

1951

Unit organization of the topic, typical regions of the United States--their contribution to New England, and New England's contribution to them

<https://hdl.handle.net/2144/5938>

"Downloaded from OpenBU. Boston University's institutional repository."

Ed
Service paper
Shaw, J. M.
1951
STORED

BOSTON UNIVERSITY
SCHOOL OF EDUCATION

Service Paper

UNIT ORGANIZATION OF THE TOPIC, TYPICAL
REGIONS OF THE UNITED STATES -- THEIR
CONTRIBUTION TO NEW ENGLAND, AND NEW
ENGLAND'S CONTRIBUTION TO THEM

Submitted by

John Mulneaux Shaw
(B.S., Boston University, 1946)

In Partial Fulfillment of Requirements for
the Degree of Master of Education

1951

Boston University
School of Education
Library

First Reader: Roy O. Billett
Professor of Education

Second Reader: Walter E. Scott
Lecturer

✓ Med. 6

iii

TABLE OF CONTENTS

CHAPTER	Page
I. PURPOSE AND BACKGROUND FOR TEACHING THE UNIT....	1
The Purpose.....	1
Method of Solving the Problem.....	2
The Pupils.....	2
Pertinent Facts About the Pupils and Their Background.....	3
Chronological Ages.....	3
Intelligence Quotients.....	5
Grade Level in Reading.....	7
Preparation of the Classroom.....	8
Equipment and Supplies.....	11
Time Allotment.....	11
Pooling and Sharing Experiences.....	12
Teacher's Log.....	12
II. UNIT ORGANIZATION OF THE TOPIC, TYPICAL REGIONS OF THE UNITED STATES - THEIR CONTRIBUTION TO NEW ENGLAND AND NEW ENGLAND'S CONTRIBUTION TO THEM.....	14
General Statement of the Unit.....	14
Delimitation of the Unit.....	14
List of Probable Direct and Incidental Learning Products.....	35

CHAPTER		Page
II.	The Unit Assignment.....	36
	Unit Test.....	53
	Pupil Opinion Poll.....	59
III.	AN EVALUATION OF THE UNIT.....	60
	Results of Objective Testing.....	60
	Relative Growth of the Pupils.....	66
	Report Based on the Daily Log.....	70
	Class Reactions to the Unit.....	75
	Conclusions and Suggestions for Improvement..	77

✓

LIST OF TABLES

Table	Page
1. Distribution of Pupils According to Chronological Age, Section 24.....	4
2. Distribution of Pupils According to Chronological Age, Section 28.....	4
3. Distribution of Pupils According to Chronological Age, Section 29.....	5
4. Distribution of Pupils According to Intelligence Quotient, Section 24.....	5
5. Distribution of Pupils According to Intelligence Quotient, Section 28.....	6
6. Distribution of Pupils According to Intelligence Quotient, Section 29.....	6
7. Distribution of Pupils According to Grade Level in Reading, Section 24.....	7
8. Distribution of Pupils According to Grade Level in Reading, Section 28.....	7
9. Distribution of Pupils According to Grade Level in Reading, Section 29.....	8
10. Pre-Test and Final Test Results, Showing Gain....	61
11. Calculation of the Mean and the Standard Deviation for the Pre-Test Results.....	63
12. Calculation of the Mean and the Standard Deviation for the Final Test Results.....	64
13. Calculation of the Mean and the Standard Deviation of the Gains Made in the Final Test..	65

LIST OF FIGURES

Figure	Page
1. Classroom before the unit was taught.....	9
2. Classroom showing one of the displays made during the unit.....	74
3. Relative Growth Scale -- Pre-Test.....	67
4. Relative Growth Scale -- Final Test.....	68
5. Relative Growth Scale -- Gains.....	69

CHAPTER I

PURPOSE AND BACKGROUND FOR TEACHING THE UNIT

The purpose.-- The purpose of this service paper is to apply the basic principles and procedures set forth in Fundamentals of Secondary-School Teaching^{1/} and the course in The Unit Method in the Secondary School, as taught at Boston University, to the unit organization and classroom presentation of the topic Typical Regions Of The United States - Their Contribution to New England And New England's Contribution To Them. The problem was suggested by the existing need in the curriculum for a well-organized seventh grade social studies unit providing an overview of the United States, using the New England States as a basis for comparison. It was carefully planned to take its place in a series of units for the seventh grade starting with orientation to the new school, followed by a study of the home city of Newton, Greater Boston, Massachusetts, New England and finally the above-mentioned Unit.

