowers which may be found in the spring are:

jack-in-the-pulpit
dogtooth violet
hepatica
bloodroot
Dutchman's breeches
wild phlox
anemone
dandelions

Some garden flowers which may be seen in the spring are:

columbine	iris
bleeding heart	lily-of-the-valley
crocus	peony
daffodils	tulip
hyacinth	snapdragons

Seat Work and Activities

Take trips at different times and to different places to see the spring flowers.

Observe the life cycle of two or three flowers. The observations made may be carefully recorded.

Scrapbooks of spring flowers may be made. The pictures should be labeled.

Charts containing spring flowers may be made.

Pre-Geography Correlated with Reading and Language

Children may dictate sentences for the teacher to record about:

trips taken
observations made
descriptions of some flowers

(See primary language bulletin for recording.)

Lesson 28

HOW THE WEATHER INFLUENCES US

Rain and Clouds

Materials Needed

Paper for booklets
Paper for class chart
Pan
Water

Teacher Procedure

This lesson should be taught on a rainy day.

Let the children watch the falling rain from the windows. Watch where the drops strike. How do they make the ground and walk look? Where does the rain go when it strikes the ground?

Where does the rain come from? How does the sky look on a rainy day? Where do the clouds come from? How many different colored clouds have you seen? What color are the ones that send us rain? From what direction do they usually come? What shaped clouds have you seen? Do clouds move? Have you ever seen above the clouds? What do you sometimes see in the sky after a rain?

Think of all the reasons why we like to have rain come in the spring. You may have heard this quotation, "April showers bring May flowers." How is this true? As children give reasons teachers should write them on the blackboard. Later they may be transferred to the large class chart. Children may be given copies to paste in booklet for the reading table. Some of these reasons may be:

we like to carry umbrellas
we like to wear rubbers

the rain brings the flowers
rain soaks the ground and waters the seeds and roots in the ground
rain makes puddles and streams
rain makes water in our wells and cisterns
when it rains it washes the dust from the plants

Can you name some things that the rain does that you do not like? Some of these may be:

we can't go outside to play
sometimes it rains so long that the rivers overflow
sometimes it washes things away
it makes mud and we get our shoes covered with it

Seat Work and Pupil Activities

Let children watch the raindrops fall on a rainy day.

Have children observe the clouds.

Children may watch for puddles and streams after a rainy day.

Children may observe the steam from roofs when the sun comes out warm after a rain.

Have children place a pan of water in the sun and watch to see what happens.

Let children make pictures of cloudy days to put in a weather booklet for the reading table.

Let children make pictures of a rainy day to put in a weather booklet.

Children may bring clippings from newspapers telling about rainstorms.

Children may keep a weather chart through April (See the lesson on wind.)

Pre-Geography Correlated with Language and Reading

Children may make a little summary about rain. As they dictate the sentences the teacher should write them on the board. After the guide questions have been fully answered through observations, explanations, and reading, the children will do this readily. The observations, explanations, reading, and discussion must come first.

(See language bulletin for ways to record the work.)

Lesson 29

OUR WATER SUPPLY

Materials Needed

Paper for large class chart
Pictures
Paper for booklet

* * * *

The children in Crocker School discussed the many ways that water is used. Miss Allen, the teacher, wrote down the ways of using water as the children suggested them.

"My father told me that the big engine that pulls the train uses water as well as coal," said Mary.

"I saw some reservoirs where water is stored for the trains to use when we were on our trip," added Melvin.

"Our automobile uses water," said Alice.

"My mother and I went to visit a large brick and tile factory and there was ever so much water used there," said Robert.

"Oh, but you have forgotten some of the most common ways you and I use water everyday," said Miss Allen. "See if you can think of other ways and we will add them to our list tomorrow."

Teacher Procedure

Let the children complete the story above by giving ways in which we use water. Write these on the board as the children give them.

The children may read the references given at the close of this lesson and see if they can find other ways in which water is used. Some of the uses given may be:

We use water to:

run engines	put out fires
drink	keep clean
cook our foods	sprinkle streets
carry boats and ships	make ice
water animals	water plants

Let each child tell from where his water supply comes.

Bring out the fact that some of our rain sinks into the ground and some runs into streams, ponds, and lakes.

Discuss with the children various ways of getting water. Show as many pictures as possible. Some of these pictures may be:

water pipes	water tank
hydrant	windmill
springs	lakes
rivers	pumps

Discuss with the children why city people must pay for the water they use. Why people in the country do not pay for the water they use.

Talk over with the children why much care is used to keep the water we drink pure.

Seat Work Activities

Make booklets out of brown wrapping paper.

Draw pictures to show ways we use water. Paste the pictures you have drawn into the booklet. Label each picture you paste in the booklet.

Draw a picture to show how you get the water you use in your own home. Paste this in your booklet.

Pre-Geography Correlated with Reading and Language

Record or summarize on the blackboard and finally on a chart sentences which the children give summarizing this lesson. This summary may be given to the children to paste in the booklets they have made. The booklets may be used on the reading table. (See primary language bulletin.)

Lesson 30

WHAT THE SOIL DOES FOR US

Materials Needed

Cans for the soil	Some soft rocks
Some clay, sand, and loam	Paper for chart
Seeds to plant	

* * * *

Teacher Procedure

Let the children collect samples of sand, clay, and rich soil from the woods. If real blue clay can be secured, let the children work with the clay making marbles, figures, and the like. Then let them try to do the same with the sand and the loam. Children will see that the clay sticks together the best of the three.

Children may make some rock flour by pounding and rubbing some soft rocks together. Plant some seeds in the rock flour and some seeds in the soil from the woods. Water and care for each one in the same way. Notice carefully what finally happens to the plants. Permit children to offer any explanation they may have as to why the plants growing in the rock flour soon die.

Examine the rock flour and the soil from the woods. Let children see if they can find things in the soil from the woods, that they can not find in the rock flour. The children will, no doubt, be able to find pieces of leaves, bodies of insects, and so on in the soil from the woods. It is these things which, when decayed, make food for the plants. Some of the children will now no doubt be able to tell why the plants which were growing in rock flour, died.

Let children tell why the soil from the woods is good for growing plants.

Develop from this experiment the fact that the soil feeds the plants.

Children may dictate a list of the things we get from plant life.

If the teacher wishes to carry this lesson further, she can take the children on some trips to observe how rocks are broken up. Pictures will also help to show the children how this is done.

Observe the breaking up of the rocks by: wind, water, ice, and plants.

Pre-Geography Correlated with Reading and Language

The results of the study of soils may be summarized in sentences by the children as a language lesson and placed on the blackboard and chart. (See primary language bulletin for ways of recording.)

* * * *

REFERENCES

School readers and primary reading table materials contain stories which are helpful in interesting children in their environment. The following page references to the primary books which were available at the time these units were prepared are given to show busy teachers how to use school readers and library books in building early concepts in geography.

The list is by no means complete and is to be considered only as a starting

point. Space is left for the teachers to use in listing additional references as they develop these units and prepare new references.

Bryce, Hardy, *Newson Readers, Book II,* Newson and Co., Chicago, pp. 16-22, 24
Butts, Mary Frances, "Dewdrops," *Poetry Book 3* by Huber-Bruner-Curry, Rand McNally Co., Chicago, Ill.
Coleman, Uhl, and Hosic, *The Pathway to Reading, Book II,* Silver, Burdett & Co., Chicago, pp 117-120, 127
Craig and Baldwin, *Out of Doors,* Ginn and Co., Chicago, 1933, pp 10-14, 113-138
Dressel, Veveska and Robbins, *Laidlaw Readers, Book I,* Laidlaw Pub. Co., Chicago
Elson Gray, *Basic Readers, Book II,* Scott, Foresman & Co., Chicago, p 40
Gates, Huber, *The Work Play Books, Book I,* Macmillan Co., Chicago, pp 141-145
Hardy, Hecox, *Good Companions, Book II,* Newson & Co., Chicago, pp 176-183
Horn and Shields, *Learn to Study Readers, Book I,* Ginn and Co., Chicago, pp 127-131
Horn, Cutright, Horn, *First Lessons in Learning to Study,* Ginn & Co., Chicago, pp 74-78
Lewis and Rowland, *Growing Up, Book I,* J. C. Winston Co., Chicago, p 117
Pennell and Cusack, *Children's Own Readers, Book I,* Ginn & Co., Chicago, pp 74-80
Pennell and Cusack, *Children's Own Readers, Book II,* Ginn & Co., Chicago, p 123
Ringer and Downie, *Citizenship Readers, Book I,* Lippincott Co., Chicago, pp 37-38
Ringer and Downie, *Citizenship Readers, Book II,* Lippincott Co., Chicago, pp 134-137
Suzzalo, Freeland, McLaughlin, and Skinner, *Fact and Story Readers, Book I,* American Book Co., Chicago, pp 28-43
Suzzalo, Freeland, McLaughlin, and Skinner, *Fact and Story Readers, Book II,* American Book Co., Chicago, p 138
White and Hanthorn, *Do and Learn Readers, Book I,* American Book Co., Chicago, pp 38-54
White and Hanthorn, *Do and Learn Readers, Book II,* American Book Co., Chicago, pp 109-119

ADDITIONAL REFERENCES

THIRD GRADE PRE-GEOGRAPHY

The organization of the third grade pre-geography units includes: lesson approach and things to do. A test or summary is found at the end of each unit.

Before beginning the teaching of any of these units it is important that the teacher assemble all supplementary reference materials available and train pupils to use them effectively. Direct references are not listed in these materials because the same texts and library books are not used in all schools. Do not overlook the many splendid stories dealing with these subjects which are found in your school readers.

HOW WE GET SOME OF OUR FOODS

Milk

Lesson approach

Some things to talk about:
- Foods we have
- Where we get our food—grocery, meat market, truck gardens, and farms
- What foods we buy at the grocery store
- What foods the farmer produces for us
- The most necessary food for babies which is produced on the farm
- Some things we would like to know about this important food

The pictures and readings given in your book or other references will help to answer your questions as well as the ones which follow about milk.
- How long has milk been used as a food?
- What kinds of cows are usually kept on a farm for their milk?
- Is the milk from any other animals ever used as food for people?
- How are cows cared for?
- How are cows milked?
- How is milk cared for:
  - on a farm?
  - on a milk train?
  - in a bottling plant?
  - on a delivery wagon?
- How is cream separated from the milk?
- How is butter made?
- Where do we get cheese?
- Why are large dairy farms found near large cities?

Free Material
- Borden's Farm Products Company, Illinois, 326 West Madison St., Chicago, Illinois. (Ask for the pamphlet "The Story of Selected Milk.")
- National Dairy Council, 307 South Michigan Avenue, Chicago, Illinois.
- Heart Delight Farm, Chazy, New York (Ask for calendar pictures of farm life.)

Look on flour sacks at home or in a store to see where the flour was made.
Find out if your teacher or parents will take you to see a grain elevator.
Grind some grains of wheat between stones.
Write a paragraph telling how wheat was made into flour in olden times.
The following words are in the references you have read:

flails	miller	scours
chaff	millstones	elevators
grist mill	bran	
water wheel	kernels	

Write a sentence using each of these words. Show by the sentences that you know the meaning of each word and how to use it.
See if you can think of a good reason why wheat is a good food to ship to countries where poor people need food.
If possible visit a bakery to see how bread is made.
Arrange the following sentences so that they will tell the story of a grain of wheat from the time it is planted until it is made into a loaf of bread.

At the mill the wheat is cleaned thoroughly.
The binder cuts the grain and ties it into bundles.
The ground is plowed.
A baker buys the flour.
The dough stands for some hours to get light.
The flour is sifted.
The loaves of bread are baked in an oven.
The grain is threshed.
The ground is disced to cut the furrows into small pieces.
The flour is mixed with other ingredients—fat, yeast, sugar, salt, and water.
The loaves stand in a warm place until light.
The course flour is sifted through a bolting cloth.
The wheat is hauled to the mill or elevator.
Drills plant the grain in rows.
The dough is made into loaves.
The fine white flour is packed into sacks and barrels.
The ground is harrowed to smooth it.
The bundles or sheaves are set up in the field in bunches or shocks to dry for a few days.
The wheat is crushed between great steel rollers.
The flour is ground and sifted many times before it is ready to be made into bread.

Check Sheet for Test

The ground is plowed.
The ground is disced to cut the furrows into small pieces.
The ground is harrowed to smooth the ground.
Drills plant the grain in rows.
The binder cuts the grain and ties it into bundles.
The bundles or sheaves are set up in the field in bunches or shocks to dry for a few days.
The grain is threshed.
The wheat is hauled to the mill or elevator.

At the mill the wheat is cleaned thoroughly.
The wheat is crushed between great steel rollers.
The course wheat flour is sifted through a bolting cloth.
The flour is ground and sifted many times before it is ready to be made into bread.
The fine white flour is packed into sacks and barrels, and sent to storekeepers.
A baker buys the flour.
The flour is sifted.
The flour is mixed with other ingredients—fat, yeast, sugar, salt, and water to make a dough.
The dough stands for some hours to get light or rise.
The dough is made into loaves.
The loaves stand in a warm place until light.
The loaves of bread are baked in an oven.

Fruits

Lesson approach

Talk about:
The kinds of fruits you have on your own farm or farms near you
The kinds of fruits you have seen growing
The kinds of fruits you have eaten
Read to find out:
How we get fruits that are not grown in our own community
Why we do not raise citrous fruits in Iowa

Some things to do

See if you can tell about the following.
Fruits that can be grown in our climate where we have cold winters and hot summers
What the citrous fruits are
Kinds of fruits you would find if you were to visit southern California
Why oranges are sometimes called "Bottled Sunshine"
What we get from the vineyards of California
How pineapples are grown
How a banana plantation is started
How bananas are prepared for market
How crops are raised in parts of California where it is very dry in summer
What raisins and prunes are
Our most important fruit crop
How fruit is kept for use in winter
What things we send to the people who send us bananas
What fruits we get from other countries
Why it is possible for us to get the fresh fruits from other countries
Collect pictures showing how fruits are raised.
Find out how fruit is canned so that it will keep.

Plants seeds at the right time
Fertilizes poor soil before planting
Kills the toads and birds
Makes bird houses and bird baths to bring the birds to his garden
Harvests vegetables when ripe
Takes a long vacation while the vegetables are growing
Takes the vegetables to market while fresh

Give two reasons why we should eat vegetables.

Meat

Lesson approach

Some things to talk about
Kinds of meat eaten, such as pork, mutton, ham, beef, fish, and bacon
Kinds of meat produced on our own or nearby farms

Read to see if you can paint a picture with words of (1) a cattle ranch (2) a packing house (3) a poultry farm

Some things to do

Find out what kinds of food hogs are fed in your community.
Find out what kinds of food chickens are fed in your community.
See how many kinds of poultry you can name.
Tell about ways in which we keep fish until we are ready to eat them.
The following words are found in the references you have read:

brooder	beef	ranchman	tallow	slaughterd
incubator	ranch	mutton	cold storage	ocean
canneries	cowboy	bacon	stock	lard
sardines	stockyards	ham	corn fed	poultry
brand	pork	lasso	lariat	

Write a sentence using each of these words. Show by the sentences that you know the meaning of each word and how to use it.
Name the kinds of fish you have seen.
Name the kinds of fish about which you have read. Compare the two lists.
Find out how eggs are tested. Perhaps your teacher will help you to test some eggs.

(1) A ranch	(2) A packing house	(3) A poultry farm	(4) A fishery

Below are given forty words. Find the ones that would be used in talking about life and work on the ranch and write them in column (1). Put the words that suggest a packing house to you in column (2), the ones that suggest a poultry farm in column (3) and the ones that suggest a fishery in column (4).

nets	carcass	leather leggings	slaughtered
cowboys	incubator	salt-water	sausage
great herds	shell and gravel	grazed	coops
cuts	cured hams	pullets	wide brimmed hats
feathers	fowls	bacon	brands
good riders	dried beef	trawls	huckster
sea	round-ups	fresh water	sinker
soap	plains	lard	cold storage
bait	ham	boat	feathers
lasso	tested eggs	brooder house	row

You may add other words if you think of them.

Sugar

Lesson approach

Some things to talk about:
Ways sugar is used
From what sugar is made

Read to see how a field of corn differs from a plantation of sugar cane.

Some things to do

Collect samples of different kinds of sugar and label.
Perhaps your teacher or parents will take you to see molasses made.
To see sugar crystallize dissolve some sugar in water. Boil until a thick syrup. Let stand until crystals form over the top.
Here are five sentences for you to read. Each tells something that must be done before we can have sugar to eat. Arrange the sentences to show the order in which these things are done.
The juice is squeezed from cane sugar stalks.
Clear syrup is crystallized.
The juice is run through pipes and vats, boilers and whirlers, purifiers, and dryers, until it is finally raw brown sugar.
The cane is cut off as near the earth as possible.
A clear syrup is made by dissolving the raw sugar in hot water and passing it through bone black.

Here are some words you found in your reading:

plantation	refinery	bone black
syrup	sorghum	granulated
raw sugar	filtered	powdered sugar
molasses	irrigated	sugaring off
sap	crystals	crystallize
tapping		

Write sentences using each of these words. Show by the sentences that you know the meaning of each word and how to use it.

See if you can tell:
- How sugar cane is planted
- How sugar cane is cut
- How the juice is taken from the sugar cane stalks
- What is done with the stalks after the juice is taken from them
- What kind of a climate it takes for sugar cane.
- The difference between sugar beets and garden beets
- What becomes of the waste part of beets after the juice has been taken out
- How is the sugar taken from the beet
- Why sugar beets can be raised where sugar cane cannot
- What time of year maple trees are tapped

Alice ate these foods for supper:

dish of corn	a glass of milk
one potato	peaches

Did she eat any sugar?

Rice

Lesson approach

Most countries have some one food that is eaten nearly every meal. In our country it is bread. In Central America it is bananas. In China it is rice and also in Japan. We do not grow any rice in Iowa.

Read references to see if you can find out:
- Why we do not grow rice in Iowa
- How the raising of rice differs from the raising of wheat

Some things to do

See if you can tell about the following:
- In what kind of a climate rice will grow
- What kind of soil it takes
- How the raising of wheat differs from the raising of rice
- What swamp rice is
- What upland rice is
- How fields of rice are irrigated
- How the raising of rice in China and Japan differs from the way it is raised in our country
- If China and Japan send us any rice
- Which is better for one to eat, polished rice or unpolished rice
- What other parts of the rice plants are used besides the kernel

Collect samples of rice and rice products.

Ask your mother to help you find the different ways that rice is prepared for food.

Find pictures of rice fields in our country and in China and Japan to show to the class.

Find out how the Chinese and Japanese cook and eat rice.

See if you can find out where your grocer gets the rice that he has in his store.

Write sentences using these words:

paddy	polished	irrigated
husks	unpolished	swampy

Arrange the following sentences so that they will tell what happens to a grain of rice from the time it is planted until it is eaten by you.
- The grain is husked and cleaned in steam rollers.
- The ground is flooded.
- The paddy is threshed off by machines.
- The ground is plowed.
- The grain is packed in bags and barrels for market.
- The grain is cut with reapers and binders.
- The ground is harrowed.
- The rice passes through machines which polish it.
- The fields are allowed to dry before the harvest.
- The seeds are planted.

Nuts

Lesson approach

Ask your teacher or parents to take you to the woods to gather some nuts. See how many kinds you can find.

Now read to see if you can find the names of some nuts not grown in your neighborhood.

Some things to do

Make a collection of the kinds of nuts you can buy.

See if you can tell the life story of each nut. This little outline may help you:
- Where I am grown
- How I am grown
- How I look
- How I am gathered
- For what i am used

Make up some riddles about nuts and see if your friends can guess the answers. Here is one:
- I grow in California.
- I get ripe in October.
- I am picked up by boys and girls.
- I am bleached white with a chemical before I am sent to market.
- I am a cousin to the black walnut.

Plant a walnut in a window box. Be sure to water it. It will be fun to watch it grow.

HOW WE GET SOME OF OUR CLOTHING

Cotton

Lesson approach

Read to find out how the work of the farmer who raises cotton is like the work of the farmer who raises corn.

Some things to do

Make a collection of different kinds of cloth made of cotton. You may mount these pieces on a cardboard and label.

Weigh a pound of cotton.

Tell the story of Eli Whitney and the cotton gin.
Write to the south for some cotton bolls.
See if you can get some raw cotton. Twist the fibers and see if you can make thread.
Look at a fiber under a microscope and see if you can tell what makes the fibers cling together when they are twisted.
Weave a rag rug. Your teacher will show you how to make a loom.
Dye some cloth. Use natural dyes such as walnuts, onion skins, and cranberries.
You may find the following words in your readings:

cotton gin	looms	bolts
bales	shuttles	muslin
bobbins	warp	calico
carding	dyed	gingham

Write a sentence using each one of these words. Show by the sentences that you understand the words and how to use them.

DIRECTIONS: Arrange these sentences so that they will tell the story of a cotton plant.

I have wee pods.
The hairs in my pods grow longer and longer.
Some more cotton pickers come and take the fluff from my pods.
I am planted in soft warm soil.
Cotton pickers will come back until they get all the fluff in my pods.
Soon more of my pods will burst open.
Silky white hairs wrapped around seeds grow in my pods.
The rain and sun help me to grow.
I am a seed.
The blossoms drop to the ground.
Then my work will be done.
Some people come and take away the fluffy white down from my pods that are open.
I have beautiful blossoms.
The white hairs burst some of my pods.

DIRECTIONS: Arrange these sentences so they will tell what is done with cotton after it is picked until it reaches the factory.

The raw cotton is pressed into bales.
Wagons carry the cotton to the gin.
The gin tears the cotton fibers from the seeds and fans blow away all the dust and dirt.
The bales of cotton are sent to cotton mills in our own country or shipped far across sea to factories in other countries.
The hair-covered seeds go into the gin.

DIRECTIONS: Arrange these sentences so that they will tell how cotton is made into cloth.

The cloth is wound into bolts by big machines.
The fibers are spun to make thread.
Machines pull the cotton apart and blow out the sticks and dirt.

The cotton is rolled into thick sheets.
Threads are stretched evenly lengthwise on frames called looms.
The cotton is combed or carded to pull the fiber out straight.
As the shuttles go back and forth cloth is made.
Some pieces of cloth are dyed after they are taken out of the looms.
Patterns are sometimes stamped on the cloth.
Shuttles fly swiftly back and forth carrying cross threads through these lengthwise threads or warp.
The spun thread is wound upon spools for weaving and sewing.

DIRECTIONS: Write the answers on the blanks below. Re-read if you need to do so.

..... For how long has cotton been used?
..... What kind of a plant was the cotton in our country at first?
..... About how long are the cotton fibers?
..... What kind of days does it take to make cotton grow?
..... How is cotton best picked?
..... What is wrapped around the cotton seeds?
..... What machine pulls the fiber from the seed?
..... About how much will a bale of cotton weigh?
..... How much cotton can one man clean in a day?
..... How much can the cotton gin clean in a day?
How is the work of the farmer who raises cotton like the work of the farmer who raises corn?

Wool

Lesson approach

Read to see if you can find the answers to these questions from your reading:

Where are most of the sheep raised in our country?
What do the sheep do in summer?
What are the men called who watch them?
What do the sheep do in winter?
Why must sheep be sheltered in winter?
How many sheep can one man take care of?
What do sheep eat?
When are sheep sheared?
Where are sheep sometimes taken to be sheared?
How many sheep can one man shear in a day?
How does he shear the sheep?
How does the factory get the wool?
What does the factory do with the wool?
To whom does the factory send the wool cloth?

Booklets and Pamphlets (free or at small cost)

The American Woolen Company of New York, 225 Fourth Avenue, at 18th St., P. O. Box 100, Station D, New York City, *From Wool to Cloth*

Factories from which material may be obtained free:

Pendleton Woolen Mills, Pendleton, Oregon
Mishawaka Rubber and Woolen Mfg. Co., Mishawaka, Indiana

Exhibits and Specimens

F. A. Patrick and Company, Duluth, Minn. The exhibit cost is 35c

Some things to do

Bring to school a piece of woolen cloth; unravel some of it. The threads unraveled are called yarn. Now pick out a few wool fibers from the yarn.
Look at a wool fiber through a microscope.
Ask the first and second grades to tell you how they cleaned, carded, and dyed some wool.
Find out something interesting about the collie dog.
Tell what the factory does with the wool.
Build with your teacher's help a summary of the story of wool. You may dictate the sentences for the summary and your teacher will write them on the board for you.

Linen

Lesson approach

See how many uses for linen you and your classmates can find.
Find out what uses are mode of the seeds from the flax plant.

Some things to do

Examine some linen and woolen cloth. Then underline the words or groups of words which describe linen:

very strong
warm
cool
rough
smooth
takes up water quickly
easily torn

Find out:

Why linen is good for towels?
Why linen is worn in the summer time?
Why linen cloth is used for covering the wings of airplanes?
Why some fishing lines are made from linen?
Why many laces are made with linen thread?
Why flax is not raised in our country for the fibers?

Can you tell:

How flax is retted
How linen cloth is bleached

DIRECTIONS: Arrange these sentences so that they will tell how we get linen cloth.

When the seed bolls are almost ripe men pull the plants up by the roots.
Combs take out the seeds without breaking the fiber.
The bales of fibers are sent to big factories.
The thread is woven into cloth.
The inner fibers are tied up into bales.
The flax is retted.
The flax plant blooms.
The cloth is given boiling hot baths.
The flax is spread out to dry.
The cloth is put up in bolts ready to be sent to stores all over the world.

Seed bolls take the places of the flowers.
The cloth is dyed or bleached.
In the factory the flax fibers are combed again and again.
The flax seed is planted.
The fibers are spun into thread.

DIRECTIONS: Draw lines from the unfinished sentences at left to the words that complete them. The first one is done correctly for you.

The broken fibers are called	tow
The flax plants used for making cloth are pulled before them are	ripe
Flax is pulled up by the	roots
Rotting the flax is called	water
Flax si spun under	retting
The flower on the flax plant is	damask
Flax is spun under	blue
The best linens are called	autumn

Silk

Lesson approach

As you read references see if you can tell why silk cloth costs more than cotton cloth.

Books and Pamphlets (free or at small cost)

Silk Association of America, 468 Fourth Ave., New York City, *The Romantic Story of Silk, Its History, Culture, and Manufacture*
Rayon, The Fiscose Company, 171 Madison Ave., New York City. Ask for *The Story of Rayon, The Newest Textile Yarn*

Factories from which possible material may be obtained free:

Belding Bros. Co., 201 W. Monroe St., Chicago, Ill.
Corticelli Silk Mills, Florence, Mass.
Cheney Brothers, Manchester, Mass.
Susquehanna Silk Mills, Sunbury, Pennsylvania

Exhibits and Specimens

Corticelli Silk Co., Florence, Mass., has these materials:

HOW WE ARE SHELTERED

Homes

Lesson approach

As you read your text and references available see if you can decide why people living at different times and in different parts of our world build different kinds of houses.

Some things to do

Make a house scrapbook.
See how many uses you can find for a home. Write these down for your scrapbook.

Find pictures of homes for your scrapbook:

frame houses	log houses
brick houses	shingle houses
stone houses	stucco houses

Find names of materials which have been used by man at some time or in some place to build homes. Write these down for your scrapbook.

Examine your own home. Name all the kinds of material used in building it. Put the list which you make in your scrapbook.

Underscore the word or words which tell about a home in the city:

oil lamp	garbage can
woodshed	pump
fire escape	back alley
gas stove	apartment
elevator	

Mounted Specimens, showing each process, 80c postpaid. The eight specimens come on heavy cards 5x9 inches. They have complete explanations.

Teachers' Silk Culture Chart, 20c. The chart has more than 30 pictures showing different steps in the culture and manufacture of silk.

Silk, Its Origin, Culture, and Manufacture, a 48 page book illustrated in color, 10c paperbound.

Some things to do

Look at pictures showing how silk is made.

Collect samples of silk cloth and unravel a small piece of one. Notice the smooth feel of the threads.

See how many things you can name that are made of silk.

Ask your teacher to tell you about artificial silk (rayon).

Perhaps your teacher and you will be able to get some silkworms or cocoons. If you can get the silkworms, you will have something very interesting to watch.

DIRECTIONS: Fill in the blanks with the right word or words.

Silkworms are hatched from tiny .....

The caterpillars do nothing but .....

Every five or six days the worms get new .....

..... times the silkworm gets too big for his coat.

The silkworm eats the leaves of the ....

The leaves are cut up into small pieces for the ....

Silkworms live about a .....

The worm spins a ..... round itself.

The silken covering is called a .....

A white moth comes from the .....

DIRECTIONS: Arrange the sentences below to tell how raw silk is made ready for the big factories.

The worker takes the threads from four or more cocoons and twists them together as she unravels the threads from the cocoons.

The cocoons are put into warm water to loosen the silk thread of the cocoon.

The worms spin threads around themselves.

The thread is unwound from the cocoons.

The worms find good places to start their nests.

The raw silk is sold to factories to be spun, woven, and dyed.

Lumber

Lesson approach

As you read about our forests see if you can tell why we value lumber much more today than the pioneers did.

Some things to do

Plant some nuts, acorns, or apple seeds in a window box in your school room. Water the soil and watch them grow.

Set out some seedlings in your school yard. Find out the best place to put the seedlings and how to care for them.

Find out about Arbor Day. This is a good day to set out some seedlings.

Find out what parts of your own home are made from wood.

Make a chart showing the trees found on your school ground; trees found on the way to and from school; trees found at home; and trees found in woods near your home. Your chart may look something like this:

Leaf	Name of Tree	Use	Location

Find out ways to save our trees.

Look at the end of a log that has been sawed and notice the rings.

Can you find out what these rings mean? Perhaps you can tell how old the tree was when it was cut down.

Here are some interesting places to go if your teacher or parents can take you:

To the woods to find out the kinds of trees growing there

To the woods when some trees are being cut to watch the cutting of them

To a nursery to see how trees are started

To a sawmill to see how the logs are sawed into wood

To a lumber yard to see the different kinds of lumber

To a building being erected to see the parts made out of lumber

Copy the sentences which help to give you a picture of a "log rolling."

Arrange these sentences so that they will tell the story of a board:

Lumber jacks cut me down.

I grow into a tree.

I am loosened.

I am rolled into the river with many other logs.
I am pulled up a runway to the shining saw.
We (the boards) are loaded on trains.
We are cut into boards of all sizes.
We are carried a long distance.
We are taken to a lumberyard.
I am guided into quiet waters.
I am caught in a log jam in the river.
I am dragged to the bank of a river.
I am a seed.
I am sawed into boards.
We are unloaded and stacked to dry out or "season."
We are taken to a mill to be planed and smoothed.

Find sentences in the reading which explain these words. Copy the sentences on paper. Make up sentences of your own using these words. Show by the sentences that you make that you understand how to use them.

sawmill	crosscut saw	nurseries
snaking logs	a log jam	reforestation
flumes	sawdust	conservation
log rolling	prairies	a lumber jack
seedlings	forest rangers	natural resources

Underscore the word or words which name things which come from trees.

telephone poles	rope	fruit
Indian pottery	farm implements	barrels
stove	brush handles	baby carriage
barns	radios	broom handles
an engine	fuel	sickle
pumps	lantern	box cars
churches	nails	picture frames
nuts	railway ties	plow shares
bath tub	bolts	houses
toys	fences	fruit jars
cork	pencils	seats
wash basin	stove poker	baskets
musical instruments	furniture	clothespins
paper	hinges	ladder
scissors	books	thimble
boxes	spools	sign boards

Cement, Plaster, Stucco, Mortar, Concrete

Lesson approach

As you read your references see if you can determine why more and more concrete blocks are being used for building.

Some things to do

Some interesting things to watch:

A building being stuccoed
A foundation of a building being laid

A house being plastered
A walk being made
A road being paved
A cement mill at work

If you know where you can see any of these things, ask your teacher or parents to take you to the place.

Make a bird bath using cement. (The older children in school may help with this).

Fill in the blanks with the right words:

Cement is made from ....., ..., ...
Lime comes from ..... or .....
It is not as ..... to get marl as it is to get limestone.
Instead of clay .... may be mixed with lime.
Limestone is crushed, dried, ground, and mixed with ....., or .....
The mixture of limestone and clay is ..... in huge .....
The mixture is taken from the ovens in the form of a hard dry substance called .....
Large machines ..... the ..... into a fine dust.
The dust is .....
It is put into ..... and shipped away.
When ready to use ..... is added to the powder and the mixture is spread out to ..... or .....
Concrete is made by mixing ..... and ..... with cement.
Mortar is a paste of ..... and ..... mixed together with water to the right thickness.

Write sentences with these words: clinker, slag, marl, foundations, warehouses, mortar.

Show by the sentences that you make that you understand the meaning of the words.

Read again the paragraph which describes a cement mill. Now see if you can tell why plants near a cement mill die.

Find out how concrete blocks are molded so that they are hollow inside.

See how many uses for concrete you can find. Be sure to look about you on your way to and from school. Keep a record of the ways you find it is used.

Examine your own home and see what parts have been made by using cement.

Brick and Tile

Lesson approach

Read references to see if you can find out why more bricks are used today than were used a long time ago.

Some things to do

If there is a brick or tile plant near you, ask your teacher or parents to take you to see it work.

If you could choose a home, would you take one made of wood or of brick? Give your reasons.

Mold some bricks from clay. Bake them in the sun until hard.

Make a list of the different ways bricks and tiles are used.

Arrange these sentences so that they will tell the story of a brick from the time it is in the earth until it is placed in the foundation of a home.

The clay is mixed with water.
The bricks are cooled.
The bricks are placed in small cars and run into a drying room to dry.
The clay is stamped and cut into bricks as it comes from the tunnel.
The clay is dug up by huge steam shovels.
The bricks are put in a kiln and baked.
The clay is run through a tunnel the width and height of a brick.
The clay is ground fine and put through a coarse sieve to take out the lumps.

Use these words in sentences of your own:

clay pit	kiln	fire bricks
pressed bricks	foundation	bricklayer
mosaics	tile	

Building Stones

Lesson approach

As you read see if you can find why stone is being used more and more in building.

Some things to do

If there is a stone building in your community ask your teacher to take you to see it. See if you can tell from what kind of stone it is made.

Tell how these stones are made: sandstone, granite, limestone, and marble.

See if you can get pieces of slate, granite, limestone, and sandstone.

DIRECTIONS: Put the right heading on the line at the top of each column.

It is used where great strength is needed.
It is used in
- hotel buildings
- great stores
- bridges
- piers
- apartment buildings
- fine houses
- paving streets

Pillars of big buildings are made from it.
It is used for monuments.
It is not discolored by rain or snow.

You can always tell this stone because it looks like millions of grains of sand cemented together.
It is used in buildings of all kinds.

It is used for roofs.
It is used for making blackboards.
It breaks in flat layers.

It is used in making:
- statues
- stairs and hallways
- steps and doorways
- floors

It is used for interior decoration.

It is used for:
- foundations of houses
- mixing with clay to make cement
- smelting iron
- buildings roads

In its finest form it is marble.

HOW OUR HOMES ARE HEATED AND LIGHTED

Electricity

Lesson approach

As you read find out why some homes use electricity and others do not.

Some things to do

Tell the story of Benjamin Franklin and the kite.
Electricity is made by machines called dynamos. Find out what runs the dynamos.
Look at an electric light bulb and notice the fine wire filaments.
Find out how electricity is carried.
Find out how the amount of electricity used in your home is measured.
Make a list of the ways people use electricity.
Ask your teacher to read you the poem "The Lamplighter," by R. L. Stevenson.
Record ways in which people should try to be safe in using electricity. (See Safety Education Bulletin.)

Coal

Lesson approach

As you read see if you can determine why coal is of such importance to us.

Some things to do

Study the pictures given in the references. Each picture will tell you something about coal. Number the pictures so that when taken in order they will tell the story of how coal is mined. This is the way:

1. Miners getting the coal from the ground
2. Loading coal in the mines

Perhaps your teacher will have other pictures. You may use these, too. Your teacher will put a number on each one, so that you can list them with the pictures found in the books. You may also use pictures you find. You may letter your pictures so that you can list them with the ones found in the books.

Find out the difference between hard coal and soft coal.
Find out how your home is heated.
If there is a furnace in your community, ask your teacher to take you to see it.
Find out how the heat gets to the other rooms in the building.
Make a list of the ways coal is used.

Petroleum, Gasoline, Kerosene

Lesson approach

Tell how your father and mother use kerosene and gasoline.
Read to see if you can find other ways in which kerosene and gasoline are used.

Some things to do

See how many of these things you can find in the pictures given in the references:

a refinery
oil derricks
oil tanks
an oil well
an oil drill
tank cars
oil field
"shooting a well"
a kerosene lamp
an oil gusher

Use these words in sentences of your own:

gusher
pipe line
tank ships
derrick
refineries
explosives

Find out the ways in which oil is carried.
Find out everything you can do to help prevent accidents in the use of gasoline and kerosene. (See Safety Education Bulletin).

Gas

Lesson approach

Look at pictures and read references to find out:

from where gas comes
how gas is transported
how gas is used
how accident may be prevented when gas is used

Some things to do

Look at the pictures found in the references and find:

a gas stove
a gas main
gas tanks

Complete these sentences:

Gas is carried in .....
Coke is made from .....
Coke is used for .....
Natural gas is found in the .....
Acetylene is a kind of .....
An odorless gas is .....
Gas is used for .....

Find out ways to avoid accidents in the use of gas stoves. (See Safety Education Bulletin).

TRAVEL AND TRANSPORTATION IN OUR COUNTRY

On Land

Lesson approach

Tell about any trips you have taken. Ask your teacher to tell you about any trips she may have taken.
Now read references which tell about trips others have taken.
Pictures—Write to any of these companies for pictures and materials explaining what use you wish to make of the material.

Canadian-Pacific Railroad, 167 East Ontario St., Chicago, Ill.

Educational Foundation (Fuel-Power-Transportation) Ohio Chamber of Commerce, 1116 Beggs Bldg., Columbus, Ohio
New York Central Lines, Mr. Alan Rogers, Supervisor Public Relations, LaSalle St. Station, Chicago, Ill.
Northern Pacific Railroad, 73 East Jackson Blvd. (Bulletin No. 8) Chicago, Ill.
The Pullman Company, Chicago, Ill.
Western Railways' Committee on Public Relations, 105 West Adams St., Chicago, Ill.

Some things to do

Find pictures of the following and tell what is done in each place:

station
baggage car
mail car
baggage room
smoker
day coach
passenger train
dining car
sleeping car

Collect pictures of:

busses
freight trains
passenger trains
taxis
street cars
trucks
wagons
automobiles

Tell for what each of the above is used.
See if you can tell:

what a green light means to an engineer
what a red light means to an engineer
why a train whistles
what the porter does
what the engineer does
what the fireman does
what the conductor does
what makes the wheels of the engine go
why baggage clerks are numbered
how a train may be flagged
what may make a hot-box
the difference between a passenger train and a freight train; a bus and a taxi

Find out what things are sent away on trains from your community.
Find out some things which trains carry you.
Ask your teacher or parents to take you through a train sometime where it is waiting on the track.

On Water

Lesson approach

Read references and plan what you would do if you were to be on an ocean liner for one day.
Pictures—Write to any of these companies for pictures and materials explaining what use you wish to make of the material:

Canadian Pacific, Madison Ave. and 44th St., New York City
Cunard Line, 25 Broadway, New York City
Dollar Steamship Line, 604 Fifth Avenue, New York City
French Line, 19 State St., New York City
Hamburg-American Line, 39 Broadway, New York City
Holland-American Line, 24 State Street, New York City
Nippon Yusen Kaisha (N.Y.K. Line) San Francisco, California
North German Lloyd, 57 Broadway, New York City
Norwegian-American Line, 22 White Street, New York City
Red Star Line, 1 Broadway, New York City
White Star Line, 1 Broadway, New York City

Some things to do

Find pictures of:

ocean liners	freighters	motor boats
row boats	sail boats	life boats
submarine	tugs	

What are some ways in which these vessels differ?
Use these words in sentences of your own:

siren	hold	lighthouse
deck	stateroom	dock
life belts	pier	bow
stern	keel	life saver

Find out what these people do on a ship:

the captain	the pilot	the sailors

See how many different things you can find people doing on the ships. Make a record of these things.
If you know of any one who has traveled on an ocean liner, write a letter asking him to come to your school to tell about his journey.
Find out what you send away from your own community that may finally travel on ships.

In the Air

Lesson approach

How much does it cost to send a letter by airmail? Read references and see if you can find why it costs more to send a letter by airmail than by train.

Some things to do

Make a collection of pictures of planes. You will find pictures in newspapers and old magazines. See if you can find pictures of the following:

monoplanes	bi-plane
tri-plane	hydro-plane
dirigibles	

Find out:
what keeps a balloon up in the air
what helps to keep an airplane up in the air

what part of an airplane turns round and round
what helps to guide the airplane
how the aviator knows how high he is flying
how the aviator can tell how fast he is flying
how the aviator can tell which direction he is going
what is meant by a nose dive
why pilots often wear leather coats, leather helmet, and goggles
from what materials airplanes are made
what fuel planes use
where the f uel is stored
how much fuel it takes
the use of beacon lights
what uses are made of airplanes today

Find in the pictures you have collected the following:

propeller	body	hangar	tail
engine	wing	airport	ailerons
rudder			

Collect some airmail stamps.
Tell the story of Charles A. Lindberg.
See if your parents or teacher will take you to an airport to see a plane.

Travel and Transportation in Some Other Countries

Lesson approach

As you read be thinking why:

the camels are used for traveling in the desert
the reindeers are used for traveling on snow-covered lands
the dgos are used for traveling in the land of snow and ice
boats made mostly of skin are used for traveling in the far north

Some things to do

Make titles for the pictures found in the references.
Choose two pictures which interest you and write a few sentences about each one.
With your teachers help write a summary of travel and transportation in some other countries. Include in this summary:

travel where camels are used
travel where dogs are used
travel where reindeers are used
travel where boys and men are used

Use these words in sentences of your own:

jiggy	wheelbarrow
jinrikisha	caravan
sedon chair	umiak
cart	kayak

FOURTH GRADE GEOGRAPHY

Introduction

Pre-geography for the primary grades tends to interest the children in their home environment. The purpose of the work in fourth grade geography is to interest the children in our foreign neighbors and also to prepare them for more intensive work in the fifth grade. For this reason we have chosen type studies which bring out the effect of geographic conditions on the food, clothing, shelter, and transportation of the people living in these countries.

The type studies chosen are:

People living in hot wet lands—Amazon Indians and Congo Negroes
People living in hot dry lands—Arabians and dwellers of Sahara Desert
People living in mountainous regions—Herders of Switzerland
People living in cold lands—Eskimos of the North
People living in low wet lands—Farmers of Netherlands
People living along rocky coasts—Farmer fishermen of Norway

Teachers should assemble all text and reference materials available before beginning the teaching of any of these units. Since the books used in different schools vary according to local adoptions, direct references are not given. It will be found advantageous to train children to help find their own references for reading. Elementary geographies, or those entitled Book I, contain helpful references on these units.

Six units have been prepared for the use of the fourth grade. This will allow five or six weeks for working on each unit and should provide time for reading widely and enjoying the material.

The organization or set-up arranges problems for consideration, activities or things to do during the study period with books open, and a summary or test which may or may not be worked out with books open. The things to do include vocabulary study; study of the pictures in the reference books; comparisons; cause and effect; lists to make; paragraphs to write; and some outlining to be done.

GEOGRAPHY FOR FOURTH GRADE

To the Teachers: The object of this work in geography is to help the children to see how man depends upon the outdoors for what he needs and how he makes use of what he has. The way he lives and what he does are closely related to his natural environment or where he lives.

By the time these units are worked out the children should also have an understanding of the following:

effect of distance from the equator on the way man lives
the seasons and their relation to the equator and the poles
effect of highlands and lowlands upon temperature
directions rivers flow
use of some geographical terms

Children should be able to locate on the globe:

places north or south of the equator
places to the east or the west of a certain place
Each continent
each ocean bordering the continent

Unit I

PEOPE WHO LIVE IN HOT WET FORESTED LANDS

Amazon Indians

1. Approach and problem set-up—Read these problems of the Amazon Indians and think about them. Do we have such problems in Iowa?
   Why the rivers in the Amazon Basin are the roads
   Why the houses of this region have high sloping roofs
   What man depends upon for food
   Why so few clothes are needed in this region
   Why it is possible to raise gardens all year long
2. Read references on the Indians of the Amazon Basin.
3. Things to do

Required List

See if you can find on the globe the branches of the Amazon River. You will then know where floods occur in this region.

Be able to locate South America, the Amazon Basin, and the oceans bordering on South America on the globe at any time.

Find the highlands and lowlands of the world on your globe. How can you tell on a globe which are highlands and which are lowlands?

Be able to find the equator on the globe. Follow it around the globe and see what other equatorial lowlands you can find.

Explain how the clothes of the people of the Amazon River differ from our clothes.

Notice from your reference reading that people in the Amazon Basin always see the noon sun high in the sky and sometimes right over head. When do you see the noon sun high in the sky?

Follow the equator around the globe to the other hemisphere and decide in what other countries the sun never rises nor sets much before six o'clock every day.

In a city near the equator would the electric light bills be small during one time of the year and larger at another time?

Make a list of all the things we get from the Amazon forests.

List all the uses of rubber of which you can think.

Make lists of all the animals, insects, and products which you found in the Amazon forests or jungle. Mark those which you find man using with a star (*). Use the following chart for doing this:

Animals	Insects	Products

From your reading see if you can find out how much rainfall there is in this region each year. How does it compare with our rainfall? Take your ruler and measure to see how much farther we are from the equator than the people in the Amazon Basin. You will need to use the scale of miles to do this.

Look to see where our sun is at midday. From your reading where is the sun at midday in the Amazon Basin? Where will the sun be at midday in other countries along the equator?

Find out about and report upon the following:

how houses near rivers that flood are built
why houses built on the ground have clay floors
why in some houses fires are kept going all day and all night
why scanty clothing is worn
why there are few roads through the forests
why there is little travel by land
why animal food is scarce
why hunting in the forest is dangerous
why people clear land, use it for a few years, and then move on the clear another piece for use
what prevents fishing at times
what fruit comes from this region
why boats can go so far up the branches of the Amazon River

Find and list all the interesting pictures you enjoyed while reading the references.

Find these words used in your reference reading and use each in a sentence of your own:

equator	jungle	lowlands
highlands	tropical	dense
oppressive	cassava	latex
basin	region	Sauba ant
boa constrictor		

Supplementary List

Write a paragraph on the kind of house which is comfortable in the Amazon Region.

There are many interesting and peculiar trees and vines in the forests of the Amazon. See how many different kinds you can read about and then write a paragraph on the one you find most interesting.

If the following sentences were put in proper order they would describe a typical day in the Amazon Basin. See if you can write them in order:

The forest is cool in the early morning.
It makes a great noise as it falls on the leaves.
The days and nights are about the same length.
A cloud comes up suddenly and darkens the forest.
The plants are covered with dew drops.
The rain lasts about a half-hour and then the sun comes out.
People, birds, and animals become active again.
The air in the forest becomes hot and oppressive.
The birds and insects are active.

The sun comes up in the east at about six o'clock.
Men, birds, and animals sleep in the middle of the day.
It gets cooler.

Find out all you can about the Sauba ant (white ant or termite) and write a paragraph about it.

Write a paragraph telling how the boa constrictor snake gets and eats its food.

Write a paragraph on transportation or travel in the Amazon Basin.

Arrange the following sentences in proper order so that they will tell the story of "how we get rubber":

A plantation owner hires men to gather the rubber.
Each man is given several hundred trees to care for.
The huts are made of poles covered with leaves.
The rubber gatherer gets up early before daylight.
The juice is called latex.
Paths are cut through the forests around the rubber trees.
The men build huts to live in.
He uses a lantern, fastened to his head, when he first goes to work.
He goes back and collects all the latex in a bucket.
It hardens and turns yellow.
Each rubber worker must have the proper clothes and tools for working.
He makes a gash in the tree.
He keeps dipping the paddle into latex and holding it in the smoke until he has a big ball of rubber.
A path is cut from tree to tree.
Some men take their families along when they gather rubber.
The rubber gatherer wears few and simple clothes.
He makes a gash in every tree.
A cup is fastened in to catch the juice.
He carries the latex to his camp.
He holds the paddle with latex on it in the smoke.
The next day he taps other trees.
He builds a fire and makes a big smoke with palm nuts.
Rubber gatherers usually work at this for four or five months.
Some rubber gatherers get as much as a ton of rubber during the season.

Find pictures to show why travel on land is difficult in the Amazon Basin.
Find pictures to show how the Indians build homes to keep dry.
Describe on paper how cassava is made into bread.

Summary

Complete the following statements:

1. Houses in the Amazon Basin have steep thick roofs in order to .....
2. Floods occur in the ..... of the .....
3. Some savage animals of this region are .....
4. Some interesting and dangerous insects of this region are .....
5. This region is so hot because it is ..... and near the .....

6. The Amazon Basin is in the northern part of .....
7. South America is bordered by the ..... Oceans.
8. When we follow the equator on the globe we come to other .... lands.
9. The clothes of the people of the Amazon Basin differ from ours in that .....
10. ..... sleep at noon in this region because .....
11. It ..... and ..... every day in the Amazon Basin.
12. The sun comes up about ..... in the ..... in this region. It sets about ..... in the .....
13. At noon the sun is always .....
14. The boa constrictor is a big .....
15. We get the following from the Amazon forests .....
16. The ..... are the roads in this region because of .....
17. We use rubber for .....
18. Rubber is extracted from .....
19. Rubber juice is called .....
20. A wild rubber gatherer can collect about ..... pounds of rubber in a season.
21. Houses built near the rivers that flood are built on poles because .....
22. Fires are kept burning in some houses all day and all night because .....
23. It is difficult to travel through the forests because .....
24. Animal food is scarce because (1) ..... (2) ..... (3) .....
25. Hunting in the forest is difficult because .....
26. ..... prevent fishing.
27. People move often in this region because .....
28. People must depend upon ..... and ..... for food.
29. Boats can go far up the branches of the Amazon River because .....