It is felt that a satisfactory solution of this problem may make a lasting contribution to the newly organized social

^{1/}Roy O. Billett, Fundamentals of Secondary-School Teaching, Houghton Mifflin Company, Boston, 1940.

studies curriculum and will serve as a basis for future units meeting the same need.

Method of solving the problem.-- The method employed in this unit was that of gathering objective data on specific groups of pupils in specific classroom situations. The teaching-learning situation was developed by analysis and creative synthesis. As a basic evaluative instrument, a 75 item informal teacher-built objective test was used. It was given as a pre-test and repeated at the end of the unit. Initial score, final score, and gain of each pupil on each test was reported.

The relative growth of each pupil in relation to other pupils and to the class as a whole was determined by calculation of the arithmetical means and standard deviations for each of the three divisions taking part in the unit. A relative growth scale was constructed for each section consisting of five equal parts, based on the total score made by the pupils on the test. This statistical log of pupil progress was also a valuable measure of pupil interest and progress. This is reported on in detail in Chapter III.

The pupils.-- This unit was planned for use in three sections of seventh grade social studies students. The groups are designated by numbers corresponding to their home rooms; namely, 24, 28, and 29. Room 28 is a heterogeneous group of

30 seventh grade pupils. Room 24, with 23 students, is further divided into groups of 24A and 24B which separate for mathematics and English, but remain together for social studies and science. The A group consists of the fast-learning children and the B group, the slow learners. A similar division is made in Room 29, designated as 29A and 29B. Room 29 enrolls 27 pupils. For the purpose of this study, the divisions will be referred to simply by their home room number.

Pertinent facts about the pupils and their backgrounds.---

This study reports on a total group of 80 pupils. In a majority of cases, English is the language spoken in the home. The only decided language problem is Italian. A study of this problem reveals that 17 per cent of the pupils are of first generation Italian descent with Italian being the principal language spoken in the home. This has been solved to a considerable extent by special reading and speech classes in the lower grades. That the problem still remains, however, is evident by a study of reading abilities presented in Tables 7, 8, and 9. A reading difficulty, correlating with Italian being spoken in the home, can be noted in many cases.

Chronological ages.--- Tables 1, 2, and 3 present a breakdown by sections of the pupils according to their chronological ages. Medians have been established for each section.

Table 1. Distribution of Pupils According to Chronological Age, Section 24

Chronological Age	Number of Pupils
(1)	(2)
13-0 to 13-5	4
12-6 to 12-11	3
12-0 to 12-5	8
11-6 to 11-11	8
Total	23
Median	12.2

Table 2. Distribution of Pupils According to Chronological Age, Section 23

Chronological Age	Number of Pupils
(1)	(2)
14-0 to 14-5	1
13-6 to 13-11	
13-0 to 13-5	6
12-6 to 12-11	6
12-0 to 12-5	11
11-6 to 11-11	6
Total	30
Median	12.4

Table 3. Distribution of Pupils According to Chronological Age, Section 29

Chronological Age	Number of Pupils
(1)	(2)
13-6 to 13-11	3
13-0 to 13-5	1
12-6 to 12-11	6
12-0 to 12-5	6
11-6 to 11-11	7
11-0 to 11-5	3
10-6 to 10-11	1
Total	27
Median	12.3

Intelligence Quotients.--- The intelligence quotients and medians are reported in Tables 4, 5, 6. The effect of the high-ability groups is very discernible in sections 24 and 29, resulting in a definite increase in the median.

Table 4. Distribution of Pupils According to Intelligence Quotient, Section 24

Intelligence Quotients	Number of Pupils
(1)	(2)
130 - 139	1
120 - 129	4
110 - 119	7
100 - 109	2
90 - 99	5
80 - 89	3
70 - 79	1
Total	23
Median	112.5

Table 5. Distribution of Pupils According to Intelligence Quotient, Section 28

Intelligence Quotients	Number of Pupils
(1)	(2)
130 - 139	
120 - 129	3
110 - 119	3
100 - 109	11
90 - 99	9
80 - 89	4
70 - 79	
Total	30
Median	101.6

Table 6. Distribution of Pupils According to Intelligence Quotient, Section 29

Intelligence Quotients	Number of Pupils
(1)	(2)
150 - 159	1
140 - 149	
130 - 139	3
120 - 129	5
110 - 119	5
100 - 109	2
90 - 99	7
80 - 89	3
70 - 79	1
Total	27
Median	112.5

Grade level in reading.--- Tables 7, 8, 9 give a grade level in reading distribution and median for the three groups participating in the unit.