Congo Negroes

1. Approach and problem set-up—Read these problems and think about them as you read the references on the Congo Negroes. Are these problems similar in any way to the problems of those living in the Amazon Basin?
   In what ways the Congo and Amazon Basins are similer
   What these people do for food, clothing, and shelter
2. References—Read references on the Congo Negroes to see how they compare with the Amazon Indians.
3. Things to do

Required List

Find the equator on the globe again.

Find the Congo River Basin in Africa and then run your finger around the globe on the equator and see if you can find the Amazon Basin again.

The Congo Basin is in the eastern hemisphere. Now put your finger on the Amazon Basin again. It is in the western hemisphere.

The equator divides the world into a northern hemisphere and a southern hemisphere. Put your finger on each of them.

Find on the globe the oceans bordering Africa.

From your readings write a paragraph on the rainfall of the Congo Basin. How does this compare with rainfall in the Amazon Basin? With our rainfall?

How many seasons do we have? How many seasons do they have in the Amazon Basin? The sun is high in the sky at all times in the Congo Basin so how many seasons do they have?

Write a paragraph telling how farming in the Congo Basin differs from farming in Iowa.

List all the products from the Congo Basin.

Make a chart of the animals, birds, insects, and crops of the Congo Basin and compare with those of the Amazon Basin.

Animals	Birds	Insects	Products

Write a paragraph telling how travel in the Congo Basin differs from travel in Iowa and why. What other places has travel been similar to that in the Congo Basin?

List all the ways in which you have found the Amazon and Congo Basins and their people and work to be alike.

Read and report on the following:

why boats can't go far up the branches fo the Congo River
why the rivers are used as roads
why it is harder to sail into Africa than into South Amercia
the use of the hippipitamus
how the animals, trees, and plants are like those of the Amazon Basin
what is used fro fuel in this region
how loads are carried
why the natives haven't domestic animals
how paths are cut through the forests
where most of the animals live
why elephants are destructive
how elephants are killed
how messages are sent through the forests
from what clothes are made

why the waters of the Congo River are muddy
what the Pygmies look like
uses of the oil palm

Make a list of the foods that the people of this region would be apt to have for an evening meal.

Find out how the Amazon River branches differ from the branches of the Congo River.

Write a description of the people in the Congo Basin.

Supplementary List

Make a chart comparing the kinds of plants and trees of the Congo Basin with those of the Amazon Basin.

Plants and Trees of Congo Basin	Plants and Trees of Amazon Basin

The following sentences tell the story of how homes in the Congo Basin are made. Can you arrange them properly to tell the story?

Four poles with forks on the end are set up.
Pieces of vine are used for binding the roof to the frame.
The roof is steep to keep out the rain.
Strong sticks are put into the ground for the walls.
Other poles are fastened to the corner posts with pieces of vines.
The roof is made of grass or leaves.
Before the ends of the posts are put in the ground, they are burned so the ants will not eat them.
The roof of grass and leaves helps keep out the heat.

Make a list of the useful trees of this basin.

Write a paragraph describing how these people get something to take the place of our butter.

The Congo Basin is higher up from the sea than the Amazon Basin so the nights are cooler than in the Amazon Basin. See if you can think why visitors are more apt to become ill in the Congo Basin than in the Amazon Basin.

Outline the work of the men in the Congo forests.
Outline the work of the women in the Congo forests.
Outline the work and play of the boys and girls in the Congo forests.
Outline ways in which people make a living in the Congo forests.
Write a paragraph explaining how the people live, their schooling, and so on.
Write a paragraph of the tsetse fly.

Write a paragraph telling how the natives dress and from what their clothes are made.

Make a list of the pictures which interested you as you read the references.

Summary

Draw a line from the first part of each sentence to the last part.

Rivers are used as roads	because of falls in the rivers
Homes are built with steep roofs	because this region does not produce coal
It is harder to sail into Africa than into South America	because they are so dense
The hippopotamus is valuable to the natives	live in trees
The forest people use galvanized iron for building homes	because the equator goes through both of them
Wood is used for fuel on steamers	because they eat the gardens
Paths are cut through the forest with knives	by the use of drums
Most animals of this region	because the forest is so dense
Elephants are destructive	because they eat him
Messages are sent through the forests	because the ants eat the wood
The natives wear few clothes	because it rains so much
The natives raise crops all year	because there is no winter season
Plants grow fast in this region	because it is so warm and damp
The river is muddy	because dirt has been washed down into it
The Congo Basin is unhealthy	because the days are hot and the nights cold
The Congo and Amazon Basins are much alike	because it is so hot

Unit II

PEOPLE WHO LIVE IN THE HOT DRY LANDS

Arabs of Arabia and People of the Sahara

1. Approach and problem set-up—We have studied about the Amazon Indians and the Congo Negroes who live in the hot wet lands. Now we shall see how some people live in hot dry lands. The following are problems to read and think about before you read the references on the people of hot dry lands:

   Why the nomad herders move so often
   What the people who move about so much live on
   Why the oasis dwellers have permanent homes
   What is raised and traded in these regions

2. References—Read references to see if they help to answer the problems set up.
3. Things to do

Required List

Find the equator on your globe again.

A desert is a place where there is less than ten inches of rainfall. See if you can find the Sahara desert and the Arabian desert. Australia has a hot desert. Find out what direction it is from the Sahara desert.

About how far are these deserts from the equator? Use your scale of miles and find out.

Paint a word picture of a desert.

Find the Tropic of Cancer on your globe. The people who live between the Tropic of Cancer and the equator see the noon sun over head sometimes. Those people living in southern Sahara see the noon sun directly over head once or twice a year while those in nothern Sahara never see it directly over head.

These regions have hot days and cool nights, dry summers and a little rain in their winter which is not cold. Fill in the remainder of the chart below:

	Arabian and Sahara Deserts	Amazon Basin	Congo Basin
Seasons	Hot dry summer Warm winter—just a little rain		

Find the meaning for the word nomad.

List the foods of the nomad or desert herders and tell from what each comes.

Outline the work of the nomad men.

Outline the work of the nomad women.

Describe the clothing of the nomad people.

See if you can explain why these people wear more clothing than those people of the hot wet regions.

Make a list of the things the nomads have to trade and also a list of the things which they get in trade.

Find out why the oasis dwellers do not move but stay in one place.

List the foods eaten by these people.

Fill in the following chart on trade:

	Trades	Receives in trade
Nomad herder of the desert		
Oasis dweller		

Compare the day in the hot dry lands with the day in the hot wet lands.

	Morning	Noon	Evening and night
Hot dry lands			
Hot wet lands			

Find out what the oasis dweller grows beneath the palm tree.

Read about and be able to report on:

How the camel travels—its power to get along without food and water—its feet—what it eats—what products the natives get from it—dangers of its getting lost in the desert

A sand storm in the desert

How a nomad recognizes an oasis in the desert

How bricks for houses are made

How dates are harvested

Why the Arabs or nomads wear loose clothing and more than the Congo Negroes

Where the nomads sleep

How irrigation is carried on. Find out how it compares with irrigation in our western country

How nomads differ from the oasis dwellers

How water is carried in the desert

How barley bread is made

Where and how barley is harvested

How long the nomads stay in one place

How water is secured in the desert

What is made from camel's milk

What clothes the women make

What the women make to sell

What is sometimes done with surplus barley which cannot be carried along

6. Water is carried in the desert in (thermos jugs, goat skin bottles; iron buckets).
7. The nomads wear loose heavy clothing because (it is hot in the day time and cold at night; they think it looks better; it lasts longer).
8. Women make things to wear and sell out of (palm leaves; goat and camel hair; barley straws).
9. The oasis dweller doesn't move because (he is too lazy; he loves his home; he can get water).
10. The houses of the oasis dweller have flat roofs because (they do not know how to make any other; there is not much rain; they keep out mosquitoes).

Unit III

MOUNTAIN HERDERS

Cattle Herders and Cheese Makers of the Swiss Alps

1. Approach and problem set-up—Read and think about the following problems on Switzerland. Keep them in mind as you read references on this country.

   Why the cattle herders of the Alps go up into the highlands during the summer months

   Why cheese making is the important industry carried on in the summer

   Why people in Switzerland farm so carefully and do not waste any ground

2. References—Read references in your text and other books keeping in mind the problems.
3. Things to do

Required List

Find Europe on your globe. Now find Switzerland, a little country in Europe.

Measure on the globe to see how far north from the equator Switzerland is. Now measure how far Iowa is from the equator. Which would have the shorter summers and colder winters? The people living in Switzerland never see the sun directly over head. Switzerland is about half way between the equator and the north pole and has four seasons. Can you name these seasons?

Read to find out whether the mountains are warmer or colder than the lowlands.

The important river of Switzerland is the Rhine. Compare its basin with that of the Congo River using this chart:

	Falls	Muddy	Surrounding Land (high, low)	Icy Water	Forests	Use as Roads
Rhine River						
Congo River						

Find out, if you can, about the size of the farms in Switzerland. How do they compare with Iowa farms?

Outline the mountain farmer's work in spring, in summer, fall, and winter.

How would a similar chart for an Amazon farmer look?

Write a praragraph telling how cattle are herded in the mountains in summer.

Compare the food, clothing, houses, and travel of the people of Switzerland, Congo Basin, and the deserts using the following chart:

	Food	Clothing	Houses	Travel
Swiss People				
Congo People				
Desert People				

Homes in Switzerland are lighted with electricity. Can you find out why?

Make a list of the interesting pictures on Switzerland which you find in the books as you are reading them.

From your reading see if you can find out:

Why it is better to make cheese than butter
Why cheese is made in the mountains
Where and how the herders live in the mountains
How many times pastures are changed during the summers
What is meant by back grass
What is done with the surplus cheese

What crops are raised on the farms
How large the farms are
Why many things are manufactured
Why milk chocolate is manufactured
What the winter sports are
Why tourists visit Switzerland
Why milk isn't brought down into the valley and made into butter
Why Switzerland is so much colder than Iowa; than the Amazon Basin
Why the mountains furnish pasture
Why Switzerland might be called the "Land of Tunnels"

Supplementary List

Write a paper telling what you would see if you took a trip up into the Alps of Switzerland.

Explain the process of making cheese in the mountains.

Make a list of the things you can find that have been manufactured in Switzerland.

Write down the things Switzerland gets from us.

Try to find and read these books:

Heidi
Donkey John of Toy Valley
Moni the Goat Herder

Summary

Fill in the following outline on Switzerland:

1. Man's work
   a. In spring
   b. In summer
   c. In fall
   d. In winter
2. Important manufactures
   a. ....
   b. ....
   c. ....
3. What the Swiss get from us:
   ....
4. Why the Swiss manufacture .....
5. Crops raised on Swiss farms
   a. ..... b. .....
   c. ..... d. .....
   e. ..... f. .....
6. How the size of farm affects herding .....
   .....
7. Winter sports
   a. ..... b. .....

Unit IV

FARMERS OF LOW WET PLAINS

Netherlands

1. Approach and problem set-up—There are some people who farm but who have problems different from other countries because of the low wet land. Netherlands, parts of China, and Japan are examples of such countries. Read the problems that the Netherlands has to meet and keep them in mind as you read the references on this country.
   - How to support so many people when the country is so small
   - How to get land from the rivers and sea and how to keep it
   - How to get the things they need from other countries
2. References—Read references, keeping in mind the problems of Netherlands.
3. Things to do

Required List

Find Europe on the globe. Now find Netherlands, sometimes called Holland. What does the word mean?

In which hemisphere is Europe?

Measure the distance of Netherlands from the equator. From the North Pole. You find that Netherlands like Switzerland is about half way between the equator and the North Pole. Land half way between the equator and North Pole has four seasons.

Your books tell you that Netherlands has a truly temperate climate. Find out what that means.

Compare the use of the windmill in Netherlands with our use of windmills in Iowa.

Find out how nature makes it easy to use windmills in Netherlands.

From your reading find out how the Dutch get much of their land. Give the name for the lowlands which have been drained.

List the foods produced in Holland.

In what way is travel somewhat alike in the Amazon and Congo Basins and Netherlands?

See how many pictures you can find which show the different occupations of Netherlands.

Read about and be able to write or report on:

- Use of windmills
- How polders are obtained
- Why the windmills must keep pumping
- Why grass is planted on sand dunes along the shore
- What dikes are
- How dikes are kept up
- The use of canals
- How people travel in Netherlands
- How canals are used in winter
- Importance of the chief engineer of canals
- What storks are and how they look and live
- How the very low land is used

- How long it takes the Dutch to take land from the sea or rivers
- What United States gets from the Dutch
- What the Dutch get from United States
- How the land in Netherlands and Switzerland compares
- How Dutch homes are made
- Why some people are fishermen
- Use of the bicycle in Netherlands
- Why Dutch cities on delta mud are built on high logs or piles

Find each of the following words in your reference reading and use it in a sentence of your own:

lowlands	canals	milk chocolate
temperate	ditches	oleomargerine
sea level	storks	hyacinths
polders	bulbs	dikes

Choose at least two pictures found in your reference reading and tell the stories in your own words that the pictures tell you.

Supplementary List

Write a paragraph telling how Switzerland and Netherlands look different.

The important river of Netherlands is the Rhine. Write a paragraph on how the Rhine River is like and unlike the Amazon River.

Read to find out what "below sea level" means.

From pictures in your books draw a picture of a Dutch windmill.

The Dutch must always pump water and watch the sea. Can you explain why?

Write a description of a Dutch home.

Explain the danger of a break in the dike.

List the materials used for keeping out the water and tell how dikes are kept up.

Write a paragraph on how travel and transportation are carried on in Netherlands.

Imagine that you are taking a trip on a large boat in Netherlands. Write an account of your trip.

Can you find out why it is sensible for the Dutch to wear wooden shoes?

Summary

Underscore the correct word or group of words in the sentences below:

1. Netherlands means the same as (Switzerland; Holland; Belgium).
2. People of Netherlands are called (Dutch; Swiss; Irish).
3. Netherlands has a (cold; hot; temperate) climate.
4. Netherlands differs from Switzerland because it is (a low wet land; hot dry land; a hot wet land).
5. The people of Netherlands are (farmers, fishermen, traders; miners, bricklayers, stonecutters; foresters, rubber gatherers, date gatherers).
6. Canals are used as roads because (they are cheap transportation; the country is so low; one can travel faster).
7. A sea polder is valuable because (it is muddy; it is rich farm land; it is a cool place).

8. The chief engineer of canals is important because (so many canals used for transportation must be looked after; he gets a high salary; he can make others work).
9. Our trade with the Dutch is important because we get (luxuries; things that we need; groceries) from them.
10. We like the Dutch people because (they wear wooden shoes; they are thrifty; they use windmills).

Unit V

FARMER-FISHERMEN OF NORWAY

1. Approach and problem set-up—We are now going to study a country that is different in some respects from the other countries we have studied. It is a country where the people fish for a living. Read the following problems and then see if you can answer them through your references:
   Why the people of Norway live near the sea coast
   Why the people of Norway are called the farmer-fishermen
2. Read references from your books on these problems.
3. Things to do

Required List

Find Europe on your Globe. Now find Norway. Would you say that Norway is half-way between the equator and the north pole? Is it closer to the north pole or the equator. Now measure to see how much nearer the equator United States is than Norway. Find out on your globe what circles go through Norway. Find the parallels on your globe and read the numbers on them. They tell you how far certain places are from the equator.

Summer days in the part of Norway which is north of the Arctic Circle get longer and longer until the sun never sets. See what you can find out in your reading about the "Midnight Sun" in Norway. The days get shorter and shorter until the sun is not seen for a long time. This is called the "Winter Night." See what you can find out about the "Winter Night" from your reference reading.

Find out the best month of the year for going to see the "Midnight Sun."

Find on your globe the oceans bordering on Norway.

The people of the New England coast of United States and of Newfoundland are also fishermen. See if you can find these places on your globe.

List the work of the people of Norway using this chart:

	Work in Summer	Work in Winter
Men		
Women		
Children		

Explain why it is easy for the people of Norway to have electricity and

telephones in their homes. Can you think of any other country which we have studied which uses much electricity?

List as many reasons as you can why Norway is a fishing country.

List the crops of Norway in one column and those of Iowa in another. Find out why corn and wheat are not raised in Norway.

Write a paragraph on the way people fish in Norway.

Explain in what ways dairying in Norway compares with dairying in Switzerland.

Find out how the people of Norway preserve fish.

Compare the ways in which some of the people in different lands, about whom we have studied live. Use the chart below for making comparisons:

	Food	Clothing	Houses	Travel	Work	Important Products
Norway						
Switzerland						
Arabia						
Congo Basin						
Netherlands						

Supplementary List

Examine the pictures of your books to find out how "skerry guards" protect the coast of Norway.

Write a paragraph describing the homes of the Norwegians.

Describe a fish market of Bergen, the most important fish exporting city of the world. See what pictures you can find of this place.

You are spending December in Norway. Write a letter to a friend describing the winter sports of Norway.

Explain the difference in the use of vegetables in Norway and in Iowa.

Summary

Fill the blanks in the following sentences:

1. A fiord is .....
2. Skerry guards are for .....
3. People in Norway act and dress much as people of .....
4. Bergen, a city of Norway, is noted for .....
5. Winds blowing from the sea keep Norway from being so ..... in winter.
6. Some people along the coast of Norway get all of their living from ..... because .....
7. Norway can easily have electric lights and telephones because .....
8. The roofs of the houses are steep in Norway because .....
9. Norwegian women are noted for baking .....

10. The storehouse in Norway is used for .....
11. The dairy cattle are pastured on the hills of Norway because .....
12. In Norway vegetables are used for ....., and .....
13. There are no railroads in western Norway because .....
14. The chief farm crops of Norway are ....., ..., ..., ..., ..., and .....
15. Corn is not raised in Norway because .....
16. Goats' milk is used for .....
17. Hay making in Norway differs from hay making in Iowa in that .....
18. Fodder crops mean .....
19. Cows in Norway are given much care because .....
20. A saeter is .....
21. Some people of Norway farm and fish too because .....
22. The important fish of Norway are ....., ..., and .....
23. Days in Norway get ..... and ..... in summer.
    Nights in Norway get ..... and ..... in winter.
24. The important winter sport in Norway is .....
25. Fish in Norway are preserved for home use by .....
26. Use these words in sentences of your own: saeter, fiord, harbor, fodder, scythes, shipping, skerry guards.

Unit VI

PEOPLE OF THE FAR NORTH

1. Approach and problem set-up—Read these problems carefully and try to think about them as you read the references again.
   - Why man on the northern plains depends upon animals for the necessities of life
   - Why man lives near the coast on the northern plains
   - How man in the northland builds his house to fit the climate
2. References—Read references on the people of the Far North.
3. Things to do

Required List

Find Canada and Alaska on your globe. Are they north or south of the equator? Measure how far they are from the north pole; from the equator.

What do you know about the length of the day and night here in Iowa? As we go on farther north the winter days get shorter and shorter and the winter nights longer and longer. When we go inside the Arctic Circle we find that the days become longer than twenty-four hours. On the Arctic Circle there is a twenty-four hour day on June 21st. A little farther inside the Arctic Circle there are two weeks of continual day. Still farther north there are two months when the sun never sets. Finally if we went as far north as the north pole, we would reach a spot which has six months of continual day. There are about two months of continual day where the Eskimos live. There is a continent at the south pole but no people live there. Perhaps you will see

movies which show pictures of Byrd's visit to this continent. See if you can find this continent.

Find out why people cannot plant crops and farm in the Far North.

Make a list of all the pictures shown in the references you read of:
- Houses of the Eskimos, snow, sod, wooden
- The way the Eskimos travel in winter; in summer
- The way the Eskimos hunt
- The way the Eskimos dress

Outline the work of the men and women in winter.

Outline the work of the men and women in summer.

Fill in the following chart. It will show you how the Eskimo lives in comparison with other people about whom you have studied.

	Food	Clothing	Houses	Travel
Eskimos				
Congo Negroes				
Arabs				
Swiss				

See if you can find out how Eskimo life on the coasts differs from Eskimo life farther inland.

What have you found out about the days and nights in the winter in Eskimo land? In summer?

Why would you call some of the Eskimos nomads?

Describe the home life of the Eskimos.

Read about and be ready to report on:
- Why crops are not grown
- Winter clothes of the Eskimos
- Hunting equipment
- Why the people and animals live on meat
- Furniture of the homes
- Domestic animals
- Where flowers bloom in summer
- How an igloo is made
- How the home is heated
- How food is prepared
- Use of the grass which grows in summer
- Jewelry made and worn by the girls
- How sewing is done
- Customs as to eating
- How the people look
- Animals hunted
- Use of the caribou
- Use of bird eggs and birds, wild ducks, and geese
- Why winter is a good time to play

See if you can find the following words used in your references. Make a sentence using each of these words:

nomad	kayak	umiak	iceberg
turpik	sledge	walrus	cache
seal	harpoon	caribou	
blubber	igloo	reindeer	

Supplementary List

Read what you can find in your references on the work of the following men:

Vilhjalmur Stefansson
Robert E. Peary
Richard E. Byrd
Roald Amundsen

Write a paragraph on why it is so hard to get to the North or South Pole.

Write a paragraph on how animals live in the Far North.

Find a picture of a walrus. Find out what he lives on and how large he is.

Write a description of an Eskimo's winter home (igloo) and contrast it with an Eskimo's summer home (turpik).

Write a paragraph on "The Three Jobs of the Hunter in Eskimo Land."

See if you can write a play about Eskimos which you and your classmates may present.

Summary

Complete the following sentences:

1. The summers in the Far North are .....
2. The winters in the Far North are .....
3. The Eskimo eats ..... because .....
4. The people of the Far North wear clothing of ..... because .....
5. The Eskimos do not eat fruits and vegetables because .....
6. Some Eskimos live in ..... in summer because .....
7. The Eskimos do not live in one place all the time because .....
8. The men spend most of their time in ..... because .....
9. The women burn ..... for cooking and lighting because .....
10. Eskimos get the materials for clothing from .....
11. The Eskimos store food by ..... because .....
12. The hunter has three jobs in Eskimo land, to ....., to ..... and to .....
13. Flowers bloom in the Far North in the short summer because .....
14. It is difficult to reach the North or South Pole because .....

15. The oceans bordering North America are .....
16. In winter Eskimos hunt .....
17. In summer Eskimos hunt .....
18. The Eskimos use ..... for travel because .....
19. Eskimos are called nomads because .....
20. Hunting equipment of the Eskimos consists of .....
21. The work of the people of the Far North differs from our work because .....
22. The work of the people of the Far North differs from the work of the Congo Negroes because .....
23. Three things which keep the long two months' winter night of the Eskimos from being very dark are ....., ... and .....

BIBLIOGRAPHY

School readers continue to be a helpful source of material for teaching geography in these grades. A few page references are listed below, taken from the readers that were available at the time these units were prepared. Teachers will be on the search for more such references and will add them to the list whenever new texts are adopted, supplementary readers added to the library, or visits made to the public libraries or to the office of the county superintendent. Many companies publish geographical readers, work-books, and other geographical material in series, including travel, journeys to other lands, and other topics from which selections can be made. Representatives of book companies will be glad to furnish information as to their publications adapted to any given grade or subject.

Obviously references given below are not to be considered as complete or to be interpreted as essential to the working success of these units. They are only a starting point. The teachers can easily make substitutions or additions from the books on hand in the school libraries. Space is given for adding new titles and references. So much attention is being given to publications of new materials in the social studies that teachers will have no difficulty in locating additional supplementary books. A more extended list will be printed in the 1933 supplement to the school library manual now in preparation. It will contain a bibliography devoted entirely to the social studies. Teachers should not overlook the references in the elementary course of study manual.

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ADDITIONAL REFERENCES

INTERMEDIATE AND UPPER GRADE GEOGRAPHY

(Grades Five, Six, and Seven)

Introduction

The purpose of the geography material arranged for fifth, sixth, and seventh grades is: to improve the reading ability of the children in these grades through having them read widely; to get them away from memorizing the material of a textbook; to cause them to realize that geography is a study of the living world of which they are a part; and to train them to find data pertinent to the problem in hand and use them in gaining an understanding of how men fit their ways of living to the conditions of the natural environment in the region which they occupy. This material is to be used as a guide and not as a textbook.

The materials used are based upon the elementary state course of study. No attempt is made to say in what grades this material is to be used, as there are numerous plans in local use throughout the state. The plans and set-up of this material, however, vary in difficulty, and some attention should be given to adjusting the units to fit the learning powers of children at different ages. Texts which the children have and other geography books, as well as encyclopedias, may be used for reference reading.

The organization of this material includes:

1. The approach and problem set-up in which the most crucial problems of the group of states or country are suggested. Pupils are asked to consider these problems and find the answers to them as they read their own texts and other reference books. Space has not permitted any attempt to take up the lesson approach or the development of the problems during the class period.
2. Some things to do which consists of a required and a supplementary list of things pupils may do during the study period outlined by the weekly teaching program in the elementary state course of study.
3. Summaries or tests which may be worked out, in some cases with the books open, and in others with the books closed. Much use is made of questions requiring reasoning.
4. Use of outline maps is required for locating places, products, etc. The essential place geography emphasized in the elementary state course of study has been included for location on outline maps.

THE UNITED STATES

I. The Middle West

North Dakota	Missouri
South Dakota	Wisconsin
Nebraska	Illinois
Kansas	Indiana
Minnesota	Ohio
Iowa	Michigan

Corn and Meat Belt

1. Approach and problem set-up—Read these problems and think them over carefully before reading the references on corn and meat.

Why corn is raised in the corn belt
Things in the corn belt which nature has provided for helping the farmer
How the farmer makes use of what nature provides for raising corn
Other crops raised in the corn belt
Why so many hogs are raised in the corn belt

2. References—Read references, thinking about the problems as you read.
3. Things to do

Required List

Look up and report on the following:

Is the corn belt near or far away from the equator? Would you say it is one-half, one-third, or three-fourths of the way between the equator and the north pole?
How these middlewestern states have come to have such valuable farm land
Where rain in the corn belt comes from
Whether or not rain comes when the corn needs it
Weather conditions best for corn
Pests which the farmer must fight
Why more meat than corn is supplied by the corn belt
Why so many corn belt farmers keep cows
What the typical corn belt produces in addition to corn (oats, barley, or wheat and hay)
Why there is need for cities in the corn belt
Work of the lake and river cities in the corn belt

Show the corn belt on an outline map of the United States.

List all of the things that you have found which make the corn belt a suitable region for corn.

Make a plat of a corn belt farm. There are 160 acres in the farm which are divided into five fields of 32 acres each. One of these fields is divided into smaller plots including dwelling and barn yards.

Write down all the uses of corn of which you can think. Can you find more uses in a reference book?

Fill in the following outline:

States Wholly in the Corn Belt	States Partly in the Corn Belt

Use these words and expressions in sentences of your own: prairie, glacier, township, quarter section, corn weather, ensilage, concrete silo, legume, fertilizer, racks, troughs, stockyards, grain elevator, nodules, erosion.

Supplementary List

Plat another corn belt farm.

Make a plat of a dairy and feeder farm. How may it differ from the first corn belt farm which you made?

Start a rainfall distribution map of the United States. Use the following colors for shading in the rainfall of these states:

10 inches or less (desert)—yellow
10 to 20 inches (semi arid)—orange
20 to 40 inches (plentiful)—blue
Above 40 inches (heavy)—black

List the live stock which may be found on an average corn belt farm.
Outline the spring work of the corn belt farmer.
Outline the summer work of the corn belt farmer.
Outline the autumn work of the corn belt farmer.

Meat Packing Cities—Transportation

1. Approach and problem set-up—Read these problems carefully before you read the references on meat packing cities and transportation.

Where large stockyards and meat packing plants are located
How meat is shipped from the packing cities to the East
How Chicago and other cities are located for meat packing

2. References—Read references keeping in mind the problems on this industry
3. Things to do

Required List

Name at least six great meat packing cities in this section.

On an outline map locate the list of meat packing centers you have named and note railroads leading to each.

List all the by-products of meat packing that you can.
Explain why many corn belt cities are meat packing centers.

Supplementary List

Write a paragraph on "How the Meat Packing Industry is Carried On."

The Largest City in the Middle West—Chicago—Other Cities

1. Approach and problem set-up—Read the problems with regard to Chicago and try to keep them in mind as you read the references.

Why Chicago has become a great meat packing center
How the needs of Chicago are supplied
Why our largest cities are ports or railroad cities
Why Chicago is called the "Great Central Market"

2. References—Read after studying the problems
3. Things to do

Required List

Prepare reports on the following:

Ways in which the following have affected Chicago:

Railroads from all directions
Its location on Lake Michigan
Its location in the corn belt
Its location on the Chicago River
Its markets for meat
Its markets for garden stuffs
The railroads from Iowa to Chicago
Where Chicago gets its water supply
How Chicago disposes of its sewage
Where Chicago gets its summer vegetables
Where Chicago gets its milk supply
Transportation in the city—Street car, busses, elevated lines, lack of subway
Places of interest—parks, amusement centers, museums
Foreign sections in the city
Why cities grow up around the ends of lake routes
Why our largest cities are ports or railroad cities
How resort cities and mining cities are started

Explain how you would go from your home to Chicago.

Locate, on an outline map, the most important cities of the middlewestern states.

Explain:
Our need for cities
The work of river cities
The work of the lake cities

Start a population distribution map of the United States. Put in one dot for every 200,000 people living in these states. Tables in the backs of textbooks give the population of each state.

Start a manufacturing distribution map of the United States. Show places where much manufacturing is done by making heavy dots close together with a colored pencil. Color the places which do some manufacturing with medium heavy dots farther apart. Color places where little is done with lighter dots and far apart. Leave white places where no manufacturing is done. Use this map for the middle western states and save it to use later when studying other sections of the United States.

Supplementary List

Write a paper telling of the things which you saw while in Chicago or would expect to see if you have never been there.

Make a list of the important manufactures of Chicago.

List the different kinds of work which Chicago does.

The Wheat Belt

1. Approach and problem set-up—Read the problems and think about them as you read the references on the wheat belt.
   Why some sections of the middlewestern states choose to raise spring wheat and others winter wheat
   Why Minneapolis is such an excellent location for flour mills
   Ways in which the corn and wheat belt regions are alike and unlike

2. References—Read references keeping in mind the problems on the wheat belt.
3. Things to do

Required List

Make a bar graph to show the world's wheat production; then show on the bar the part of the whole which the United States produces.

Write a paper on "Wheat Ranches in the States," in which you include the following:
Other crops which are found on the wheat ranches
Number of acres in some wheat ranches
Machinery used for seeding and harvesting wheat
The labor supply in harvesting wheat
Storing of the grain from the wheat ranches

On an outline map put a blue line around the states included in the wheat region. Also mark the wheat milling centers.

List the work of the farmer in the winterwheat belt; in the spring wheat belt.

Chart the length of growing season by days in the wheat and corn belts.

Fill in the following chart:

Middle Western States in the Spring Wheat Belt	Winter Wheat Belt

Supplementary List

Make a collection of labels from packages which have contained wheat products.

Explain how the wheat farmer's crop is sometimes destroyed.

Make graphs showing a comparison of wheat grown in United States and Canada.

Tell the story of how flour is made.

Find out about and report on:
Machinery used in harvesting wheat
Farming risks in raising wheat
The Falls of St. Anthony and their power

The Dairy Belt

1. Approach and problem set-up—Read these problems and keep them in mind as you read the references on the dairy belt.
   Why dairying is a good industry for the northern edge of the corn belt

Why the production of corn and hay encourages the dairying industry
What products come from milk

2. Read references on the dairy belt keeping in mind the problems of this belt.
3. Things to do

Required List

Read and be able to report on:
How a dairy farm would compare with a ranch
How and why milk is pasteurized and condensed
Value of refrigeration to the dairy industry
How the cities get their milk supply
Feed for dairy cattle

On an outline map draw a line around the chief dairy region of the middlewest.

Make a graph showing the comparison of the value of dairy products of Ohio, Illinois, Indiana, and Iowa with that of New York and other states of the New England section. Data for this graph may be found in the United States Department of Agriculture Yearbook.

List the work of the dairy farmer throughout the year.

Supplementary List

Write a description of a dairy farm.
Name three breeds of dairy cattle and describe each kind.
List all the products which come from milk and describe each.

Mining and Lumbering

1. Approach and problem set-up—Read the following problems related to mining and lumbering and keep them in mind as you read the references.
Why Chicago, Cleveland, Gary, and Detroit are important as manufacturers of iron and steel
How iron ore from Minnesota travels to the coal district of Pennsylvania
Where there are forests in the middlewestern states
How the lumber industry is carried on
2. References—Read references keeping the problems in mind.
3. Things to do

Required List

Tell what minerals are found in the middlewestern states and where each is found.

Make a list of important iron and steel cities of this section.

Explain what resources are necessary in the smelting of iron ore.

Locate on an outline map regions where the following are mined: iron, copper, salt, lead, zinc.

On an outline map show where there are forests in the middlewestern states.

Supplementary List

Find a description of the way iron is mined by the open pit method and write a paragraph about it.

List states in this section in which petroleum is mined.

Explain each of the following:

How iron ore is smelted; how steel is made
How iron is used for making agricultural machinery

Make a list of the advantages of having a logging camp near a river on which logs may be sent to the mill by water.

Write a description of a logging camp.

Write a paragraph on "Methods of Logging."

Make a list of the purposes of wood cut from the middlewestern states.

The Automobile Industry

1. Approach and problem set-up—Read the problems on the automobile industry and keep them in mind as you read the references.
Why almost everyone thinks of Detroit and automobiles together
Why Detroit is so well located for making cars and other machinery
How cars are sent from Detroit to places where they are sold
2. References—Read your reference books looking for answers to these problems.
3. Some things to do

Required List

Find out how many people in Detroit and surrounding cities are employed in making automobiles.

Put an automobile together.

Carefully copy a map of the Great Lakes region. Cut out and paste a little picture of an automobile where the city of Detroit is located. Do you know what parts of an automobile are made of iron and steel? Of copper? Of leather? Of lumber? Is coal used in the automobile factory? Draw lines of different colors to places from which Detroit receives each of these materials. Write the name of each material on its line.

To make you able to explain to others learn how to use these expressions in talking to your friends: assembling plant, distributing center, wholesale merchants, standardization, age of machinery, local agency, moving conveyor, loading by gravity. Use each of these in a sentence. Read your sentences aloud to a class and let them tell whether or not you understand the meanings of the expressions.

List other cities which manufacture automobiles.

Supplementary List

List at least ten different kinds of automobiles, and find out how many of them are made at Detroit.

Find out in what cities other cars are made.

Find out where trucks and tractors are made.

Find out what cars are made at Syracuse, New York.

TEST TO BE USED AT THE COMPLETION OF THE UNIT ON THE MIDDLE WESTERN STATES

DIRECTIONS: The correct answer to each of the questions in Number I is a single word. In each case in which you know or think you know the answer, write it upon the blank line in front of the question. Do not write more than one word on each line.

..... 1. In which part of the United States is the corn belt?

2. Give the most important use of corn.
3. In which section of the United States is the meat belt?
4. Name one important breed of hogs raised in the meat belt and used for bacon.
5. What is the largest city in the middle west?
6. To what are extensive areas of land too dry for farming devoted?
7. Name the most important city in the United States in which you expect to find large stock yards and meat packing plants.
8. How is the meat shipped from the packing cities to the East?
9. Where does Chicago get its water supply?
10. Where does Chicago get its summer vegetables?
11. What is the most important truck gardening county in the middlewest
12. Name an important state leading in the production of dairy products?
13. What has enabled Minneapolis to become a big wheat milling center?
14. What part of the wheat of the world does United States produce?
15. Improvement along what line has helped to increase our wheat production?
16. On what river is Sioux City located?
17. What is the chief manufacturing industry of Sioux City?
18. Where are the Falls of St. Anthony?

On outline maps of United States:

a. Mark off the middle western states with a red pencil and write in the names of these states.

b. Locate:
   (1) Four important rivers draining this region
   (2) Four great lakes
   (3) Low and high regions
   (4) Places where there are twenty inches or more of rainfall
   (5) Places where there is from ten to twenty inches of rainfall
   (6) Iron, copper, zinc, and lead mines
   (7) Most important cities on the Great Lakes
   (8) Most important cities located on rivers
   (9) Ozark Plateau
   (10) The Great Central Plain
   (11) The following cities: Columbus, Cleveland, Toledo, Detroit, Chicago, Milwaukee, Minneapolis, St. Paul, Duluth, St. Louis, and Kansas City

Note—The above may be used first as an exercise and later as a test.

II. The Mountain and Plateau Section

Montana	Utah
Idaho	Arizona
Wyoming	Colorado
Nevada	New Mexico

Grazing Section

1. Approach and problem set-up—Read the following problems in connection with the grazing section.
   Ways in which the grazing section differs from the middle western states
   Why fewer people live in grazing lands than in farming lands
   How dry farming is carried on in the grazing section
   Why ranches in the Great Plains are large
   The work of the ranch
2. References—Read references keeping in mind the problems outlined
3. Things to do

Required List

Make a long list of the ways in which you see that the mountain and plateau section states differ from those of the middle west.

On an outline map of United States show the ranching states. They are all the states which lie at the eastern foot of the Rocky Mountains.

Name the state through which meat will travel in refrigeration cars from this region to New York City.

List the leading crops grown on the various sections where irrigation is practiced.

Prepare to report on the following topics:
Mountains in this region
About how far west of us this section is located
In which states of the Great Plains there will be most danger of losing cattle in winter blizzards
Whether or not we produce enough mutton to supply our demand
How beef cattle are fattened for market
What is done for cattle food in summer and in winter
What is meant by the Great Basin

Show on your outline map of United States all the part of this section which has 20 inches or over of rainfall. With a different color of pencil color in the semi-arid parts, those which have 10 to 20 inches of rainfall. Arid land has less than 10 inches of rainfall a year.

Continue the population and manufacturing distribution maps of the United States. Show how the plateau section ranks in population and manufacturing with other sections of the United States.

Use these words in sentences of your own: corral, shearer, clipper, fleece, rancher, herder, Great Plains, spring rains, band, coyote, bobcats, mountain trail, summer pasture, timberline, desert lands, irrigated alfalfa, desert pastures, bush food, yearly round trip.

Supplementary List

Find and read the description of a cattle ranch.

After reading about ranches lay out what you think a cattle ranch should be.

Give reasons why this region is better for sheep than for cattle.

Write a paragraph on "The Work of the Ranchmen."

Select a route over which cattle may be taken from a Wyoming ranch to an Iowa farm.

Trace on an outline map the route some cattle raised on the plains of South Dakota might take as they are transported for meat to New York.

Trace on an outline map the routes followed in taking some cattle from Western Texas to Chicago, giving them a stop-over for feed in Iowa.

Write a paper on "How the Dry Farmer Saves Moisture for His Crops."

Mining (Gold, Silver, Copper, Lead) and Forests

1. Approach and problem set-up—Read these problems on mining and forests in the mountain and plateau section and keep them in mind as you read the references.
   - Where minerals are found in the mountain and plateau section
   - How the discovery of minerals in this section has affected the growth of the population
   - How timber can be used without waste
2. References—Read references thinking of the problems set up.
3. Things to do

Required List

Find out what part of the world's gold is mined in the United States each year. Make a graph showing this.

Find a description of a mining camp in a mountain region of this section. Through it bring out the difficulties of mountain transportation. Consider early snows, land slides, swift mountain streams, bridges, and tunnelling.

On an outline map of United States show states in this section which produce gold, silver, and copper.

Show on an outline map cities which are important in this mining and forest region.

Explain how gold, silver, and copper are mined.

Show on an outline map in which parts of this section forests are found.

Supplementary List

Find out which mints in the United States make pennies.

Outline all the uses you can of copper, silver, and gold.

Read about how gold is mined and then write a paragraph about it.

Tell about the work you would do if you were one of the following:

- A forest ranger
- A miner
- A lumberman

Write a paper on how mining towns grow and decline.

Scenery

1. Approach and problem set-up—Study the following problems and keep them in mind as you read the references on scenery in this section.
   - Are the National Parks in this region worth setting aside as playgrounds for all of us

   - Why our largest playgrounds are in this section
   - How visitors are entertained in this section of the country
2. References—Read references keeping in mind the problems set up
3. Things to do

Required List

On an outline map of the United States locate some of the National Parks of this section.

Consider the following topics for reports:

- The purpose of our National Parks
- The location of our National Parks in this section
- How the natural beauty of the mountains is being preserved
- Why Yellowstone National Park and Glacier National Park are of special interest
- The Grand Canyon and country around it
- Why our largest playgrounds are in the West

Supplementary List

Write to the National Park Service at Washington, D. C. for information and pictures of our National Parks.

Write a description of the Great Basin and the Colorado Plateau and show why these regions support a very sparse population.

Irrigation

1. Approach and problem set-up—Think the following problems over carefully.
   - Why people were afraid to settle in the mountain and plateau section in early days
   - Why the government has established irrigation projects in these states
   - How water is secured for irrigation
2. References—Read references keeping the problems in mind.
3. Things to do

Required List

On an outline map locate some well known irrigation projects.

Find and list all the interesting facts you can about the following:

- The Belle Fourche irrigation project
- City of Pueblo
- Colorado Springs
- Boulder Dam

Be able to tell or write about the following:

- Into what states the desert of the United States extends
- What mountains have to do with irrigation
- Why Death Valley is an interesting place but has few residents
- Why there are Salt Lakes in the Great Basin
- Why the Western plateaus are thinly settled
- Why Denver has become the metropolis of the plains area
- The crops raised in the Imperial Valley
- Why irrigated farms are small
- How dry farming is carried on

Supplementary List

Write a description of Death Valley.

Make a list of the states having one or more "irrigation or reclamation" projects.

List the products of the irrigated farms.

Make a scrapbook putting into it pictures of products grown on irrigated farms of this section.

Read to find out about irrigation projects now in progress in these states.

TO BE USED AS AN EXERCISE AND LATER AS A TEST

a. Mark off on an outline map of United States the Mountain and Plateau section with a red pencil and write in the names of these states.

b. Locate on an outline map of United States:

(1) Two important rivers draining this section
(2) A great lake
(3) The Great Basin
(4) Colorado Plateau
(5) Rocky Mountains
(6) Death Valley
(7) Imperial Valley
(8) Two places where there are irrigation projects
(9) Ten national parks
(10) The following cities: Denver, Butte, Salt Lake City

III. The West

Washington
Oregon
California

Forests, Mines, and Fisheries

1. Approach and problem set-up—Think about how the forests of the Pacific States are important and why they are so heavy in this part of United States. Why mining and fishing are important industries in this section.
2. References—Read your references on forests in the west.
3. Some things to do

See if you can find out why the population is so sparse in this region.

Show density of population, rainfall, and manufacturing in these states on your outline maps.

On an outline map of the western states show the forest regions of the west. Compare this with your rainfall map of the region.

Make a list of the products which come from the forests of the West.

Be able to answer the following questions from your reference reading:

Why do forests grow well in the Pacific Northwest?
How large do the trees grow in the West?
How are logs transported in the western States?
Why are Portland and Seattle important?

Why is the lack of coal and iron in these parts a handicap?
How is timber made usable?
What are the important forest products of this section?

Measure the length and the width of the mountain region, using your ruler and the scale of miles given in your book.

Supplementary List

Make a list of the different kinds of trees in the Western forests.

Write a paragraph on the life of a forest ranger.

Find pictures of a logging camp and write a paragraph describing it.

Outline the uses of lumber in your community.

Hunt information on forest fires. Give some safety measures for preventing forest fires.

Describe salmon fishing in the life of a forest ranger.

Write a paragraph on the climate of southern California and why people from Iowa sometimes go there.

Write the story of the discovery of gold in California.

List the minerals mined in this section.

Make a chart comparing gold and petroleum as to usefulness.

The Fruit Industry

1. Approach and problem set-up—Consider why the western states are so well adapted to fruit raising and how some regions get enough water to carry on this industry.
2. References—Read references on the fruit industry of the West.
3. Some things to do

Required List

List all of the Western fruit crops you can find and tell in what form each comes to our market here.

Figure out the following:

How far oranges from California travel to reach us here in Iowa
Through how many and which states do California oranges pass to reach New York

Make a graph showing the comparison of the citrus fruits grown in the West with those of the rest of the United States.

Find out about and be able to report on:

Why San Francisco has become the metropolis of central California
The raisin industry in California
The dried fruits of the California Valley
The apples of Washington and Oregon
California orange ranches in winter
Summer work on an orange ranch
The California Fruit Growers' Association

Supplementary List

Look up the meaning of citrus fruits.

Find out how it is possible to grow oranges in a land where a few frosts are likely to occur.

Find out how Los Angeles gets its water supply and write a paragraph on it.

Moving Picture Industry of Los Angeles

1. Approach and problem set-up—Think about the reasons for the development of the picture industry carried on around Los Angeles.
2. References—Read references on the moving picture industry.
3. Some things to do

Required List

Find out and list all the things which Southern California has to offer movie makers.

Try to find out from your reference reading why such an industry is carried on in Los Angeles.

Supplementary List

Write a paragraph on how moving pictures are made.

Write a paper on the work of taking motion pictures and the advantages of California for such work.

Make a list of five motion pictures that you know used scenes in or near Los Angeles.

Cities, Trade and Manufactures

1. Approach and problem set-up—See if you can find out why the most important manufactures of these states are canned fruits and vegetables, lumber planing, shipbuilding, and automobiles and machinery.
2. References—Read references on this problem.
3. Some things to do

On an outline map locate:

Two seaports on Puget Sound
The seaport on San Francisco Bay
The seaport near the junction of the Willamette and Columbia Rivers
The railroad center on San Francisco Bay

List the manufactures of the western states.

Explain why lumber is the chief product brought by sea to Los Angeles.

Explain why Portland is well located for trade and transportation.

Write a paragraph on "How Los Angeles made herself a good harbor."

Supplementary List

Find out where cherries and berries are canned.
Find out where condensed milk is canned.
Find out where many boats are built.
Find out where sugar beets are grown.

Test to be Used upon Completion of the Units on the Mountain and Plateau States and the West

DIRECTIONS: Name as many varieties, types, or kinds of each of the following as you can. Record your answers to each exercise upon the blank lines immediately beneath it, using one line for each answer. The number of lines under each answer is the same, but this does not mean that there are that many answers to be given to each. In no case, however, are there more than eight.

1. Ways in which the mountain and plateau section of the United States differs from the middlewest:
2. Mountains which you would come to in traveling west from Iowa:
3. Reasons why the mountain and plateau section is good for grazing:
4. Reasons why more sheep could profitably be raised:
5. Minerals mined in the mountain and plateau section:
6. List of words describing a mining camp in a mountain region of the West:
7. Difficulties of mountain transportation:
8. Ways in which the West differs from the Plateau Section:
9. Uses of copper:
10. Names of our most important National Parks:
11. Reasons for having National Parks:
12. Places in western states where irrigation is practiced:
13. Crops raised by irrigation in western states:
14. Why forests grow well in the Pacific Northwest:
15. Forest areas of the western United States:

16. Ways in which timber is made usable:
    ....
    ....
17. Uses of lumber:
    ....
    ....
18. Fruit crops of the West:
    ....
    ....
19. Things which Southern California has to offer to movie makers:
    ....
    ....
20. Forms in which fruit crops of the West come to our market here:
    ....
    ....
21. Do the following on outline maps of United States or a map of the Western States:
    a. Mark off the Western Section with a colored pencil and write in the name of each state.
    b. Locate on outline maps of the United States:
        (1) Two important rivers
        (2) Three mountain ranges
        (3) Three important harbors
        (4) Pacific Ocean
        (5) Golden Gate
        (6) The following cities:
            Seattle
            Portland
            San Francisco
            Los Angeles

IV. The South (Land of Cotton)

Oklahoma	Mississippi	West Virginia	North Carolina
Texas	Tennessee	Maryland	South Carolina
Arkansas	Alabama	Virginia	Georgia
Louisiana	Kentucky	Delaware	Florida

Cotton

1. Approach and problem set-up—Think about the following problems as you read the references on cotton. How many of the problems are you able to answer after you have read the references?
    Why cotton is the leading crop of the southern states
    Why the farmers of the southern states raise a variety of crops, rather than depend upon cotton alone
2. References—Read references, keeping the problems in mind.
3. Things to do

Required List

Mark off the cotton belt on an outline map and write in the names of the states.

Make a graph showing the relation of the production of cotton in the South to that of the world.

Write a description of the work of the cotton grower. Include:

Time for planting	Ginning the cotton
Cultivation	What is done with the cotton used
Combatting the boll weevil	What happens to the baled cotton
Picking the cotton	The chief port which ships the most cotton

Compare the growing of corn in the middlewest to the growing of cotton in the South. Use the chart below:

	Planting Time	Number of Days Without Frost	Process of Cultivating	Process of Harvesting	Uses	Pests
Corn						
Wheat						

Fill the blanks in the following sentences:

1. We do not raise cotton in Iowa because .....
2. Much hand work is required in raising cotton because .....
    .....
3. Laborers can be kept cheaply in the South because .....
    .....
4. Some of the big milling cities and their locations are .....
    .....
5. It is an advantage to a city to be near the cotton fields because .....
    .....
6. Cotton mills are run by .....
7. The great pest of the cotton grower is .....
8. Cotton demands a ..... climate, ... rain, and ..... soil.
9. Much labor is required for cotton raising because .....
10. Cotton needs ..... growing days.
11. The invention of the cotton gin was important to the south because .....
    .....
12. Cotton factories are increasing in the South because .....
    .....
13. The cotton picking season lasts a long time because .....
    .....
14. Other crops besides cotton are raised in the south because .....
    .....