Table 7. Distribution of Pupils According to Grade Level in Reading, Section 24

Grade Level in Reading	Number of Pupils
(1)	(2)
11.1 and above	5
10.1 - 11.0	2
9.1 - 10.0	2
8.1 - 9.0	1
7.1 - 8.0	5
6.1 - 7.0	
5.1 - 6.0	8
Total	23
Median	7.8

Table 8. Distribution of Pupils According to Grade Level in Reading, Section 28

Grade Level in Reading	Number of Pupils
(1)	(2)
11.1 and above	1
10.1 - 11.0	1
9.1 - 10.0	1
8.1 - 9.0	6
7.1 - 8.0	8
6.1 - 7.0	8
5.1 - 6.0	5
Total	30
Median	7.4

Table 9. Distribution of Pupils According to Grade Level in Reading, Section 29

Grade Level in Reading	Number of Pupils
(1)	(2)
11.1 and above	4
10.1 - 11.0	5
9.1 - 10.0	3
8.1 - 9.0	0
7.1 - 8.0	4
6.1 - 7.0	4
5.1 - 6.0	1
4.1 - 5.0	
Total	27
Median	7.0

Preparation of the classroom.-- The Frank Ashley Day Junior High School is one of the older junior high schools in Newton. It normally enrolls approximately six hundred students in grades seven, eight, and nine. The classroom used for the presentation of the unit was a combination social studies and science room. There were 35 traditional type desks attached to the floor, arranged in five rows, seven seats in a row. The teacher's desk and a science bench were at the front of the room. The blackboard space was adequate with boards on both the front and back of the room. On the side away from the windows there were wardrobes with built-in bookcases on each side of them. A picture of the classroom as it was before the unit was started is included in Figure 1.



Figure 1. Classroom before The unit was Taught

As can be seen from the above description and the photograph, free space in the classroom was limited. It was, however, possible to put a filing cabinet in the corner of the room by the teacher's desk and to add a wooden, open-front bookcase to the right of the science bench. This additional bookcase was used for the reference books found in the bibliography of the study guide and could be arranged in order, numbered as they were in the study guide and made readily available to the groups.

The blackboards at the back of the room were used for a pictorial display which was the joint work of the three groups taking part in the unit. The work of the groups was organized and coordinated by a joint committee. The results are pictured in Chapter III, Figure 2.

Adjacent classrooms, when not in use, were used for committee meetings. Other meetings were held before and after school in the classroom. Each group provided a box labeled with the number of its section in which members of the class would submit their contributions to the pictorial display. Work groups in the room made use of the teacher's desk, the science bench, and empty seats at the back of the room. Many times it was also possible to send groups to the library to work together on some portion of the unit.

The library facilities were excellent, with a full-time

librarian and a well-organized student staff. The seating capacity was sufficient for an entire section, with moveable tables and chairs which were very adaptable to work with this type of unit.

Equipment and supplies.-- In general the building was well equipped with all types of supplies. The audio-visual equipment included two Bell and Howell 16 mm. projectors and facilities for showing films in the auditorium. Dark curtains were ordered for the classroom, but at the time of this writing they were not available. It was felt that they would make possible more and better use of visual education. The order for them is a standing one which is expected to be filled next year, and it is hoped that they will be one of the improvements resulting from the work of this unit.

Office supplies, duplicating material, machines, paper, etc. were readily obtainable and presented no problem to the work of the unit.

Time allotment.-- The tentative time allotment for this unit was five weeks, four periods per week, with a 42-minute class period.

The first period was to be used for the pretest. In period two an introduction to the unit was to be developed, with emphasis on stimulating pupil interest. During the third period the study guides were to be given out and

necessary explanations made as to how to use them to the best advantage. The optional related activities were to be placed on file at this time with suitable explanations. The unit was divided into seven main parts corresponding to the seven main divisions of the United States as chosen for study in this unit. Two laboratory periods were to have been given to each section with a partial period of pooling and sharing of experiences to follow each section. The last two periods of the work were to be devoted to a general review and final test respectively.

Pooling and sharing experiences.-- This phase of the unit was to provide an opportunity for the pupils to share their experiences and knowledge and give them an opportunity to express themselves. It was hoped that here the lower ability pupils could benefit from the work of those who were able to make more progress during the laboratory periods. This was also an opportunity for the teacher to guide and direct the work of the group. Further plans were made for oral reports, discussions, and other group activities.