Make a list of the uses of cotton seeds.

Supplementary List

Make a list of the things which the cotton plant furnishes.

Tell the story of how cotton is made into textiles.

Explain how cotton is ginned.

Write a paper on the boll weevil. Include the ways in which the farmers of the south fight it.

Other Important Crops

1. Approach and problem set-up—From your reference reading find out the following:
   Why agriculture is the leading occupation of the south
   What crops besides cotton are grown
2. References—Read references, keeping in mind the problems given.
3. Some things to do
   List other important crops of the cotton belt.
   On an outline map mark the places where the following are grown:

cotton	sugar cane	rice
tobacco	fruits	

   Outline the place and conditions of rice cultivation.
   Name the principal fruits which are grown in the South.
   Explain why this region is called the "Southern Mixed Farming Region."
   Write a list of ways in which men make their work fit the kinds of country found in these southern regions.
   Fill in the following chart on crops and products:

Crops of Southern States			
Field Crops	Tree Crops	Kinds of Forests	Forest Products

Be able to report on the following:

Where sugar cane is grown
Meaning of the "Sugar Bowl" of Louisiana
Effects of the Mississippi River floods on the "Sugar Bowl"
Tobacco as a product of the South
Why rice can be grown cheaply in the South

Supplementary List

From your reference reading write a paper on sugar including such information as size of plantations, how the mills are operated, and preparation and harvesting of the crop.

Make for each of the southern states a list of the important things which the name of that state now suggests to you.

Winter Vegetable Gardens

1. Approach and problem set-up—Study these problems and after reading the reference material be ready to report on them.
   Why the winter vegetables we get from the stores in Iowa are raised in the southern states
   Why the winter time is a busy season for the truck gardeners of Florida and other southern states
2. References Read references on winter vegetable gardens.
3. Things to do

Required List

Find out which vegetables are shipped to Iowa during the winter.

List ways in which Florida is well adapted to the raising of early vegetables.

On an outline map color the states or sections which raise winter vegetables. Also show, using colored pencils, routes over which fresh vegetables are shipped to northern states.

Supplementary List

Write a paper on how winter vegetables reach the northern markets.

Winter Resorts

1. Approach and problem set-up—Think about:
   Why some people go south for the winter
2. References—Read references to see if your problem is answered.
3. Some things to do

Required List

Read about and be able to report on:
   Some things which attract people to the south in winter
   The clothes one would need to take when spending the winter in the south
   How the cottage rented will differ from a cottage in Iowa
   Where the playgrounds of the south are located
   Why there are many pleasure and health resorts among the mountains
   How far south of Iowa you would be if you spent the winter in Florida

Find out how much closer to the equator you are when you go to Florida from Iowa.

Describe the playgrounds of the south.

Describe the health resorts of the south.

Supplementary List

Write a paragraph on how the winter visitors provide work for the people of Florida.

Write a paper on the time of the year you would choose to visit Florida and why.

Petroleum and Other Minerals

1. Approach and problem set-up—Think about:
   - What minerals are produced in the south
   - Why petroleum is an important product of the south
2. References—Read references keeping in mind the above problems.
3. Things to do

Make a list of the minerals mined in the south.

Make a graph showing how much petroleum this section produces in comparison with other sections of the United States.

Look up at least two southern seaports from which mineral oils are exported.

Find out where and how the following are produced: iron, sulphur, phosphate, bauxite, and coal. Show these on an outline map.

Fill in the following outline:

Oil

Found in the southern states in .....
Transported how .....
Where and how refined .....
Effect on growth of cities .....
Uses of petroleum .....

List the uses of oil, gasoline, and kerosene.

Supplementary List

Name the petroleum products used in your home.

Write a paper on "oil work" in the south.

Write a paragraph on the manufacturing of iron and steel in the southern states.

Mississippi River and Its Floods

Importance of New Orleans and Other Cities

1. Approach and problem set-up—Think about these problems and see if you can answer them from your reference reading.
   - Why the Mississippi River at times floods the land of the southern states
   - Why farmers use the Mississippi bottom lands when they know the danger of floods
   - Why New Orleans has become a great city
2. References—Read references keeping in mind the above.
3. Some things to do

Required List

Turn to a map of the United States and see how many of the states send water into the Mississippi River. On an outline map run a colored pencil around all the land drained by the Mississippi River.

Give three reasons why men farm the flood lands of the Mississippi River even though such is dangerous.

Give reasons why New Orleans is an important city.

In two columns list products brought to New Orleans from other countries and products sent out of New Orleans.

Show the important seaports of Texas on your outline map.

Write down on your paper the names of:

A great tobacco market in North Carolina
A great cotton market in Tennessee
Two cities which are centers for oil work
Two cities on the Atlantic coast which sell turpentine and rosin
The greatest cotton shipping port in the world
A great live stock market in Texas

Now show these centers on your outline map.

From your reference reading find out and be able to report on:

Why some cities along the Mississippi River suffer from floods, while others such as St. Louis and Memphis are not affected
Why flood warnings terrorize the people living along the Mississippi
Why floods come to the cotton belt
Why farmers try to work the Mississippi bottom lands when they know the danger of floods
Why much has been spent in draining New Orleans
The work of the Southern cities
Why the Mississippi Delta is important
Why New Orleans has become a great city
How Galveston and Houston rank as shipping centers
Why there are fewer cities in the south than in the north
Why the floods of Mississippi River are a serious problem

Supplementary List

After reading the references write a description of the Mississippi River levee.

Write a description of the houses of New Orleans.

Write a description of the "Mardi Gras" celebration held in New Orleans each year.

Find out why New Orleans is called a southern gateway.

Write a paragraph on "How New Orleans has been made a more healthful place in which to live.

TEST COVERING THE SOUTHERN STATES

DIRECTIONS: You will find below a list of twenty questions on southern United States. Each question is followed by several words, numbers, or other possible answers. One of the three answers is more nearly correct than the others. Draw a line under the correct answer.

1. Where is the cotton belt? (southern U. S., western U. S., northern U. S.)
2. Why is cotton not raised in Iowa? (too dry, too cold, too wet, summer too short)
3. At what time of year is work on a cotton plantation carried on? (in the fall, all the time, in the summer)

4. Why can laborers in the south be kept cheaply? (are lazy, many negroes, people like to work, winters mild so homes are built cheaply)
5. How is most of the work in the south done? (by machinery, by hand, by mule power)
6. What pest has to be fought by southern farmers? (fly, boll weevil, grasshopper)
7. What crop is next important to cotton? (lumber, rice, flax, corn)
8. Which southern state produces the most petroleum? (Georgia, Alabama, Oklahoma, Texas)
9. How is petroleum secured? (manufactured, mined, farmed)
10. How is petroleum transported? (pipes, buckets, vats)
11. Why do many people go south in the winter? (to fish, because of the climate, because of the scenery)
12. What important city is located near the mouth of the Mississippi River? (Montgomery, New Orleans, Austin)
13. What is the most important purpose for which cotton seeds are used? (oil, medicine, paper)
14. What is the line where the foothill belt joins the low coast plain called? (piedmont, fall line, coast range)
15. What is the largest state in the Union? (Alabama, California, Texas)
16. What is the capital of Tennessee? (Nashville, Atlanta, Birmingham)
17. In which southern city are there large iron and steel mills? (Columbia, Birmingham, Meridian)
18. In which state is the delta of the Mississippi River? (Alabama, Mississippi, Louisiana)
19. Which of the southern states is a peninsula? (Texas, Florida, Georgia)
20. On outline maps be able to locate the following. Also be able to locate by telling:
    a. Using a colored pencil mark off on an outline map of United States the southern states, and write in the name of each state.
       Mark the most important city of each state.
    b. On outline maps of United States locate the following:
       Highlands and lowlands of the south
       Wet and dry regions
       Three important rivers
       The cotton belt
       The sugar plantations
       The rice fields
       Areas producing fruits
       Mining regions
       Chief manufacturing cities
       Forest areas
       Atlantic Ocean
       Gulf of Mexico
       Mississippi River Basin
       Mississippi Delta
       Mississippi and Rio Grande Rivers
       Mammoth Cave

The following cities:

Norfolk	Richmond	Atlanta
Savannah	Tampa	Birmingham
Mobile	New Orleans	Galveston
Memphis	Louisville	Houston

V. The Northeastern States

Maine	Connecticut
New Hampshire	Rhode Island
Vermont	New York
Massachusetts	Pennsylvania
New Jersey	

Manufacturing and Its Relation to Mining, Transportation, and Water Power

1. Approach and problem set-up—Read these problems and try to keep them in mind as you later read the references on manufacturing.
   Why there is an advantage in locating factories near coal fields
   How the Great Lakes and rivers are an advantage to a manufacturing region
   How iron ore affects the industries of this region
2. References—Read references keeping in mind the problems
3. Some things to do

Required List

Find out the advantages of locating factories near coal fields.

Make a list of all the different factories of which you can think which use iron and steel.

Find out what railroads carry iron and steel out of Pittsburgh.

On an outline map show the routes iron ore boats take from Duluth-Superior to Chicago and Gary, Toledo, Cleveland, and Buffalo.

Make a list of the rivers of this section which furnish water power for manufacturing.

Make a list of the various things manufactured in the northeast section and tell at least one place in which each is manufactured.

On an outline map locate ten important cities in this section and after each write the most important thing it manufactures.

Compare the cities of Pittsburgh, Pennsylvania and Birmingham, Alabama using the following chart:

	Location	Manufacture	Coal	Other Minerals	Population Centers	Size
Pittsburgh						
Birmingham						

Read to find out and be able to report on:

Manufacturing of iron and steel in western Pennsylvania as related to coking coal
Factories located near the coal fields
Source of the iron ore in the Lake Superior district
Factories in the East and Middlewest which buy and manufacture iron and steel articles
Railroads carrying the iron and steel out of Pittsburgh
Use of the Ohio River and its branches in transporting iron and steel
Large manufacturing cities of this section
Why the large cities depend upon agriculture in the surrounding region
Work in New England woodlands and forests; New England building materials
Why New England specializes in the manufacturing of textiles and leather goods when all raw materials have to be imported
How forests aid the boot and shoe industry
Why all harbors of New England are not equally good for trade
Why quarrying is carried on in New England
Ways in which the water power of Niagara Falls was used in early days before coal was used and also at the present time

On your outline maps show density of population, rainfall, and manufacturing in the northeastern states.

Supplementary List

Find out and be ready to report on how coke is made and used.

Write a paper on the use of water power in the New England states before coal was used and also its use at the present time.

Find rivers in other sections of United States which furnish water power.

Write a paragraph on the silk factories of Paterson.

Make several statements about Buffalo which will help to explain the great amount of flour manufactured there.

Make a list of clothing which you think is manufactured in the northeastern states.

Mining Coal

1. Approach and problem set-up—Read and think about the following problems:
   Why mining is an important industry in the northeastern states
   How the production of coal affects other industries of the northeastern states
2. References to be read keeping in mind the problems above.
3. Some things to do

Required List

Make a graph showing the six states that lead in the production of coal and the amount produced by each.

On an outline map of United States show the most important coal producing section of the United States.

Show by graph how the northeastern section compares with United States and the world in coal production.

Mark on an outline map all the states that have to buy their coal from others.

List the by-products of coal.

Read and be able to report on:

Whether or not the United States produces more coal than she uses
The effect of coal production upon manufacturing
The Great Lakes system of waterways
The important lake port of Pennsylvania
The meaning of the "Canal Belt"
The location of the coal and iron cities
Kinds of cargoes usually noted on east bound freighters on the Great Lakes
Kinds of cargoes usually noted on west bound freighters on the Great Lakes

Supplementary List

Write a paper telling how coal is mined.

Make a collection of pictures illustrating mining and transportation of coal. Show, if possible, the hard, dangerous work necessary for the production of coal.

Write a paragraph telling the difference between hard and soft coal.

Take a trip on a coal and ore boat leaving Buffalo and arriving at Duluth. Tell what you would see on the way.

Discuss the discomforts of being without coal.

List the ordinary uses of coal.

List at least six things made of coal.

Explain why the Appalachian Plateau is called "a storehouse of fuel."

Additional Topics

1. Approach—Think about the following problem and keep it in mind, as you read the references related to it:
   Why lumbering, quarrying, fishing, truck-farming, dairying, and entertainment of summer visitors are important industries of this section
2. References—Read references on these topics from your text and library books.
3. Some things to do

Required List

On an outline map note a place important for each of the following industries: lumbering, quarrying, fishing, farming, manufacturing, mining, entertainment of summer visitors.

List the kinds of fish found in New England waters.

Outline the ways in which New York gets its milk supply.

Describe three kinds of transportation for people in New York City.

On an outline map trace the routes a ship would take in bringing the following to New York City:

Sugar from Cuba
Coffee from Brazil
Iron from Chile
Bananas from Central America
Pineapple from Hawaii

Lumber from Canada
Petroleum from Venezuela
Diamonds from Africa

See if you can find out from your readings and report on:

Why there are small farms and intensive farming is done
Why dairying and truck-farming are important in these states
Weather conditions in New England
How work in this section differs from work in the South
Why there are so many people in southern New England and so few in northern New England
Some ways in which the New England highland farming district differs from the southern highland district
Why shipbuilding is an important industry in Maine
What summer resorts there are in the mountains
What city of the Blue Ridge is a health resort
How the Adirondack Mountains are important
What the attractions are which these states offer to visitors
What places in New England are of historic, literary, and educational interest
Factors which have caused the growth of New York City
Why New York City is an important seaport
Where the docking place in New York City is located
What skyscraper buildings there are in New York City
The work of other cities on or near the coast
What kinds of fisheries there are in New England
Reasons for Boston's growth
How Boston ranks as a fish market

Supplementary List

Write a paper bringing out differences in the methods of farming in the corn belt, cotton belt, and New England.

Write a paragraph comparing life in an early New England home with life on a Virginia plantation.

Describe two routes which boats can take from the upper Great Lakes to Atlantic Ocean.

Find out how cold it gets in the New England states. How long are their winters?

Write a paper on "The Life of Fishermen."

Write a paragraph on oyster fishing.

Find pictures showing the natural wonders of this section.

From your reference reading write a description of traffic in a New York City street at the rush hour.

Find out what main railroads enter New York City.

Make a list of the things you would like to learn about New York City.

Describe the points which interest you most in New York City.

TEST COVERING THE NORTHEASTERN STATES

DIRECTIONS: Complete the following sentences by filling in blanks.

1. There is an advantage in having factories located near coal fields because .....
.....

2. The farms in the northeastern states are small because .....
.....
3. There are many historical places in the northeastern states because .....
.....
4. Intensive farming is done in the New England states because .....
.....
5. Pittsburgh is a great iron manufacturing city because .....
.....

DIRECTIONS: Read each question and put a circle around "yes" if it is a true statement and "no" if it is false.

Yes No 1. Is more than one kind of coal mined in Pennsylvania?
Yes No 2. Is wood ever used for making paper?
Yes No 3. Is there a good market for all home products in New England?
Yes No 4. Are there cod fish caught off the New England coast?
Yes No 5. Does Boston handle jewelry more than any other article?
Yes No 6. Is Philadelphia the largest city of New England?
Yes No 7. Is Hog Island near New York?
Yes No 8. Is Harvard University located at Boston?
Yes No 9. Does Vermont have any sea coast?
Yes No 10. Are the Blue Mountains in Vermont?

DIRECTIONS: Complete the following sentences by filling in the blanks correctly:

1. The most important mineral products of this region are: ....., ..., ..., ..., ..., and .....
2. The chief manufactures of the New England states are ....., ..., and .....
3. The chief occupations of this section are ....., ..., ..., and .....
4. Important cities on the Fall Line are ....., ..., ..., ..., ..., ..., and .....
5. The northeastern states are favorably located for trade because .....
.....

DIRECTIONS: Underline the correct word or group of words in each sentence.

1. New York is important because (it is the chief seaport of the northeastern states, it produces coal, it is a meat packing center).
2. The rivers of the northeastern states are important to manufacturing because of (food markets, water power, fishing).
3. The factories of Paterson put out (leather goods, silk goods, canned meats).
4. The farms of the New England states are (larger, smaller, better soil) than the farms of Iowa.
5. The Adirondack Mountains are important for their (hunting, forests, cattle herding).

On outline maps:

a. Mark off the northeastern states with colored pencil and write in the name of each state.
b. Be able to locate this section comparing it with other sections of the United States as to distance from the equator and the North Pole.

c. On outline maps locate the following:
The Great Lakes bordering these states
The Atlantic Ocean
Four important rivers
The Gulf Stream
Gulf of St. Lawrence, Chesapeake Bay
Cape Cod
Important mountain ranges, Mt. Washington
Appalachian Plateau
Hudson, Delaware, and Potomac Rivers
Erie Canal
The following cities:

Lawrence	Holyoke	New York	Philadelphia
Boston	Lynn	Pittsburgh	Baltimore
Fall River	New Haven	Washington	Buffalo

VI. Outlying Possessions of the United States

1. Alaska

1. Approach and problem set-up—Read the following problems and keep them in mind as you read the references on Alaska.
Has Alaska been worth the price that the United States paid for her?
Why fishing and hunting are Alaska's greatest industries
Where the most people live in Alaska and why
2. References—Read references, keeping the problems in mind
3. Things to do

Required List

Read all you can find on the history of Alaska and then fill out this outline:
Where United States got Alaska .....
When United States got Alaska .....
How much was paid for Alaska .....
Why did people make fun of Alaska when United States bought her?.....
What did people call Alaska? .....
Find figures to prove that Alaska has paid for itself many times.
List the minerals of Alaska.
Find out what kind of fish Alaska is noted for.
Describe transportation in Alaska in summer and in winter.
Outline the occupations followed in Alaska.
Find out into what harbors Alaskan ships can go all winter long and why.
Write paragraphs on or be able to discuss:
The effects on Alaska of isolation
How far Alaska is from the equator and how close it is to the north pole
The length of the winter season and how man adjusts himself to it
The length of the summer season and what man does during the summer
Circumstances which bring about the building of railroads
How United States got Alaska
What minerals are produced in Alaska and where they are used
Why fishing is Alaska's greatest industry

Difficulties of transportation in Alaska
Trapping in Alaska
Occupations followed in Alaska
What are the resources of the territory of Alaska?

Supplementary List

Find out all you can about Bethel, a typical village of western Alaska, and write a few paragraphs about it.
Find Fairbanks and explain how and why it is called the "garden spot of Alaska."
Write a paragraph describing the canning of fish in Alaska.
Describe the Eskimos of Alaska.

2. Philippine Islands

1. Approach and problem set-up—Think about and in your references try to find out what important products United States gets from the Philippine Islands.
2. References—Read references to see if you can answer these problems
3. Some things to do

Required List

After you have read about the history of the Philippines fill in the following blanks:
United States got the Philippine Islands from .....
United States bought the Philippine Islands in .....
United States paid ..... dollars for these islands.
The Philippine Islands are near .....
Trace on an outline map some important steamship lines from Manila to other parts of the world.
List the chief exports of the Philippines.
Find out how large these islands are in comparison with Iowa.
Compare Alaska and the Philippine Islands using this chart:

	Occupations	Main Food Crop	Chief Exports	Chief Cities	Location
Alaska					
Philippine Islands					

Supplementary List

Find out how far the Philippine Islands are from the United States.
Write a paragraph on Manila and its trade.
Explain how the chief food crop is grown.

3. Hawaii and Its Sugar and Pineapple Industries

1. Approach and problem set-up—Read and think about the following problems:
How Hawaii can grow so much sugar when she is so tiny

What it means to United States to own Hawaii

2. References—Read references on Hawaii and its sugar and pineapple industries.
3. Some things to do

Required List

After reading the history of Hawaii fill in these blanks:

Where United States got Hawaii .....

When United States got Hawaii .....

How United States got Hawaii .....

Find and list the two most important crops of Hawaii

Supplementary List

Find out why these islands are especially valuable to the United States. Write a paragraph about this.

Write a paragraph on why winter tourists visit Hawaii.

4. Porto Rico and Other Island Possessions of United States

1. Approach and problem set-up—Study these islands to find out why Porto Rico has 400 people per square mile and of what value she is to the United States.
2. References—Read references on these island possessions
3. Some things to do

Required List

Find all the Pacific Island possessions of United States on the map and list them. Find all the Atlantic Island possessions of the United States on the map and list them.

List things which the people of these islands import from United States.

List things United States gets from her possessions.

Describe the sugar cane industry in Porto Rico.

Find out what you can on the Panama Canal Zone and write a paper on United States' part in the canal.

Supplementary List

Find out how United States got these island possessions.

Write a paragraph explaining how the people on these islands make a living.

TEST COVERING THE OUTLYING POSSESSIONS OF THE UNITED STATES

DIRECTIONS: In the following sentences one or two important words have been omitted from each sentence and blanks inserted where the words should be. Read each sentence and write on each blank the word or words which you think makes the best and truest answer.

1. ....., an outlying part of United States, is in the northwestern part of North America.
2. Alaska's greatest industry is fishing and hunting because .....
3. Alaska is a hard place to live in because .....
4. The most important product of Alaska is .....

5. Alaska has barbors into which ships can go all winter because .....
6. The Philippine Islands are under the care of .....
7. People of the ..... race live in the Philippine Islands.
8. The Philippine Islands are important to United States because .....
9. ..... is the chief seaport of the Philippine Islands.
10. Hawaii, a group of islands in the .....=.....=..... zone, lies in the ..... Ocean.
11. Hawaii is a territory which belongs to .....
12. ..... is the capital of Hawaii.
13. Although very tiny, Hawaii grows much sugar cane because .....
15. Most of the people of Porto Rico speak .....
14. Porto Rico is called a "sugar bowl" because .....
16. The Isthmus of Panama connects the ..... and ..... Oceans.
17. The Canal Zone lies in the ..... zone.
18. Because the Philippine Islands have twelve hot wet months in the year, they grow ....., ..., and .....
19. The summers in most of Alaska are too short for growing crops. Therefore the people make a living by ..... and .....
20. Hawaiian sugar planters use large quantities of fertilizer because .....

Canada and Newfoundland

1. Approach and problem set-up—Read the following problems carefully and keep them in mind when you read the references on Canada and Newfoundland.

Why Canada, although larger than the United States, has a popualtion which is only one-twelfth as great as United States

Why industries similar to those of the New England states are found in eastern Canada

Why Canada is important to Great Britain

Why so many people are crowded into the lowlands along the St. Lawrence River

Why Newfoundland is noted for fish

2. References—Read references keeping problems in mind.
3. Things to do

Required List

Show how the resources and industries of the different parts of northern Canada correspond with those of adjoining parts of United States.

On an outline map of Canada color the wheat growing plains in Manitoba, Saskatchewan, and Alberta. Trace the waterway over which wheat is shipped to Montreal from April to the middle of November.

Give reasons why Canada has great quantities of wheat to sell to Europe.

Explain why Canada ships wheat through New York during the winter months.

Locate the leading port of Canada on an outline map.

Write a paragraph on Newfoundland's facilities for fishing.

Supplementary List

Find out about the water power of the rivers which plunge from the highlands to the lowlands in this region.

Write a paper on forest which Canada is cutting today.

List the industries and crops of Canada.

TEST TO BE USED UPON THE COMPLETION OF THE UNIT ON CANADA AND NEWFOUNDLAND

DIRECTIONS: Each of the twenty sentences given below contains one or two blanks representing the omission of words. From the list of words given at the right select the one which belongs on each blank in order to make the best or truest statement and write it upon the blank. The list contains all of the correct answers and also a number of words which are not to be used. Do not use any word in the list more than once. It may help you to do this if you will check each word as you use it.

1. The scarcely settled northern part of Canada and Newfoundland are noted for valuable ..... which are brought to the markets of the world.
2. The wheat growing plains of Canada are Manitoba, ..., ..., and .....
3. Canada has great quantities of ..... to sell to Europe.
4. The ..... River cannot be used at all times in the year for a waterway outlet from Canada.
5. ..... is the leading port of Canada.
6. Canada shares with the United States ..... of the Great Lakes.
7. ..... and ..... trees of Canada are used for making paper.
8. The ..... Valley of Minnesota is a rich wheat land.
9. The city of Winnipeg is located in one of the greatest ..... producing regions in the world.
10. Not much corn is grown in Canada because of the .....
11. Ontario and Quebec have good ..... lands.
12. Nova Scotia has good ..... mines.
13. .....is the capital of Canada.
14. The island of Newfoundland belongs to the .....
15. The people of Newfoundland get their living from the products of the ..... and .....
16. The chief town of Newfoundland is .....
17. The chief city on the west coast of Canada is .....
18. Danish America is composed of ..... and .....
19. Canada has an ..... coast line and the surrounding waters abound in .....

fish
Iceland
Grand Bank
Greenland
indented
Vancouver
Ottawa
St. Johns
forests
sea
British Empire
states
Spain
ocean
Quebec
canal
coal
diamonds
grazing
climate
channel
Winnipeg
Manitoba
bayou
Red River
Region
poplar
spruce
twelve

20. One of the best fishing grounds in the world is called the .....

four
Montreal
Halifax
St. Lawrence
wheat
meat
Alberta
Saskatchewan
furs

Mexico, Central America, and West Indies

1. Approach and problem set-up—Study the problems with regard to Mexico carefully before reading the references on this country. Some important problems to consider are:
   - Conditions which affect the relations between Mexico and the United States
   - Conditions affecting the Central American countries and the relation of United States to them
   - The bases of the interests of United States in the Central American region
   - Why Cuba is called the "sugar bowl" of the Antilles
2. References—Read references keeping in mind the problems on this section of the country
3. Things to do

Required List

Find out whether Mexico City or Des Moines would be a more comfortable place to live in July.