Teacher's log.-- The teacher's log was designed to be a written record of the pupils' progress during the working of each phase of the unit. In a sense it was to be of evaluative use in collecting and interpreting evidence of pupil growth. It was to describe the decisions made, the techniques

used, and the results obtained. The log was to serve as a chronicle of the unit, and it is reported fully in Chapter III.

CHAPTER II

UNIT ORGANIZATION OF THE TOPIC, TYPICAL REGIONS OF THE UNITED STATES--THEIR CONTRIBUTION TO NEW ENGLAND, AND NEW ENGLAND'S CONTRIBUTION TO THEM

General statement of the unit.-- The United States may be divided, for the purpose of seventh-grade social studies, into several typical regions. New England is one of these typical regions, and a comparison of the lives of the people in these selected regions with those in New England makes an interesting study. Their occupations, amusements, customs, homes, cultural color, and atmosphere can be measured against a yardstick which is already familiar; the preceding unit having dealt with the New England Community and its relation to the world at large.

Delimitation of the unit.--

- A. The United States may be divided into the following typical regions:
1. New England States
 2. Middle Atlantic States
 3. North Central States
 4. Southern States

5. Mid-Western States
6. South-Western States
7. Western States

B. The Middle Atlantic States may be compared with New England in many important and interesting ways.

1. Manufacturing got an early start in both sections.
 - a. There was no especially valuable crop.
 - b. Many ships from the fishing industry were available to transport manufactured products.
 - c. The seaports in the New England and Middle Atlantic States were located on the coast near the dense population of Europe.
2. Since both New England and the Middle Atlantic States have large manufacturing areas, there is much interchange of goods between these two regions.
 - a. Pennsylvania, Maryland, and West Virginia mine one fourth of the world's coal supply.
 - b. New England is a consumer of a large quantity of the coal which is produced in the Middle Atlantic States.
 - c. New England is largely a finished products producer with a world market including the Middle Atlantic States. New England's chief

products are cloth, hardware, shoes, tools, and machinery.

3. The coal and iron cities of the Middle Atlantic States are very different from a typical New England manufacturing town.
 - a. Pittsburgh is the center of the coal and iron cities.
 - b. More than half the people there are engaged in this work.
4. Climate depends principally on seven factors. These are latitude, altitude, the distribution of land and water, mountain barriers, ocean currents, prevailing winds and storms. In comparing New England and the Middle Atlantic States many of these factors are the same.
 - a. The climate of both is affected by the Gulf Stream.
 - b. The prevailing westerlies affect both areas.
 - c. They both have a diversified distribution of land, water, and mountain barriers.
5. In latitude New England lies approximately half way between the North Pole and the Equator.
 - a. The Middle Atlantic States are south of

New England on the fortieth parallel.

- b. This location, nearer the equator, produces differences in climate.
 - c. The number of days without frost in Northern New England is 120.
 - d. The number of days without frost in the southern Middle Atlantic is 210.
 - e. Massachusetts is in between with 180 days without frost.
6. Population Centers - Both regions contain important gateway cities to the United States. The largest of these is New York.
- a. New York is the principal gateway between the vast population in our own country to the west and European to the east.
 - b. New York's almost perfect harbor is located where the best of all routes to the interior meets the greatest sea routes.
 - c. Railways to all parts of our country and air transportation to all parts of the world are centered in New York.
 - d. As a manufacturing, commercial, and business center, New York City is the world leader.

7. Boston, due to its early start as a city, has remained one of our leading population centers.
 - a. Boston is known as the Hub of the Universe, chiefly as a literary, educational, and historical center.
 - b. Its chief industries - shoemaking, printing, and clothing - attract many people.
 - c. All types of transportation are good, but, of course, do not compare with New York, itself.
8. Philadelphia
 - a. Prosperous farms surrounding Philadelphia make this city different from New York and Boston.
 - b. This excellent farm land attracts many people.
 - c. People are also attracted to Philadelphia because of its residential areas.
 - d. The great Pennsylvania Railway is centered in Philadelphia.
9. Washington, D. C.
 - a. Historically it is here that the South meets the North.
 - b. As the capitol of our country, it employs

thousands of people in government work.

c. Large sums of money spent by our government make it one of our most beautiful cities.

Hence, it attracts many visitors.

10. The Middle Atlantic and New England States produce quantities of vegetables and dairy products to feed its dense population.

11. The fishing industry continues to furnish thousands of people with work and food.

12. Virginia raises much tobacco and manufactures it into finished products.

C. The North Central States have the surface of land, soils, rainfall, and growing season necessary to become one of the greatest food producing areas in the world.

1. The Central States have a crop belt as famous as the Cotton Belt of the Southern States. This is the Corn Belt that stretches through the states of Illinois, Indiana, and Ohio.

a. The corn belt has always been a mixed-farming region with a variety of crops and livestock on each farm. However, corn is the crop raised most consistently and in the largest quantity.

- b. Corn is not so great a food crop as wheat, but it is the best of grain for fattening meat animals. Much of the corn crop of this region is used for this purpose.
 - c. Two of the largest cities of the Corn Belt - Columbus, Ohio and Indianapolis, Indiana - have grown up as markets for the farm land products, distributing centers for goods needed on the farms, and as manufacturing centers.
2. Kentucky lies south of the Corn Belt and is one of our leading states in the production of coal, having a generous share of the rich coal mines of the Appalachian Plateau.
- a. The plains of Kentucky are part of the corn and winter wheat belt.
 - b. Kentucky has a great deal of tobacco land, ranking second only to North Carolina in the production of tobacco.
3. All but one of the North Central States border on the Great Lakes which provide a shipping route from the interior of North America to the Atlantic coast. Four of the five largest cities of the central states are lake ports. These cities

are Chicago, Detroit, Cleveland, and Milwaukee.

a. Chicago ranks next to New York in size.

It is a huge marketing, transportation, and manufacturing center. Its meat packing industry ranks with the world leaders.

b. Detroit, located on the waterway connecting Lake Huron with Lake Erie, is a leader in the automobile manufacturing industry.

c. Cleveland is a coal and iron port and one of the chief centers by which iron ore is sent by rail to other industrial centers.

4. The plains of the lake states are in the Hay and Dairying Belt and find ready markets for their products in the largest cities of the region.

5. The Superior region in the Laurentian Upland produces four fifths or more of the iron ore mined in our country.

6. Akron, Ohio is our greatest center for the manufacture of automobile tires and tubes. It manufactures many other kinds of rubber products and is known as the greatest rubber manufacturing center of the whole world.

D. In the Southern States agriculture takes the place that manufacturing holds in the New England States.

1. Much of the land and climate in the Southern States is suitable for farming.
 - a. The growing season is 200 days or longer.
 - b. There is level land in large quantities.
 - c. There is a sufficient amount of rainfall.
2. Cotton is still the leading money crop of the Southern States.
 - a. Mississippi, Alabama, Georgia, South Carolina, and North Carolina are in the center of the Cotton Belt.
 - b. Cotton is such a valuable raw material that any nation with land suitable for growing it is fortunate.
 - c. The southern section of our country leads the world in the production of cotton.
3. Georgia, North Carolina, South Carolina, and Tennessee are leaders in the states producing tobacco. North Carolina is our greatest cigarette manufacturing state.
4. The farm land of the south produces a variety of crops other than cotton and tobacco.
 - a. Corn is the second most important crop of the cotton belt.
 - b. The raising of cattle, hogs, and the pro-

duction of dairy products has become increasingly important to the southern farmer.

- c. The South still has large tracts of land covered with valuable forests.
5. The three important South Atlantic seaports in this group - Savannah, Charleston, and Wilmington - are not great gateways to the whole country as the chief Middle Atlantic ports are but are important gateways to the South.
6. Birmingham, Alabama is the iron and steel center of the South. Many of its iron and steel products are exported through Mobile, Alabama's seaport on the Gulf of Mexico.
7. Knoxville, Tennessee is the headquarters of a big project that the national government has worked out in the Tennessee Valley. This project is directed by the Tennessee Valley Authority and is designed to check soil erosion, lessen the danger of floods, and to use the water power stored behind its dams to produce power for the two and one half million people of the Tennessee Valley.
8. Florida, our southernmost state, has become the winter resort center of the country.

- a. The southern half of Florida seldom experiences frost.
 - b. Florida is a truck farming state supplying northern states with vegetables in midwinter.
 - c. It is best known for the citrus fruits it produces.
 - d. Of the Southern States that border the ocean or the Gulf of Mexico, Florida is the leader in fishing and fishery products. Shrimp and oysters are the most valuable of these.
- E. The Mid-Western States are comparable to the North Central States in the amount of food produced.
1. Minnesota lies almost completely in the Hay and Dairying Belt and is our leading state in the production of butter.
 2. Iowa and Missouri are a continuation of the Corn Belt discussed under the North Central States.
 3. The four Mid-Western States farthest west are North Dakota, South Dakota, Nebraska, and Kansas. They are often called the "prairie states" because they are in the part of the interior plains where the early settlers found grasslands instead of forests.
 - a. These four states are part of the huge wheat-producing section of our country.