List all the reasons why so many people live in the Mexican highlands.

Write a paper on sisal hemp and its use. Include:
- Where it is produced
- How it is produced
- How it is used by Iowa farmers

Find out under what conditions the following are raised in Mexico: bananas, vegetables, sugar, vanilla beans.

Write a paragraph on "to what extent mining has been developed in Mexico."

On an outline map locate the important cities of Mexico.

On an outline map locate the countries of Central America.

Find out what influence climate, surface, vegetation, and animal life have had on the people of the eastern lowlands of Central America.

What conditions make it possible for Cuba to be the largest source of the United States sugar supply?

Locate these products in the proper division of Central America: rubber, coffee, bananas, potatoes, sugar cane, corn, wheat, coconut, cocoa, gold, silver, cattle, and mahogany wood.

Central America

Central Lowlands	Highlands

Write a paper contrasting the section of Central America used for bananas with the section used for coffee on the basis of climate.

See if you can decide upon the possibilities for development of Haiti and the Dominion Republic, considering their geographic conditions.

Supplementary List

Trace a shipment of sisal hemp from its place of production, through Mexican and American ports to a binder twine factory in Chicago.

See if you can find out why every driver of an automobile has an interest in Mexico.

Find out what railroad interests Americans have in Mexico.

Outline the work of the wet months and of the dry months on the sugar plantations.

Discuss ways in which the surface influences the development of transportation in Central America.

Write a paper on how closely Cuba is allied commercially and politically with United States.

TEST TO BE USED UPON THE COMPLETION OF THE UNIT ON MEXICO, CENTRAL AMERICA, AND WEST INDIES

DIRECTIONS: Fill the blanks in the following sentences:

1. The most important kinds of work in Mexico are ..... and .....
2. The most important seaport in Mexico is .....
3. Five kinds of minerals mined in the plateau and highlands are ....., ..., ..., ..., and .....
4. The chief crop of Mexico which is ..... is raised in .....
5. The population of the southern part of the plateau of Mexico is greater than any other part of the country because .....
6. The chief products of the West Indies are ....., ..., ..., ..., and .....
7. Possessions in the West Indies are valuable to United States and Europe because .....

LATIN AMERICA

According to the World Almanac Latin America comprises South America, Central America, Mexico, Cuba, Haiti, and Santa Domingo.

On an outline map of the World color the divisions of Latin America.

Find out and report on the following:

What nations chiefly have colonized these countries

The chief languages spoken

Why United States is interested in Latin America

How the Panama Canal has brought us into closer relationship with Latin America

How the Panama Canal saves time and money for both North and South America

What the Pan-American Union is and how it is important

List and name the twenty one republics in the Pan-American Union. They should be listed as follows:

Pan-American Union				
United States	Mexico	South American Republics	Republics of Central America	West Indies
		1	1	1
		2.	2.	2.
		3.	3.	3.
		4.	4.	
		5.	5.	
		6.	6.	
		7.		
		8.		
		9.		
		10.		

Brazil

1. Approach and problem set-up—Read these problems on Brazil and think about them as you later read the references on this country.
   - Why Brazil is noted for raw materials
   - Type of people who own these raw materials
   - The most important cities of Brazil and what they do
   - The important forests and cultivated products of Brazil
2. References—Read references keeping the problems in mind
3. Things to do

Required List

Find out about and report on the following:

Why the Amazon Valley is a great jungle with few inhabitants

What parts of Brazil may have many inhabitants in future years and why

Why Brazil is not an important manufacturing country

Why some manufactures have been started in southeastern Brazil
Why Brazil produces so much coffee
With what countries Brazil must compete in raising coffee
Why Brazil doesn't produce as much rubber as formerly
What other countries produce rubber
Why United States is a good customer of Brazil
Where grazing is important in Brazil

On an outline map of South America locate and color in the three important parts of Brazil:

Amazon region
Coffee area
Southern interior grazing region

Trace on an outline map of the World steamship routes from important rubber and coffee cities of Brazil to parts of United States and Europe.

Fill in the following product chart for Brazil

Product Chart of Brazil			
Raw Agricultural Materials	Raw Forest Materials	Raw Materials from Animal Industry	Gems and Minerals

Make a list of the important cities of Brazil and tell why they are important and interesting.

Locate the following on an outline map of South America:

a. Brazil
b. Pacific and Atlantic Oceans, Caribbean Sea, Brazilian Current
c. Andes Highlands, Brazilian and Guiana Highlands
d. Amazon Valley, Llanos, Selvas, Pampas
e. Amazon and Orinoco Rivers
f. Cities: Para, Rio de Janerio, Sao Paulo

Supplementary List

Make a coffee chart showing:

Pictures of the coffee tree
Pictures of coffee blossoms and beans

Pictures of coffee picking, drying, and packing
Samples of coffee

Write a paper on the kind of people who live in Brazil. Bring out the following: natives before the coming of the Europeans, where and how they live, what kind of Europeans have settled in Brazil, and what other races are found there.

Argentina

1. Approach and problem set-up—Read and study carefully the problems on Argentina before reading references on the country.
   Why Argentina is often called "The United States of South America"
   Why Argentina exports more corn and beef than United States but doesn't raise as much
   Why Argentina is the most progressive country of Latin America
2. References—Read references keeping the problems in mind
3. Things to do

Required List

Make a chart comparing United States and Argentina

	United States	Argentina
Largest rivers	Mississippi	Rio de la Platta
Surface features—mountains		
Surface features—plateaus and plains		
Coast lines		
Oceans		
Largest cities and their locations		
Most important farm products		
Transportation facilities		
Imports		
People		
Manufacturing		
Exports		

See if you can find any crop reports and prices quoted from Argentina.

On an outline map of the world draw routes from the ports of Argentina to the countries with which she trades. On the maps write the imports and exports.

Find out about and report on:

How the climate has influenced the progress of Argentina
How the coast line of Argentina has been helpful to her in her progress
Method of wheat farming in Argentina
Time for marketing wheat compared to United States

Amount of corn raised by Argentina
What Argentina does with her corn
Where the agriculture of Argentina is carried on
Why the raising of cattle and sheep in Argentina is profitable
The effects of meat packing plants in Buenos Aires on the raising of sheep and cattle
Why United States trades with Argentina when both have the same products
Agricultural products produced by the Pampas
Animal products produced by the Pampas
Forest products from Gran Chaco
Agricultural products of the Andean region
Mineral products of the Andean region
Improvements made in transportation
Use of rivers for transportation
What you think may be the future of Argentina

On an outline map of South America locate:

a. Argentina
b. Atlantic Ocean
c. Andes Mountains, Pampas
d. Buenos Aires

Supplementary List

Make a products map of Argentina by shading in the parts which raise various crops.

Collect newspaper clipping, maps, and pictures of industries in Argentina for a scrapbook.

Chile

1. Approach and problem set-up—Read the references on Chile and think them over carefully before reading the references on the country.
   Why there are three natural divisions in Chile
   Why the occupations of the people in the central valley of Chile differ from those in the south of Chile and the northern part of Chile.
2. References—Read references on Chile and her problems.
3. Things to do

Required List

On an outline map of South America locate the nitrate districts of Chile, the Central Valley of Chile, and Southern Chile.

Place each of the following in the proper column below:

oranges	nitrate beds	corn	iron
wheat	grapes	salt	oats
copper	dairying	borax	alfalfa
peaches	sheep raising	lumbering	barley
apples	manufacturing	wool	potatoes
flour mills	mutton	beans	lemons
shoe factories			

Products and Industries of Chile

Northern Chile	Central Valley	The South

Describe the mining and use of nitrate.

Write a paragraph comparing the climate and crops of central Chile with southwestern California.

Write a paper accounting for the contrast in occupations in northern, central, and southern Chile.

On an outline map of the World show with your pencil the chief ports of Chile and the principal countries with which she trades.

List things imported by Chile from United States.

Fill the blanks in the following sentences:

1. Nitrate is used for .....
2. A valuable by-product of nitrate is .....
3. Two other important minerals of Chile are ..... and .....
4. The chief port from which nitrate is shipped is .....
5. Salt and borax are obtained in ..... Chile.
6. ..... is the leading crop of central Chile.
7. Other cereals raised are ....., ..., and .....
8. The most important fruit grown in central Chile is the .....
9. Other fruits grown in central Chile are .....
10. Animals raised in Chile are ....., ..., and .....
11. Forests are found in ..... Chile.
12. Industries carried on in Chile are ....., ..., ..., and .....

Andean Countries

(Bolivia, Peru, Ecuador)

1. Approach and problem set up—Think about the following problems as you read the references on the Andean countries:
   Why most of the people live in the high plateaus
   How the coastal desert of these countries differs from that of Chile
   Why Peru raises sugar and cotton
2. References—Read references keeping in mind the problems stated above
3. Some things to do

Required List

Locate these countries on an outline map of South America

Study the map of South America to determine how Bolivia's location is a disadvantage to her.

Read and be able to report on:

Differences between the mountain and lowland people of Bolivia

Why most of the people live on the plateau in Bolivia

Why the transportation facilities of Bolivia are poor

Why Bolivia is known as the "hermit nation"

Industries of the eastern lowland section

Minerals of Bolivia

Grazing industry of Bolivia

Read to find out why Peru has declined.

List the products of Peru.

Find out what natural conditions have made the modern development of Peru difficult.

Read and be able to report on the following:

How surface and climate conditions have been a hindrance to the development of Ecuador.

Why so few people live on the low coastal plain of Ecuador.

How the coastal deserts of the Andean countries differ from that of Chile.

Where the people live in Ecuador and why.

What is manufactured in Ecuador and why.

List the products of Ecuador.

Supplementary List

Read to find out how the living conditions of the natives and white people of Bolivia differ.

Compare transportation facilities in these three countries.

Read to find out how the Panama Canal has influenced Peru.

Find out about the Inca Indians of Peru.

4. Summary or test

Complete the following sentences:

1. The ..... and ..... have been disadvantages to Bolivia in her development.
2. The chief minerals of Bolivia are ..... and .....
3. ..... are raised on the mountain slopes.
4. Three forest products of Bolivia are ....., ..., and .....
5. Bolivia is sparsely populated because .....
6. More people live in the ..... of Bolivia than in the .....
7. The transportation facilities of Bolivia are ..... (poor or good).
8. The most important cities of Bolivia are ..... and .....
9. ..... and ..... have hindered the modern development of Peru.
10. The mineral products of Peru are .....
11. Products raised in Peru are .....
12. Few people live on the low coastal plain of Ecuador because .....
13. Most of the people live in the ..... region of Ecuador.
14. ..... are manufactured in Ecuador.
15. Two products of the Ecuador forests are ..... and .....

The Northern Countries of South America (Colombia, Venezuela, Guianas)

1. Approach and problem set-up—Keep these problems on the countries bordering the Caribbean Sea in mind, as you read the references.

Why there has been big development in the petroleum industry

Why coffee is cultivated on the uplands

Why sugar is an important product in the Guianas

2. References—Read references to find answers to the problems on these northern South American countries.
3. Some things to do

Required List

List reasons why Colombia has greater commercial advantages than other countries of South America.

Find out what products in demand in United States and other countries, Colombia produces.

On an outline map locate three cattle regions in these countries.

Write a paragraph on the development of the petroleum industry in Columbia.

Find out why coffee is an important product of Columbia.

Read to find out why Venezuela has not developed as much as her natural advantages seem to promise.

See if you can find four gateways to the interior of Venezuela.

Read to find out about the big petroleum industry of Venezuela.

Mark the Orinoco Llanos on an outline map and write a paragraph on the chief industry of these plains.

See what you can find out about the Venezuela forests.

Color off the Guianas on your outline map and on each write the name of the country to which it belongs.

List the products of the Guianas and tell why sugar is the most important of these products.

Supplementary List

Read to find out why Venezuela is called "The Wonderland of Opportunity."

Why the mother countries are interested in their Guiana colonies.

4. Summary or test

Fill the blanks in the following sentences:

1. The eastern rivers in Colombia are of no use to her because .....
2. Colombia, Venezuela and the Guianas border on the .....
3. Coffee is a suitable crop for Colombia to produce because .....

4. ..... takes most of Colombia's coffee crop.
5. Four important products of Colombia are ....., ..., ..., and .....
6. Colombia produces the following minerals: ....., ... and .....
7. Venezuela has not developed much because .....
8. The Llanos of the Orinoco produce .....
9. ..... has vast forests.
10. The Guianas belong to ....., ..., and ..... and are located on the ..... Sea.
11. The chief crop of the Guianas is .....
12. Other crops of the Guianas are .....

EUROPE

Make a survey of the nationality of the children in your class or school to find out how many European countries are represented. Examine the map of Europe to find out in what section of the continent those countries are located.

Appoint committees to find out from people or books some of the foods, costumes, and songs peculiar to these countries.

—Elementary State Course of Study

Norway, Sweden, Denmark, Holland, and Belgium

1. Approach and problem set-up
   Keep these problems in mind as you read about these countries.
   How account for the peculiar distribution of population in Norway and Sweden
   Why Iowa farmers are interested in Denmark's cooperative farming
   Why Belgium and Holland differ as to industries
2. References—Read what references you can find in your book and other books to see if you can answer these problems.
3. Questions to answer
   Why is Norway called the "Land of the Midnight Sun?"
   Why has agriculture become the important industry in Norway, although most of the land is very mountainous and so far north?
   Why are fishing and lumbering important industries in Norway?
   How do Norway and Sweden differ?
   What is meant by oceanic climate?
   What is meant by continental climate?
   What are the chief industries in northern Sweden?
   Why is Swedish iron so valuable?
   Why are there many farms and factories in southern Sweden?
   Why can the Scandanavians fish even in the winter?
   What is cooperative farming?
   Why has Scandanavia much water power? For what is it used?
   Why is Denmark outstanding for dairying?

   Why are Denmark's colonies of less value to her than the Dutch colonies to Holland?
   Why is Belgium called the "workshop of Europe?"
   Why is Holland called the "dairy farm" of Great Britain?
   Why are the people of Europe called the "world traders?"
   How are the people of Belgium provided with food?
   How have the people of Holland helped to make their land?
   Why are there many windmills in Holland?
   Why is Norway so much warmer than Greenland?
4. Things to do

Required List

Locate the following on an outline map of Europe: Norway, Sweden, Denmark, Holland, and Belgium.

Write in each country their chief products.

Under the name of each of these countries write a list of the most important imports and exports. Indicate which of these comes from or goes to the United States.

Find out how farmers from Norway and Sweden had to change their ways of farming when they came to the United States.

Make a list of the foreign possessions of Belgium, Denmark, and Holland and write opposite of the name of each dependency the names of the most important product that it supplies to the mother country.

Locate the following on an outline map: North Sea, Baltic Sea, Norway, Sweden, Denmark, Holland, Belgium, and Stockholm.

Use the following words in sentences about Netherlands: Bourse, polder, windmill, dikes, dam, delta mud, barge, textiles, Zuider Zee.

Use the words in sentences about Denmark: cooperative association, sand dunes.

Use these words in sentences about Norway and Sweden: Viking, pirates, pulp wood, rayon, fiords, and fishing banks.

Supplementary List

Suppose you had had a summer's trip to Norway. Write a paper describing the land, industries, homes, and life of the people there. Compare the country with Alaska.

Describe the dikes in Holland.

TEST TO BE USED AT THE COMPLETION OF THE UNIT ON NORWAY, SWEDEN, DENMARK, HOLLAND, BELGIUM

DIRECTIONS: Underscore the correct answer or answers in each of the following statements:

1. Norway has become one of the great fishing countries of the world because (it is close to the British Isles, it has many good harbors, cool waters abounding in fish lie off her coast, her mountain slopes are covered with fine timber).
2. Belgium is the workshop of Europe because it (has coal for manufacturing, the people work hard, has a good sea coast, is a small country).

3. Holland has a (high, rough, below sea level, rocky) surface.
4. Dairying is the most important industry of Holland because of (plenty of cows, good grass lands, cold climate, suitable housing).
5. Denmark has (cooperative selling, cooperative making of machinery, cooperative dairy farming).
6. Holland people are called the "world's traders," because of their (thrift, location, natural resources, explorations).
7. Fishing is important in Denmark because of her (big fish, location with respect to seas, salmon fisheries, canning factories).
8. The "Midnight Sun" condition in Norway is due to (her position inside the Arctic Circle, effect of the moon, shooting stars).
9. The chief industries in northern Sweden are (farming and dairying, fishing and canning, lumbering and mining).
10. Southern Sweden is a land of (mines and forests, factories and farms, fox farms and bee hives).
11. Resources of raw materials in Belgium are (coal-iron-zinc-clay-sand, gold-diamonds-silver-lead-copper, salt-radium-quartz-tin-rubber).
12. Agricultural resources in Belgium are (copra-corn, sugar beets, flax, oats, barley).
13. Products from the Belgium Congo, which help Belgium are (salt-iron-coal-tin, rubber-ivory-diamonds-gold, turpentine-wheat-lead-silver).
14. People of Holland made their land by means of (windmills, dikes, fertilizer).
15. An important condition which a country should have in order to become a good traveling or commercial nation is (coal and iron mines, a good location with respect to other countries, a warm climate).

France

1. Approach and problem set-up—Read these problems carefully and keep them in mind as you read the references on this country.
   Why France is chiefly agricultural rather than industrial
   How the farms and farming methods in France differ from ours in United States
   Why France has such a variety of crops
   What kinds of manufacturing France has developed
   Some of the leading cities of France about which we should know
   What her colonies have contributed to France
2. References—Read what references you can find in your book and other books to see if you can answer these problems.
3. Some things to do

Required List

Read about and be able to report on:
   Why agriculture is an important industry in France
   What nature has provided for the use of French farmers
   How the crops of southern France differ from those of northern France
   How farming in France and United States differ
   What agricultural products of northern France are exported
   In what part of France her textile factories are located and why they are are there

   What part of France is called the "Land of the Sardines"
   What the future of manufacturing in France may be
   A city of France noted for its oil trade
   The development of water power in France
   Uses which France has made of her sea coasts
   Why France has become a wine making country
   The important cities of France
   Why Lyon is a great silk center
   Why Paris is called the heart of France
   Importance of the Saar Basin and where France got it
   How Algeria, Tunis, and Morocco are valuable to France
   Climate of the North African colonies
   Products of the North African colonies
   Values of French West Africa to France
   Why France has developed French Equatorial Africa very little
   Why Madagascar is an important island
   Colonies which France has in South America, Asia, among the Pacific Islands and islands around Newfoundland

The Paris Basin is the best crop region of France. List the reasons why this is true.

Show the wheat and grape region on an outline map of France.

Write a paragraph telling why the farmers choose these regions for raising wheat and grapes

Find out why France chooses to manufacture a great variety of luxuries for the markets of the world.

See what you can find out about the manufacture of:
   Perfume at Grasse
   China at Limoges
   Silk at Lyon
   Wine at Bordeaux and in southern France

Find out what French industries were benefited by regaining Alsace-Lorraine.

On an outline map of the world draw trade routes connecting the parts of France and the parts of her colonies. List the names of products sent by the colonies to France. List the products sent by France to United States.

Locate the Riviera district of France on an outline map. If you traveled here you would find many tourists. Why? At what time of the year would you find the most? This is like what seashore of United States in climate? What city of United States may be compared with Nice in climate?

Locate the following on an outline map of the World:
   France
   French possessions or colonies
   Atlantic Ocean and Mediterranean Sea
   Cities: Paris, Marseilles, Bordeaux, Lyon

Supplementary List

See what pictures of the following you can find:
   French industries and commerce
   French agriculture
   French peasant life

Make a list of the important crops of France.

Make a list of the minerals found in France.

Write the names of the important cities of France and opposite each the most important manufactures.

Test or Summary

DIRECTION: Fill the blanks in these sentences:

1. The chief farm crops of France are ....., ..., ..., ... and .....
2. Beets are raised for ..... in France.
3. Farms in France differ from farms in Iowa in that they are .....
4. Each field grows a different crop each year. This is called .....
5. Many ..... are raised in France for meat.

DIRECTION: Mark each of the following sentences as true or false.

1. T. F. North central and northern France raise excellent wheat, potatoes, beets, and garden crops.
2. T. F. Corn grows well in all parts of France.
3. T. F. There is much fog and rain in northwestern France.
4. T. F. The parts of France near the Mediterranean have many olive trees.
5. T. F. France is the principal wine making country of the world.
6. T. F. The French Riviera is in northern France.
7. T. F. Buckwheat and rye are grown on the central uplands of France.
8. T. F. Flowers are grown in southern France for making medicine.
9. T. F. Southern and central France have short hot summers and bitterly cold winters.
10. T. F. Petroleum is taken from the trees of the pine forests of France.

DIRECTION: Put a check (x) before each correct answer.

1. France is rich in (a) coal, (b) iron ore (c) tin.
2. France imports (a) cotton, (b) silk, (c) wool, (d) flax, (e) iron ore (f) oil, (g) textiles, (h) clothing.
3. Many of the factories of France are run by power from (a) coal, (b) water, (c) oil.
4. Most of the raw silk used in French factories comes from (a) Africa, (b) Asia, (c) United States, (d) Australia.
5. Lyon is noted for (a) foods, (b) silk factories, (c) oil wells.

DIRECTION: Put the number of the part of the sentence completing the first part of the statement in the parenthesis.

( ) Each of the three coasts of France
( ) Marseille in southern France
( ) Bordeaux is the great
( ) Havre is the great
( ) The Paris Basin is the
( ) Paris is a great
( ) Paris
( ) The Riviera is

1. the most popular winter resort of France
2. has many factories
3. richest agricultural section of France
4. freight port for Paris
5. has steamship lines reaching all continents
6. has a large port and some smaller ports
7. port of the west
8. railroad center

Germany

1. Approach and problem set-up—Think through the following problems carefully before reading the references on Germany.
   - How Germany has become one of the three great industrial nations of the world
   - Why the Rhine is one of the busiest rivers in the world
   - How Germany feeds her great population
   - Possibilities for the development of the New Germany
2. References—Read what references you can find in your book and other books to see if you can answer these problems.
3. Things to think about—Be able to explain each of the following:
   - How science has aided the growth of the German nation
   - Why Germany built up a large merchant marine before 1914 and what became of it.
   - What losses came to Germany as a result of the World War
   - Why the Ruhr district has so many factories
   - What Germany has been asking in recent world conferences
   - Why Germany with rather poor soil is able to grow large crops
   - How the Germans care for their forests
   - Why the Rhine is important to Germany
   - How the loss of Alsace-Lorraine affected Germany's iron and steel industry
   - Advantages and disadvantages in making the Rhine River an international highway
4. Things to do

Required List

Make a graph comparing the area of Germany with that of France and another comparing the populations of the two countries.

Find out whether or not Germany is able to feed her large population.

Compare France and Germany as to latitude to see which has the longer summer.

Locate the North German Plain on an outline map.

See if you can find pictures of work being done in the North German Plain.

Make a list of the leading crops of the North German Plain.

Explain why the Germans choose to grow much rye

Write a paragraph on how people in Germany get good crops from poor soil.

Compare farm work in Germany with farm work in Iowa.

Locate Germany's dairy region.

Locate on your outline map the three great industrial districts of Germany.
Find out the basis for the manufactures of the Ruhr district.
List the industrial centers of the Rhine Valley.
List the manufactures of the Saxony district.
Locate the Middle Rhine Valley on your outline map.
Find out why this valley is good for farming.
List the products of the Middle Rhine Valley.
Write a paragraph on the importance of the "Black Forest."
Locate the Southern Upland of Germany on your outline map.
Make a chart showing the different crops grown here in comparison with those grown in the North German Plain.
List the important industries of the southern upland and give reasons why these industries are carried on here.
Find out what things in your home have been manufactured in Germany.
On an outline map of Europe locate:

a. Germany
b. North Sea, Baltic Sea
c. Rhine River, Elbe River
d. The following cities:
   Berlin
   Dusseldorf
   Essen
   Hamburg
   Bremen
   Cologne

Supplementary List

On an outline map of Europe trace with colored pencil a cargo of goods by canal and river from the Baltic to the Black Sea. Check the cities through which the cargo would pass.
Make a coal poster showing how Germany has used her coal.
Make a chart showing how Germany has developed her agricultural possibilities.
Write a paper describing the following with regard to Germany:
   mineral wealth
   waterways
   location for trade
   surface features and influence on development
   forests
Find out and be able to report on:
Why the Germans cultivate their land more intensively than we do
What we can learn from Germany about care of our forests
Why the Ruhr Valley was important to Germany in the World War
Why the Rhine River is important to Germany
Why the potash deposits of Germany are important to the World
Which of Germany's ports is closed part of the winter
Why the Kiel Canal is important to Germany
List the important manufactures of Germany. Mark those which we get from Germany.

Read about the making of potato flour.
See what you can find out about education in Germany.

TEST TO BE USED UPON THE COMPLETION OF THE UNIT ON GERMANY

DIRECTIONS: Place the number of the part completing the parts of sentences above in the parenthesis preceding each of these parts.

( ) Germany
( ) The soil
( ) "Black bread"
( ) Grapes are
( ) Germany had
( ) Alsace-Lorraine was
( ) The Germans make
( ) Dusseldorf in the Rhine Valley and Essen in the Ruhr
( ) Excellent bacon and hams
( ) Germany leads the world
( ) Hamburg, near the mouth of the Elbe,
( ) Schools are established
( ) The leaves of the beets and the ground-up pulp
( ) The United States has more minerals such as
( ) Schleswig-Holstein is
( ) Toys are made
( ) The Kiel Canal
( ) Large quantities
( ) Germany's scientific

1. are the leading iron and steel centers.
2. for the training of scientific foresters.
3. a constitutional monarchy before the World War.
4. lost many of her possessions in the World War.
5. of potatoes are dried in factories and ground up into potato flour.
6. in the production of potatoes and sugar beets.
7. of Germany on the whole is rather poor.
8. care of her forests has been a fine object lesson to the other nations of the world.
9. is the busiest port on the continent.
10. in the homes of the German people.
11. connects the Baltic with the North Sea.
12. is the capital.
13. from which the sugar has been extracted furnishes excellent food for cattle.
14. raised in the upper Rhine Valley.
15. chemical fertilizers by mixing potash from their mines, waste slag from the blast furnaces, and nitrate from Chile.
16. is made from rye flour.
17. are produced where the hogs are fattened on beechnuts and acorns.
18. a famous dairy section in northwestern Germany.
19. coal, iron ore and copper than Germany.
20. given to France after the World War.

British Isles

1. Approach and problem set-up—Read the problems carefully and try to keep them in mind as you read the references and also as you study the rest of the British Empire.
   - What natural environment has been important in the development of Great Britain as a leading manufacturing and commercial nation
   - Why Great Britain must depend upon the Big Steamers
   - What factors have helped to make Great Britain a great commercial nation
2. References—Read what references you can find in your book and other books to see if you can answer these problems.
3. Things to do

Required List

Find and read Kipling's poem "The Big Steamers."

Locate the British Isles on an outline map of Europe.

Contrast the exports and imports of the United Kingdom to show to what extent it is the labor of her dense population that she sells.

Indicate the great manufacturing cities and ports on an outline map of the British Isles.

Find Greenwich and write a paragraph on "Our Time."

Learn to use correctly the terms—British Isles, Great Britain and United Kingdom.

Find out and be able to report on:

- Why the United Kingdom has developed a merchant marine.
  - Note especially:
    - That these are island countries
    - That these countries have much high rough land so food production is hindered
    - That manufactured goods and coal must be sent out to pay for raw materials and food
- How much food the United Kingdom must bring in. Note especially:
  - What foods she produces at home
  - Where crops are raised
  - Why the people choose to raise these particular crops
- How the United Kingdom pays for the food brought in.
  - Note especially:
    - Nearness of coal fields to the sea ports
    - Importance of Cardiff and Newcastle
    - Use of iron in shipbuilding
    - Manufacture of textiles
    - Importance of Liverpool and Manchester

On an outline map locate the following:

- British Isles—England, Scotland, Wales, North Ireland, and Irish Free State
- Atlantic Ocean, North Sea
- English Channel
- Thames River
- The following cities: London, Liverpool, Belfast, Dublin, Edinburg, Oxford, Manchester, Sheffield, Cardiff

Supplementary List

See how many newspaper items you can find in the daily paper about Great Britain.

Write a paper on London. Include traffic, famous buildings, parks and gardens, Thames River, ocean shipping, tides at London, docks, and manufacturing.

Find out how the population of the British Isles compares with that of United States. Make a graph to show this comparison.

Make a list of things found at home which have come from the British Isles.

Examine your music books to see how many selections have been written by British musicians.

List the stories you have read whose scenes were laid in the British Isles.

Write a paragraph telling how useful to Britain her merchant marine is.

TEST TO BE GIVEN OVER THE BRITISH ISLES

DIRECTIONS: Complete the following:

1. The climate of Great Britain is .....
2. The form of government is .....
3. The greatest cotton manufacturing center of the world is .....
4. London is located on the .....
5. The capital of Ireland is .....
6. The capital of Scotalnd is .....
7. Birmingham is noted for .....
8. The linen industry is carried on in .....
9. A noted port on southern shore of England is .....
10. The narrowest place between France and England is .....
11. An important canal owned by Great Britain is .....
12. Cardiff is noted for .....
13. Oxford is a famous university in .....
14. A city in England from which longitude is reckoned is .....
15. Glasgow is noted for .....
16. Liverpool is noted for .....
17. The main industry of Great Britain is .....
18. A famous port in China owned by Great Britain is .....
19. An ocean current which affects the climate of England is .....
20. A famous school for boys in England is .....
21. The most densely settled part of England is .....
22. The national anthem of Great Britain is .....
23. Great Britain must depend upon "Big Steamers" because .....
24. Great Britain has developed a merchant marine because .....
25. Great Britain pays for raw materials by .....
26. Great Britain raises the following crops at home .....
27. Liverpool and Manchester are important because .....
28. Great Britain must get raw materials from other countries because .....

Russia

1. Approach and problem set-up—Keep these problems in mind as you read about Russia.
   Russia, extending through Europe and Asia, and with a population of one hundred and sixty millions, has been very backward in her development. Can you find out why?
   Why Russia has so little manufacturing when she has so many raw materials
2. References—Read what references you can find in your book and other books to see if you can answer these problems.
3. Some things to think about as you study—See how many you can answer or explain when you have finished this study.
   Why Russia is called "a bridge between the East and West"
   What the new government of Russia is called
   In what part of Russia famines are likely to occur and why
   Why Russia's rivers are valuable to her
   Why the loss of Finland and Baltic States was cause for regret to Russia
   Location of Russia's oil wells
   What we use from Russia
   How well Russia is supplied with railroads
   Why so many Russians come to the United States
   Effects upon Russia of her great size, uniform relief, and rather scanty rainfall
   Why the rivers that flow north are a handicap to Russia
4. Some things to do

Required List

Compare on a globe the distance from New York to San Francisco with that from Leningrad to Vladivostok.

Compare the area of Russia with that of United States.

Prepare a graph which shows the amount of wheat, rye, and corn grown in Russia compared with the same crops in United States.

On an outline map of Russia indicate the crop land, coal and iron fields, platinum deposits, oil region, and chief ports of export.

Find the density of population for Russia, England, Belgium, and the United States. Compare and account for differences found. Use an outline map and show these differences.

Make a list of the main products of Russia.

Give reasons why some people think Russia will sometime be a greater nation than she is today.

Forest region of Russia:

Locate the forest region on an outline map of Russia.

Find out through what ports Russia would be apt to ship her lumber products.

Find out what hinders Russia from using these ports all year long and what she does when she cannot use them.

Tundras region of Russia:

Find out what two occupations the people of the tundra region follow.

Write a paragraph of the sort of life these people live.

Steppes of Russia:

The steppes of Russia are the grazing regions. Look at a rainfall map to see if you can tell why.

Locate the steppes of Russia on your outline map.

Black Earth region:

This is the best farming region. Make a list of what nature has provided for farming in this region.

Find out how the region is better for farming than the other regions.

List the crops the farmers raise in this region.

Find out why rye is an important crop.

Find out the meaning of "collective farming" and use the term in a sentence of your own.

Find out through what ports Russia ships out grain.

Find out why the eyes of the world are on Russia today.

List the waters through which grain going to Italy passes.

Using the tables in the appendix of your references make graphs comparing (1) the total area and population of United States, (2) European Russia, (3) North America.

Summarize all the reasons you have found for Russia's backwardness.

Use these words and expressions in sentences of your own: landowner, Russian Revolution, "New Russia," government farms, Russian Bear.

Make a list of the "Buffer States" and find out why they are so called.

On an outline map locate: North Sea, Baltic Sea, Don, Dnieper and Vistula Rivers, Russia, Esthonia, Finland, Latvia, Lithuania, and the cities of Leningrad, Moscow, Odessa, and Warsaw.

Supplementary List

Describe a trip from Leningrad to Vladivostok in which you explored Moscow and made a side trip to Russia's most famous fair.

Look up the story of the building of old St. Petersburg.

Read to find out about Russia's great power plant completed in 1932. How does it compare with the power plants at Niagra Falls and at the Muscle Shoals in Alabama?

Write a paper on the difficulties met by an exile in Siberia.

TEST TO BE USED UPON COMPLETION OF THE UNIT ON RUSSIA AND THE BALTIC COUNTRIES

DIRECTION: Underline the correct word or phrase.

1. The territory of Russia includes (one-sixth, one-eighth, one-third) of the land of the world.
2. The railroad systems of Russia are (good, fair, excellent, poor).
3. The longest railroad in the world is the one reaching (from Portland, Oregon to Omaha, from Los Angeles to New Orleans, across Siberia to Pacific).
4. Manufacturing was early confined to the (western part of European Russia, to eastern Russia, to the southern part of Russia).
5. The most important oil fields are at (Moscow, Baku, Saratof, Petrograd).
6. The most productive coal mines are found in (Kola Peninsula, in Lake Onega, near Moscow, in the Donetz Basin of Southern Russia).
7. The capitol of Russia is (Leningrad, Archangel, Ufa, Moscow, Rostof).

8. The tundras of Russia are found in (southwestern part, eastern, western, northern part).
9. The Ural Mountains are found in (southwestern Russia, northwest, west, northeast).
10. Russia in Europe is bordered on the southeast by (White Sea, Black Sea, the tundras, the Caspian Sea).
11. Over 90 per cent of all the platinum mined in the world came from (Donetz Basin, Rocky Mountains, Baku, Caucasus Mountains, Ural Mountains).
12. The Volga River is not good for transportation of exports because it (is too shallow, flows into an inland sea, is frozen all year).
13. The occupations of the forest regions of Russia are (mining and grazing, farming and lumbering, fishing and manufacturing).
14. Russia cannot use her northern parts the year round because they are (on poor harbors, ice bound, so shallow).
15. The people who live in the tundra region are (Indians, Negroes, nomad herders).
16. Leningrad is important to Russia because (it is a manufacturing center, gateway to the Baltic, is a winter resort).
17. The Black Earth region is good for farming because (of the climate, soil and surface, of hot long summers, of heavy rainfall).
18. The steppes of Russia are (the mining regoins, the lumber regions, the grazing regions).
19. Put a circle around all the numbers of sentences which are true statements concerning the development of Russia.

Russia has been very backward in her development because:

(1) The seacoasts are of little value.
(2) The natives have kept people out.
(3) There are so many falls in the rivers.
(4) The means of transportation are so poor.
(5) The climate is so unhealthful.
(6) Her area is so vast.
(7) The wild animals are so ferocious.
(8) There is uniformity of relief and climate.
(9) She is isolated from the rest of Europe.
(10) There is uniformity of vegetation and occupations.
(11) Her people have had little education.
(12) The old country was very tyrannical.

Switzerland

1. Approach and problem set-up—Read and think over the following problems before beginning to read the references on Switzerland:

Why Switzerland went into the milk chocolate business when she produces neither chocolate nor sugar.
Why Switzerland has much "white coal" and for what she uses it
How Switzerland has built railroads
Why Switzerland is called the "playground of Europe"
Why Switzerland has developed manufacturing when she has no coal
In what part of Switzerland farming is the best

2. References—Read what references you can find in your book and other books to see if you can answer these problems.
3. Some questions worth investigating:

Why do the Swiss have such great love for their country?
What are the advantages of the location of Switzerland?
What are the disadvantages of the location of Switzerland?
Why does Switzerland have three languages?
What are the important manufactures of Switzerland?
How are the lakes of Switzerland used?
What sports attract people to Switzerland?
What are the important industries of Switzerland?
Why has Switzerland much "white coal?"
Why has Switzerland good railroad construction engineers?

4. Things to do

Required List

List reasons why Switzerland is called the "playground of Europe."

List the scenic attractions of Switzerland which help to make it the "playground of Europe."

Outline reasons why dairying is one of the most important industries in Switzerland. Explain why cheese is made in the high pastures in summer time.

Locate the following on an outline map of Europe:

Switzerland
Rhine River
Cities of Bern and Geneva
Alps Mountains
Trace the shortest possible distance to the coast.
Trace the route a shipment of watches would take from Switzerland to your home town.

Supplementary List

Write a paper on "How the Swiss have developed their transportation facilities for the convenience of travelers and themselves." Consider what difficulties nature put in the way and how the Swiss have overcome these difficulties.

Find out how milk chocolate is made.

Look up the life of Louis Agassiz to see how he was influenced by his environment.

Find out why Geneva is sometimes called the "International Capitol."

Italy

1. Approach and problem set-up—Think about the following problems as you read about Italy.

Reasons for the Mediterranean Winter Tours taken by many European people
In what respects California and Italy are similar
Problems facing the Italian people

2. References—Read what references you can find in your book and other books to see if you can answer these problems.
3. Questions to Answer

What evidences of Italian art and learning are to be found in United States?

Do orange groves in both Italy and California have to be irrigated? Explain.

What are the agricultural products of Italy?

Why has manufacturing developed in Italy in spite of the fact that she has no coal?

How does the agriculture of northern Italy differ from that of southern Italy?

Why do many farmers of Italy keep sheep and goats but not cows?

Why is the olive an important crop in Italy?

What part of Italy is able to grow corn? How much does she grow?

Why are the following important problems in Italy:

More irrigation

Draining of swamps and eradication of maleria

Opening up of colonies

Development of water power

4. Things to do

Required List

Make a list of the agricultural products of Italy and mark each one which is grown also in California. Find out why the products of the two places are so much alike.

Find out when wheat is planted in Italy and California.

Find out how the proportion of land unfit for farming compare in Italy and California.

Look up the use of the Alps and Apennine Mountains for irrigation, power, and grazing.

Supplementary List

Write an account of a gondola trip in Italy.

Look up the following and see if you can enumerate ways in which they have helped us:

Roman law

Latin language

Look up and be able to tell about Garibaldi and Mussolini, the story of Roma, the story of Pompeii, the glories of Venice and about Genoa and Columbus, the Catacombs, the Rialto, canals.

Write papers on the following subjects:

Scenery of Italy

Italian people and their customs

Historical places of interest in Italy

Works of art and architecture in Italy

Vesuvius and its eruptions

On an outline map locate: Italy, Mediterranean Sea, Adriatic Sea, Sicily, Sardinia, Corsica, Po River, and the cities of Rome, Florence, Naples, and Venice.

Shade in on an outline map the section where wheat is grown.

Shade in on an outline map the section where oranges are grown.

TEST TO BE GIVEN UPON COMPLETION OF THE UNIT ON ITALY

DIRECTIONS: Put the number of the correct answer in space provided.

( ) "White coal"
( ) Farming is
( ) Macaroni
( ) More wine is
( ) Milan, Cono, and Florence are
( ) Naples is
( ) Olives are
( ) Goat's milk is
( ) The Po Valley
( ) Large quantities of

1. wheat and meat are imported into Italy.
2. used to make cheese.
3. is the richest agricultural region of Italy.
4. the largest city of the country.
5. made in Italy than any other country of Europe.
6. the leading occupation of the Italians.
7. is the favorite dish of all Italians.
8. the chief silk manufacturing cities.
9. raised in the south and central parts of Italy.
10. is the name sometimes given water falls.

Spain and Portugal (Iberian Peninsula)

1. Approach and problem set-up—Think about the following problems pertaining to Spain and Portugal as you read the references given:

Reasons why Spain, though one and one-half times as large, has only one-half as many people as Italy

Why Gibraltar is important to Great Britain

Why most of the people of Spain live on the border of the country

2. References—Read what references you can find in your book and other books to see if you can answer these problems.
3. Things to do and questions to answer

Required List

On an outline map locate the dense population regions of Spain and Portugal.

Look at a rainfall map of these countries to see if you can explain the sparse population of the interior of these countries.

On an outline map write the names of the chief products and the principal cities of these countries.

Find out what parts of North and South America were once under control of Spain and Portugal.

From the tables in the backs of your books compare Spain and Portugal in size and population to Italy.

Show how the products of the plateaus differ from those of the valleys.

See what you can find out about:

Balboa, the Duluth of Spain
The cork forests of Portugal
The iron mines of northern Spain
The factories of Barcelona
The Spanish peasant on the plateau
Grape vineyards of southern Spain
Olive orchards of Andulusia
The orange growers of Valentia

Find out why portugal is called "The Garden by the Sea."

On an outline map of Europe locate the following:

Spain and Portugal
Atlantic Ocean, Strait of Gibralter, and Mediterranean Sea
Cities of Lisbon and Madrid

List what Spain has to sell

Supplementary List

Find out in what countries the Spanish language is spoken and why.

Find out why it has been said that a crow flying over Spain would need to carry his provisions with him.

Find out and explain what is meant by "Two Story Agriculture."

Write a paper telling why the British value Gibraltar so highly.

TEST TO BE GIVEN AT CLOSE OF THE UNIT ON SPAIN AND PORTUGAL

DIRECTIONS: Fill the blanks in each of the sentences with the correct words.

1. Spain and Portugal are called the ..... peninsula.
2. Rain in these countries comes in .....
3. The interior of Spain has great extremes of .....
4. ..... is the leading industry on the plateau.
5. Agriculture is more important in ..... than in .....
6. The greatest density of population is along the ..... seacoast.
7. The five leading products of the peninsula are ....., ..., ..., ..., and .....
8. Manufacturing has been ..... in developing in Spain.
9. There are more ..... and ..... than cattle in Spain.
10. ..... is the largest city in Spain.
11. ..... raises oranges because .....
12. Spain's irrigated crops are in .....
13. The chief industries on the semi-arid plateaus are .....
14. Spain exports most of her iron because .....

THE BALKAN STATES AND TURKEY

Yugoslavia, Albania, Greece, Bulgaria, and European Turkey

1. Approach and problem set-up—Read the following problems on the Balkan States and think about them as you read the references on these countries.
   Why the Balkans are the most backward and least developed part of Europe
   Why Constaninople has been a "bone of contention" among the nations of Europe for centuries
   Why Greece is the best known over the world of the Balkan countries
2. References—Read what references you can find in your book and other books to see if you can answer these problems.
3. Some things to do

Required List

Look up and list contributions to the world made by Greece in art, sculpture, literature, and athletics.

Find out why the great powers of Europe are so much interested in the Balkan countries.

Explain why the Balkan region has been named the "Whirlpool of Europe."

Outline reasons why these countries have not developed their natural resources.

Read to find out why there are so many races of people in the Balkans.

Find out what the "Moravian Corridor" is and why it is important.

Find out what you can about Constantinople. Look up especially, different races of people in the city, the Bazaars, and the Nasques.

List products of these countries.

On an outline map of Europe locate the following:

Each of the Balkan countries
Turkey
Constantinople (Istanbul)
Black Sea

Use these words and phrases in sentences of your own: hydro-electric plant, aeropolis, Parthenon, Olympic Games, Gateway Port, League of Nations

CENTRAL EUROPEAN COUNTRIES

Czechoslovakia, Austria, Hungary, Rumania, and Polland

1. Approach and problem set-up—Read and think over the following problems carefully before you read the references on the Central European Countries.
   Why Czechoslovakia is called the "Keyland" of Central Europe.
   Why Wien in Austria is called the Paris of Central Europe
   How Hungary is different from Austria or reasons why Austria and Hungary need one another
   Why Rumania is one of the important grain producing countries of Europe
   How Poland resembles our middlewestern states
2. References—Read what references you can find in your book and other books to see if you can answer these problems.
3. Some things to do

Required List

Notice the peculiar (Yale lock key) shape of Czechoslovakia on the map. (This is where it gets its name of "Keyland.") Try to discover how her location makes her a "Keyland." Think about the control her location gives her over the transportation routes of Central Turope (railroads, rivers, outlets to the sea).

List the natural resources of Czechoslovakia.

List the manufactures of Czechoslovakia and tell why she is world famous for manufacturing.

Find out what elements threaten the strength of Czechoslovakia's position.

Find out why Wien is called the Paris of Central Europe.

Read to find out what natural resources Austria may develop.

Compare Austria with one of the United States in size.

Write a paragraph telling how Austria and Hungary differ in surface and products.

Outline ways in which Austria might improve her conditions.

Justify the following:

"Budapest is the Minneapolis of Europe."

"Hungary is the granary of Europe."

Find out the following with regard to Rumania:

Her agricultural products in relation to climate

Her minerals

Her transportation facilities

A sketch of peasant life

In what way Rumania is like Iowa and Nebraska

Compare Poland and our middlewest states as to:

Crops raised

Things provided by nature for working

Outline ways in which the position of Poland has caused her trouble.

List the landlocked countries which you find in Europe.

What is the disadvantage of having no seacoast?

Find on the map one country which was given a little corridor to the seacoast.

Locate the following on an outline map of Europe:

The Central European countries

Baltic Sea, Black Sea

The following cities:

Wien

Budapest

Warsaw

TEST TO BE GIVEN AT COMPLETION OF THE UNIT ON THE CENTRAL EUROPEAN COUNTRIES

DIRECTIONS: In front of each question you see the words "yes" and "no." Read each question and circle the one of these two words which makes the correct answer.

Yes No 1. Austria is called the Keyland of Central Europe.

Yes No 2. Czechoslovakia has coal and iron, and timber resources .

Yes No 3. Wien is called the Paris of Central Europe.

Yes No 4. Wien is the capital of Austria.

Yes No 5. Hungary is mountainous.

Yes No 6. Austria is a flat agricultural land.

Yes No 7. Hungary is the granary of Europe.

Yes No 8. The Danube is the "Minneapolis of Europe."

Yes No 9. Rumania is one of the important grain producing countries of Europe.

Yes No 10. Poland is noted for agriculture and some minerals.

Yes No 11 Poland and Iowa are alike in crops raised, things nature provides for working, and products.

Yes No 12. Czechoslovakia has become world famous because of her manufacturing.

Yes No 13. Bohemia has a good market for manufactured goods because most of Austria Hungary is farmland.

Yes No 14. Austria has undeveloped resources and fine scenery.

Yes No 15. Austrian farmers are inconvenienced because their farms are so small.

Yes No 16. Hungary has an oceanic climate because the winter is cold and the summer hot.

Yes No 17 Rye is the chief grain of Poland because it does well in a cool climate and sandy soil.

ASIA

Japan

1. Approach and problem set-up

Find out where Asia is located, how large it is, and its population. Find Japan on the map. How does it compare in size and population to Asia? To China? To India?

Read the following problems and keep them in mind as you read the references on Japan:

Why many Japanese try to find homes in other parts of the World

How farming in Japan compares with farming in Iowa

What industries Japan has besides farming

Why Japan has been able to rise to a first-class power from an isolated, unknown nation

2. References—Read what references you can find in your book and other books to see if you can answer these problems.

3. Some things to do

Required List

Find out why about 70% of the people of Japan are engaged in farming even though a small proportion of the land is fit for raising crops.

Draw an outline of an Iowa farm of 160 acres and divide it up into Japanese farms of 2½ acres each.

Find out whether or not Japanese farmers live on their farms.

List the crops raised on the farms in Japan.

Find out how Japan compares with U. S. in latitude and climate. How long are the growing seasons in Japan?

Write a paper contrasting farm work in Japan with that in Iowa.

Find out about and explain:

Why the silk industry is a good industry for Japan
Why Japan has been able to develop extensive manufactures
Why Yokohoma has been called "the eye of Japan"
Why Kobe and Osaka have been called the "Liverpool and Manchester" of Japan
Why Nagasaki is Japan's greatest coaling station
What things U. S. imports from Japan

Find out about and report on:

How Japan's location with regard to Asia has influenced her development of trade and manufacturing
Why natural conditions have favored the industrial and commercial development of Japan
What types of manufacturing industry Japan has developed
Why Japan naturally turned to the manufacture of cotton goods
Why the Japanese encouraged the building of ships
Why Japan has needed more territory
Why Japan assumes control of Korea
How Japan has developed commercially
Why fishing is an important industry
What parts of China Proper Japan has tried to control
Names and location of Japan's colonies
Why colonies are important to Japan
Why Japan is interesting to travelers

Trace on an outline map of the world the steamship routes from important Japanese ports to ports of the Pacific and Atlantic Ocean of United States and other parts of the world.

Locate the following on an outline map:

a. Japan Islands
b. Pacific Ocean, Japan Current, Japan Sea, Yellow Sea, China Seas
c. Korea
d. Cities of Tokio and Yokohoma

Supplementary List

Write a paragraph explaining how so much food is raised on an acre in Japan.

Write a paper on the Japanese including their thrift, courtesy, cleanliness, and industry.

Make a list of Japanese articles on sale in the stores of our cities.

4. Test to be given after the unit on Japan is covered

DIRECTIONS: Place the number of the part of sentence given below which matches the part above in the parentheses.

1. Japan is ( )
2. The people of Japan belong ( )
3. The government of Japan ( )
4. Two unusual trees growing here ( )
5. Large quantities of ( )
6. The chief port for foreign trade ( )
7. Our chief imports from Japan are ( )

8. The Japanese are very skilled in ( )
9. The capital of Japan is ( )
10. The ruler of Japan ( )
11. An important industry of Japan is ( )
12. The land under cultivation is about ( )
13. Two of the most important agricultural crops ( )
14. Our leading exports to Japan are ( )
15. Japan has gained some land on the mainland known as ( )

1. is called the Mikado.
2. coal and copper are mined.
3. to the yellow race.
4. is a monarchy.
5. Tokio
6. silks, tea, rice, porcelains, and straw braid.
7. silk manufacturing.
8. are the lacquer and camphor tree.
9. Yokohoma.
10. located in the Pacific Ocean.
11. one sixth.
12. Cotton, wheat, flour, petroleum products, and iron.
13. are rice and tea.
14. making and decorating small articles and quaint toys.
15. Korea or chosen.

China

1. Approach and problem set-up—Read these problems carefully and keep them in mind as you read the references on China.

Why most of the people of China live in China Proper
Why four-fifths of the people of China are farmers
How the Yangtse River is important to China
Why Hankow is called "The collecting place of nine provinces"

2. References—Read what references you can find in your book and other books to see if you can answer these problems.
3. Things to do

Required List

Find out:

Chinese methods of farming
How Chinese and Japanese farming compare
How China uses the Yangtse River
The importance of Hankow
China's mineral resources
Why China doesn't use her coal deposits
What and where Canton and Hong Kong are

Make a list of goods which pass in and out of the ports of Shanghai and Tientsin and be able to explain why these goods are imported and exported.

Find out and report on:

What Chinese have given to the World

Why for so many centuries China was almost an unknown land to the rest of the World
The advantages and disadvantages to China of isolation
Why agriculture has become the most important industry of the country
What crops are raised in northern China and why
What crops are raised in central and southern China and why
Types of Chinese homes
Materials and styles of Chinese clothing
Kinds of manufactures in China
Family life
The educational system
Conditions in the cities
Effects of poor transportation
Religion of the Chinese
How China was forced to open her country to foreigners
Why Japan, Great Britain, and United States are so much interested in China

List the four huge outlying provinces of China and under each arrange in chart form:

Industries
Products
Work of foreigners
Homes and customs of the people
Cities

On an outline map of Asia:

a. Color the five provinces of China.
b. Color the Desert of Gobi, Plateau of Tibet, coast lowlands, and important Chinese rivers.
c. Mark the Pacific Ocean, Indian Ocean, Japan Sea, China Seas, Yellow Sea.
d. Mark the important cities—Hong Kong, Shanghai, Canton

Supplementary List

Collect all the pictures you can on the Chinese Republic
List all the ways in which these pictures show people working.
Look up the Manchuria soy bean.
Write a paragraph on "The Great Wall of China."
Find out how many foods and other things you have at home which come from China

4. Test to be given upon completing the unit on China

DIRECTIONS: Place correct number on blank line.

..... 1. China is weak because
..... 2. Many Chinese students
..... 3. The chief occupation in China is
..... 4. The chief commercial city is
..... 5. Labor in China is
..... 6. Our chief exports to China are
..... 7. The capital is
..... 8. A Chinese province is

..... 9. China sends us
..... 10. China is

1. very cheap.
2. Shanghai.
3. attend U. S. schools.
4. silk, cotton, soy bean oil, and peanuts.
5. agriculture.
6. Peking.
7. she has shut herself away from the world.
8. one of the most ancient nations.
9. steel products.
10. Tibet.

THE NEAR EAST

(Palestine, Isak, and Suez Canal)

1. Approach and problem set-up—Read the following problems carefully and think about them as you read the references on Palestine.
   Why life is about the same in Palestine today as it was two thousand years ago
   How village life is carried on in the Holy Land
   Why Bible stories mention shepherds
2. References—Read what references you can find in your book and other books to see if you can answer these problems.
3. Things to do

Required List

Find out how large Palestine is. How many Palestines could be made of Iowa?
Make a list of the products grown mostly in the heart of Palestine.
Find on a map of Palestine: Jerusalem the capital of Palestine, Bethlehem, Nazareth, Jordan River, and Dead Sea
See what you can find out about Isak and look it up on a map.
Find out why Great Britain values the Suez Canal.

Supplementary List

Find out and report on the peculiarities of the Dead Sea.
See if you can find out why Palestine is called "The Cross-Roads of Three Continents."

India and Ceylon

1. Approach and problem set-up—Read to find out why India is able to support a very dense agricultural population.
   Why so many people live in the Ganges Basin
2. References—Read what references you can find in your book and other books to see if you can answer these problems.
3. Things to do

Required List

Compare the area of India with that of United States. Also compare the population of India and United States.

On an outline map of Asia or India color the most densely populated parts of India.

Compare farming in India with that of the Japanese and Chinese.

List the crops of India and explain why it is possible to raise winter crops.

Give the exports from India to the mother country.

Explain why India does very little manufacturing.

Write a definition for each of the following words common in India: ayah, bazaar, caste, cashmere, cobra, fakir, indigo, jute, mosque, punkah, rajah, rattan, sahib, teak, pariah, and water buffalo.

Find Ceylon and be able to give its location.

Supplementary List

Write a paragraph about the rice region of India.

Find all the pictures you can of farming in India, China, and Japan.

Write a paper on what Great Britain has done for India.

Write a paper on what Great Britain has done for India.

Make a list of the principal cities and interesting places of India.

Malay

1. Read to find out why Malay is important to the automobile industry
2. References—Read what references you can find in your book and other books to see if you can answer these problems.
3. Things to do

   Find out the two most important products of Malay.

   Write a paper on rubber. Include plantation, climate, methods of production, and uses.

   Make a list of ways in which tin is used.
4. Complete the following sentences:
   1. Palestine is noted because .....
   2. Malay is noted for .....
   3. India is an important colony to Great Britain because .....
   4. Many people live in the ..... Basin in India.
   5. Hong Kong belongs to ..... and is located in .....
   6. A city at the southern tip of Malay peninsula and owned by Great Britain is .....
   7. The sacred river of India is the .....
   8. Ceylon belongs to ..... and is located in .....
   9. The two most important products of Malay are ..... and .....
   10. India needs to produce much food because .....

   On an outline map of Asia locate:

   a. India, the Malay peninsulas, and Palestine
   b. Indian Ocean, Bay of Bengal, Arabian Sea, Strait of Malakka
   c. Ceylon and East India Islands
   d. Arabian Peninsula, Indian, and Malay peninsulas
   e. Himalaya Mountains, Mount Everest
   f. Ganges, Indus rivers
   g. Singapore, Calcutta, Bombay, Aden, Jerusalem, and Damascus

   h. Suez Canal, Dead Sea
   i. Hong Kong
   j. Borneo

AFRICA

1. Approach and problem set-up—Read the problems on Africa and keep them in mind as you read the references.

   What unsatisfactory environmental conditions in Africa have resulted in large areas being long unexplored

   Why Africa is largely controlled by European countries

   To what extent transportation and travel within the continent have been developed
2. References—Read what references you can find in your book and other books to see if you can answer these problems.
3. Things to do

Required List

Read and report on the following:

Why Europe has been interested in Africa

Why Africa was not explored early

Reasons why most of Africa is controlled by small European countries

The importance of the Cape-to-Cairo railway, Caravan Trade, Suez Canal, and the four chief rivers, the decline of caravan trade

How Africa compares with Europe and North America in size

Why entrance to Africa has been difficult

Why Great Britain and France hold the most of the African territory

The location and importance of Madagascar

What part of the population is black; white

What and where the chief railroads of Africa are located

How the Nile, Congo, and Niger rivers have been made navigable

On an outline map of Africa locate by coloring the territories belonging to Great Britain, France, Belgium, Portugal, and Italy

Supplementary List

Write a paper on the dangers of the unhealthful tropical jungle which explorers have had to meet.

Egypt

1. Approach and problem set-up—Study these problems and keep them in mind as you read the references on this country.

   Why Egypt is called the "Gift of the Nile"?

   Why Egypt is the most densely populated region of Africa
2. References—Read what references you can find in your book and other books to see if you can answer these problems.
3. Some things to do

Required List

Write a paragraph describing the Nile Valley and show how man makes use of the fertile soils of the flood plain

Locate on an outline map of Africa:
Egypt
Nile River
Aswan Dam
Two important cities of Egypt
Compare the Nile and Mississippi Rivers using the following outline:

	Country in Which Located	Length	Width of Valley	Direction of Flow	Uses	Sources	Floods	Valley Crops Raised
Mississippi River								
Nile River								

List the minerals of Egypt
List the farm products of Egypt
Compare methods of farming in Egypt with methods in Iowa
List product Great Britain gets from Egypt and what Egypt in return gets from Great Britain
Find out about the use of the Nile flood waters for irrigation

Supplementary List

Read to find out about and be able to describe the Aswan Dam
Write a paragraph about the natives of Egypt and how they live
Prepare a report on the Pyramids of Egypt

African Possessions of Great Britain

Union of South Africa
Southwest Africa
Tropical Africa
East Africa
Northeast Africa
West Coast Possessions

1. Approach and problem set-up—Study these problems before reading the references on British possessions in Africa
   How Great Britain is making use of the lands her people colonized
2. References—Read what references you can find in your book and other books to see if you can answer these problems.

BRITISH COLONIZED LANDS IN AFRICA

Division	Countries Included	Climate	Industries	Products
Union of South Africa	Cape of Good Hope Natal Transoal Orange Free State			

3. Some things to do

Required List

On an outline map of Africa color off Union of South Africa, Southwest Africa, Tropical Africa, East Africa, Northeast Africa, and West Coast Possessions of Great Britain.

Write a paper describing the types of people living in the African colonies. You should get these descriptions from your reference reading.

On an outline map of Africa locate the centers for the following industries: cotton growing, wheat growing, diamond, gold, copper, ivory hunting, tree crops, cocoanut, rubber production, grazing.

Make a chart showing at least ten important exports from Africa. Also indicate what countries receive these products.

Make a chart showing the chief imports of Africa. Show from what countries they come.

Trace on an outline map the journey of a shipment of diamonds to New York via Amsterdam where they are cut and polished.

Look up and be able to report on:

The location, importance and products of: Johannesburg, Alexandria, Cairo, Algiers, Tunis, Cape Town, and Kimberly

The importance of the cotton, rubber, ivory, ostrich, gold, copper, and diamond industries

French and Belgian Possessions in Africa

Morocco, Algeria, Tunisia, French West Africa and French Equatorial Africa, French Somaliland—Belgian Congo

1. Approach and problem set-up—Read and think about these problems concerning French and Belgian possessions in Africa:
   - Why Algeria has become a winter resort
   - How the farmers in northern Africa are able to overcome the summer draught
   - The work of the French in their possessions
   - How French Africa is of value to France
   - Why France has done little in developing French Equatorial Africa in comparison with what she has done in northern Africa
2. References—Read what references you can find in your book and other books to see if you can answer these problems.
3. Things to do

Required List

On an outline map of Africa color in all the French possessions and also Belgian Congo.

Find out and report on:

- Value of Morocco, Tunisia and Algeria
- The agricultural products of these three countries
- The animal products of Morocco, Tunisia, and Algeria
- Minerals found in the mountains of Morocco, Tunisia, and Algeria
- How the cork industry of Tunisia is carried on
- How the location of these countries affects their commerce
- Of what value Somaliland is to France

Write a paper on French West Africa including:

- Area of region compared with United States
- Reasons for this large desert area
- Types of country found in the desert
- Characteristics of the climate
- Products of the oases
- Problems of agriculture which the people must meet
- Travel in the desert

Compare French Equatorial Africa with French West Africa using the following diagram:

	French Equatorial Africa	French West Africa
Climate		
Surface Conditions		
Products		
People		

Look up the following with regard to the Madagascar:

Compare it with New Zeland as to: size, population, and kind of people

Arrange the following products of the French African possessions in the proper column: dates, palm oil, phosphate, vanilla beans, wines, lead, cork, zinc, wool, hides, peanuts, cocoa, wheat, graphite.

North Africa	French Sudan Lands	Guinea Coast	Madagascar

Trace the following trade routes on an outline map and list what each cargo would be likely to carry:

From Cairo to London

From Madagascar to Marseilles, France via Suez Canal

Supplementary List

Try to find pictures showing types of country found in the desert.

Read to find out the present or future value of French Somaliland

Describe the life of a nomad family

4. Test to be given upon the completion of the unit on Africa

DIRECTIONS: Fill each blank with the proper word or words.

1. Africa was not explored early because .....
2. Five important European countries controlling Africa are .....
3. The Cape-to-Cairo railroad connects ..... and .....
4. The Pyramids are in .....
5. Madagascar is an ..... and belongs to .....
6. Three important rivers of Africa are ....., ..., and .....
7. The most common transportation method in Africa is .....
8. Liberia is a ..... and belongs to .....
9. ..... holds the most territory in Africa.
10. Directions: Put a circle around the numbers of all the answers that are correct.

Africa was very difficult to explore because of:

1. Regular coast line with few good harbors
2. Many large rivers
3. Falls near the mouth of many of the rivers
4. Narrow coastal plains backed by steep climb to the plateau
5. Large desert areas
6. Large areas of dense tropical jungle
7. Stretches of country blocked by snow and ice
8. Lack of experience in living in hot wet climate
9. Roads narrow and rocky
10. Continent bordered by high mountains

11. Five exports from Africa are ....., ..., ..., ..., and .....
12. Two imports to Africa are ..... and .....
13. The Suez Canal is located between ..... and .....
14. The Sahara is a ..... located in ....., Africa.

AUSTRALIA AND NEW ZEALAND

1. Approach and problem set-up—Read these problems carefully and study them before reading the references on Australia and New Zeland.
   - Why Australia has been so slow to develop
   - Causes of the lack of settlement in Australia
   - The desirability of certain parts of Australia as a place to live
   - Why the United States is interested in Australia
   - The basis and status of New Zealand's highly developed dairy industry
   - Possibilities for the future development of Australia
   - Why the time of planting and harvesting of crops and the seasons are reverse to what they are in Iowa
2. References—Read what references you can find in your book and other books to see if you can answer these problems.
3. Things to do

Required List

Write a paper telling why you do or do not think parts of Australia would be a desirable place to live. Include location, route to get there, kind of people living there, methods of travel and transportation, climate and description of cities.

Discuss reasons why Australia has been slow to develop. Consider distribution of rainfall and suitable land for crops, extent to which the rivers are navigable, history of the development of railroads, and shortage of labor.

Find out why United States is interested in Australia. Consider products we send to and receive from Australia.

On an outline map trace the route of a ship load of wool bound from Sidney to London via Panama Canal; via Suez Canal. Which would be more economical and why?

Decide as to the leading industries of Australia and to what extent each has been developed.

Find out:

What problems Australia has in common with United States

What unusual kinds of animals are found in Australia

What unusual kinds of plants are found in Australia

How Australia and United States compare in size and population

On an outline map of Australia color the parts well adapted to the raising of sheep.

Locate the following on an outline map of Australia:

a. Pacific Ocean
b. Murry and Darling Rivers
c. New Zealand
d. The following cities: Melbourne, Brisbane, Sidney, Adelaide

Discuss the value of the wool, mutton and wheat production to other countries.

BIBLIOGRAPHY

This list of texts was compiled from the 1932 annual reports from the county superintendents on file in the office of the superintendent of public instruction.

In addition to the basic texts adopted for use in the school, teachers will train pupils to look to encyclopedias, world almanac, current magazines and literature, and other sources for reference purposes. Supplementary materials and visual aids enliven the work and are not expensive at the present time. Consult the sources suggested in the previous lists for additional pupil references and use the space below for making this bibliography of more immediate use. A few books on methods for teaching geography are listed here. You many find others to aid in your additional references.

Books I or Elementary Geographies

Brigham-McFarlane, *Essentials of Geography, Book I,* American Book Co., Chicago, 1931

Brigham-McFarlane, *Our World and Ourselves,* American Book Co., Chicago, 1933

Dodge-Lackey, *Elementary Geography,* Rand McNally Co., Chicago, 1928

Dodge-Lackey, *Our Country and American Neighbors,* Rand McNally Co., 1932

Frye-Atwood, *New Geography, Book I,* Ginn & Co., Chicago, 1928

Huntington-Benson-McMurry, *Living Geography, Book I,* Macmillan Co., Chicago, 1932

McMurry-Parkins, *Elementary Geography,* Macmillan Co., Chicago, 1928

Smith, *Human Geography, Book I,* J. C. Winston Co., Chicago, 1931

Books II or Advanced Geographies

Aitchison and Uttley, *North America by Plane and Train,* Bobbs-Merrill Co., Chicago, 1931

Atwood-Thomas, *The Americas and Nations Beyond the Seas,* Ginn & Co., Chicago, 1930

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*Branom, Mendel E., *A Teacher's Geography,* emphasizing the problem method, Macmillan Company, Chicago, 1928
Branom and Branom, *The Teaching of Geography,* Ginn & Co., Chicago, 1921
Burton, W. H., *Supervision of Elementary Subjects,* Chapter VII, "Supervision of Geography," D. Appleton Co., New York, 1929
*Clark, Rose, *Unit Studies in Geography,* World Book Co., Chicago, 1924
Geographic News Bulletins for Teachers, National Geographic Society, Washington, D. C.
Moore and Wilcox, *The Teaching of Geography,* American Book Co., Chicago
Thirty-second Yearbook of the National Society for the Study of Education, *The Teaching of Geography,* Public School Pub. Co., Bloomington, Ill., 1933
*Thralls and Reeder, *Geography in the Elementary School,* Rand McNally Co., Chicago, 1931

* Outlines, problems, references on specific regions

(The teacher is referred also to chapters on teaching and supervising geography found in books on teaching the elementary subjects.)

THE GEOGRAPHY OF IOWA

1. Approach and problem set-up—Keep these problems in mind as you read to find answers to them in your reference materials. (See bibliography at the end of this unit for references on Iowa history and geography.) New material is being published on Iowa which should be added by the teacher to these references.
   - Why Iowa is a great agricultural state
   - How Iowa's natural resources have aided in her industrial progress
   - How the manufacturing industries of Iowa have developed
   - What effect improved transportation has had in Iowa's commercial development
2. References—See what you can find out about these problems through reading references on Iowa.
3. Things to do

Required List

Read to find out about:

- How Iowa came to be named and nicknamed
- How our prairies were made
- How farms in Iowa compare in size with farms in New England. In Japan? In Germany?
- The kinds of soil in Iowa
- The surface of the state of Iowa and the related types of agriculture
- Seasons and climate of Iowa as related to crops and farm work
- Rainfall in Iowa and the source from which it comes
- The water supply
- What the farms of Iowa produce
- What farm animals are raised in Iowa
- What industries of Iowa have developed as a result of the natural resources
- The development of transportation facilities in Iowa
- People who settled Iowa
- Educational advantages in Iowa
- The playgrounds of Iowa as related to lakes, rivers and surface features

Locate the middlewestern states on an outline map of the United States. Now color off Iowa in this group of states.

List all of the things which nature provides for making Iowa a great farming state.

Review your plat of a corn belt farm and also of a feeder corn belt farm.

Make a graph on which you show the size of farms in Iowa, Japan, Germany, and France.

Read and report on the surface of the following counties in Iowa:

Crawford	Allamakee
Calhoun	Washington
Union	Osceola
Des Moines	

Make a graph showing the differences in the length of the growing season in the following places: Iowa, Southern Canada, Northern Canada, Congo Basin, Alps of Switzerland, and Canada.

On an outline map of the United States show the difference in amount of rainfall in the following states: Iowa, Oregon, New England States, Ohio, Florida, Colorado, Wyoming, and Texas.

Make a rainfall map of Iowa showing where the rainfall is less than 30 inches, 30 to 40 inches.

Make a list of other countries of the world which have four seasons as we have in Iowa.

Make a list of the farm products of Iowa and give reasons why these crops are raised.

Find out what is done with most of the corn in Iowa.

Study your references to find out how many million bushels of corn are produced by each of the six greatest corn producing states of the United States. Then make a graph comparing these productions.

Work out from tables of statistics given in your references Iowa's rank as a corn producing state. Make a graph to show the part of the world's annual corn crop which Iowa produces.

Make a graph comparing the number of hogs raised in Iowa with those raised in Illinois, Indiana, Missouri, and Ohio.

Make a graph comparing the number of cattle raised in Iowa with the number raised in Texas, Wisconsin, Nebraska, Kansas, and Missouri.

Find out why Iowa does not raise many sheep.

List Iowa's resources in fuel and power and compare their location with the location of Iowa's largest manufacturing cities. Find out what power runs most of Iowa's factories.

Locate Iowa's following resources in raw materials on an outline map: gypsum, clay, building stones. Be able to tell how each of these is used. Find pictures in your references which show people working with these resources.

Make a list of the food products manufactured in Iowa and locate them on an outline map by writing in the names of the products. Do the same with the quarry products, the foundry and machine-shop products, lumber products and other manufactured products.

List and locate on an outline map ten important cities of Iowa. Tell why each is important.

Outline the educational facilities of Iowa.

List and locate on an outline map at least ten state parks of Iowa.

Outline transportation facilities in Iowa and show what improvements have been made in the past 50 years.

Sketch a map of Iowa and locate on it the following by placing each number where it belongs on the map:

1. Iowa River
2. Des Moines
3. Cedar River
4. Cereals factory
5. Two packing houses
6. Pearl button factory

7. Fountain pen factory
8. Cement factory
9. Refrigerator factory
10. Woolen goods factory
11. Steel cars factory
12. Sioux City
13. Keokuk
14. Skunk River
15. Gypsum
16. Coal
17. Clay
18. Limestone
19. Storm Lake
20. Spirit Lake
21. Corn products factory
22. Basket factory
23. Woolen goods
24. Power washers
25. Paper factory
26. Three summer resorts
27. Tractor factory
28. Door and mill work factory
29. Des Moines River
30. Largest government transfer post office in United States
31. Iowa's state capitol
32. State University of Iowa
33. Iowa State Teachers Colelge
34. Iowa State College
35. Largest commercial apple grove orchard in the state

Make a list of the exports of Iowa.

Make a list of the imports of Iowa.

Use an outline map of the world and draw a line for each import to Iowa from the country from which it comes. Write the name of the import on the line. Do the same with the exports which Iowa sends to other states and countries. Now make a list of all the states and countries with which Iowa trades.

Use these words or phrases in sentences of your own: crop rotation, prairie, ensilage, chinch bugs, fertilizer, concrete, cement, shale, forage crops, alfalfa, flax, cereal mills, black loam, meat packing, dairying, water power, and rock crushers.

Supplementary List

Write a ppaer on "The Story of Iowa's Beginning."

Write a paragraph on "How Our Prairies Were Made."

Write a paragraph on the different types of soil found in Iowa. See how many samples of different kinds of soil you can find.

Write a paper on "Where and How the Cities of Iowa get their Water Supply."

Be able to tell the following with regard to corn:

How seed is chosen

How ground is prepared for planting (machinery used)
Weather required for successful growth
Machinery used for cultivation; when cultivated and how often
Number of frost free days required
How and when harvested

Outline kinds of pests which trouble the Iowa farmer and tell what has been done to eradicate them.

Read to find out from what countries the people of Iowa have come.

Write a paper telling where some of the most beautiful spots of Iowa are to be found.

Find out about the following interesting things in Iowa: Keokuk Dam, Ocheyedan Mountain, ice caves, tiniest church, clocks at Spillville, Grotto at West Bend, various state parks, and Little Brown Church.

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UNITED STATES AND HER WORLD TRADE RELATIONS

Consult your references to find out about the trade relations of United States and other countries with which she trades.

Find out about:

The trade of United States with Tropical America
The commercial relations of United States with the Orient
The trade of United States with Western Europe

List the main products which United States sends to these countries and also the products which United States imports from them.

Trace on outline maps of the world the routes these exports and imports will take.

Make graphs showing the leading imports of the United States. Explain why we buy all the rubber we use, all the tea and coffee we drink, all the pure silk our factories use. Explain our large sugar import, even when we produce sugar in our own country.

The yearbook of the United States Department of Agriculture is a valuable source of data.

Cameron McRoss

STATE OF IOWA
1933

GUIDE FOR TEACHING GEOGRAPHY IN THE ELEMENTARY GRADES

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Prepared by
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OLIVE PEARL RITTER, *Demonstration Teacher*

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