- b. Kansas and North Dakota are our greatest wheat-producing states.
4. The winter wheat lands are located principally in Kansas.
- a. Winter wheat must be planted in the fall, and the winter must not be severe enough to kill the young wheat which grows a few inches before the cold weather puts a stop to its growth.
 - b. The farms in this area are large; the land is level, and machinery can be used to advantage.
 - c. The rainfall is not heavy but is sufficient to raise the wheat. Spring and fall seasons start the young wheat.
5. Spring wheat is raised in the Dakotas.
- a. Spring wheat is planted in the spring and harvested in the fall in the customary manner.
 - b. The winters in the Dakotas are too cold for the fall-sown wheat to be grown safely.
 - c. The farms here are also large, and all the work is done by machinery.
6. Duluth, Minnesota, the only lake port in this

group, ships quantities of iron ore and wheat.

7. Des Moines, the capital of Iowa, is centrally located in the state and is a great railroad hub.
 8. Kansas City, Kansas, and Kansas City, Missouri, together form the greatest business and manufacturing center between the Mississippi River and our Pacific coast.
 9. The other large city of the western part of the Corn Belt is Omaha, Nebraska. It is a great grain and livestock market, and a center for meat packing and grain milling.
 10. St. Louis is the largest city on the Mississippi River. It is located near the mouth of the Missouri River which forms the greatest river system in our country.
- F. There are three great oil-producing districts in the South, and they are located all or in part in the South-Western States.
1. The Gulf Coast district extends along the coast of the Gulf of Mexico in Texas and Louisiana.
 2. The second district extends from East Texas into northern Louisiana and southern Arkansas.
 3. The largest is the Mid-continent district. This

stretches from southwest to northeast across central Texas, eastern Oklahoma, and southeastern Kansas.

4. Texas, which shares in all these districts, is our leading oil-producing state.
5. Petroleum as it comes from the ground is called crude oil, and in order to get gasoline and other products from it, it must be refined.
 - a. Oil is pumped many hundreds of miles to refineries.
 - b. Tulsa, Oklahoma, is the business headquarters for all the petroleum industry of the Mid-continent district.
 - c. Oklahoma City is located in an oil field which has become the greatest producer in the state.
6. The ports of Texas and Louisiana are great shipping centers for petroleum and its products.
7. It is impossible to get along without petroleum. We need huge quantities in peace and much more in time of war. For this reason the southern oil fields are of great importance to our country as a whole.
8. The Cotton Belt extends across Texas and Okla-

homa beyond the coastal plain into the Central Plains and the Great Plains.

- a. The western part of the Cotton Belt has less than 40 inches of rainfall per year. For this reason more wheat and cattle are raised here than anywhere else in the south.
 - b. Dallas and Fort Worth, Texas, are great wholesale markets for livestock. Both cities have flour mills and meat-packing plants.
 - c. San Antonio is the railroad, business, and manufacturing center of southern Texas.
9. Near Little Rock, the capital of Arkansas, is a district where a special kind of clay called bauxite is mined. This is the ore from which we get the metal aluminum, and nearly all that is mined in the United States comes from Arkansas.
- G. The Western States are noted for sparcity of population, distinct land contrasts, and diversified climate.
1. Although it has a sparser population than many other sections, it is still a very important section of the country.
 - a. It gives the United States a long coast

line on the Pacific Ocean with a number of large seaports.

- b. Its farms and fisheries supply food that is sold all over the country.
- c. Within its boundaries are its greatest forests and some of our richest mining and manufacturing centers.

2. The West is a land of great contrasts.

- a. The Rocky Mountains are the highest lands in our country, while the lowest lands in our country are in Death Valley and Imperial Valley, both in California.
- b. In the mountains of northern California and western Oregon and Washington the rainfall varies from sixty to one hundred inches a year. Other sections in the western plateaus have less than ten inches of rain per year.
- c. The growing season varies from one comparable to the Southern States found in parts of Arizona and California to other large areas with a growing season not as long as New England's.

3. The section of the Great Plain found in the western states does not have enough rainfall for

most crops. Its principal use is for raising cattle and sheep. It is a land of large ranches and sparse population. Production of food crops in these plains is made possible by irrigation. There are many federal irrigation projects as well as private enterprises.

4. The Rocky Mountains are young rugged mountains stretching all the way down through the western states.
 - a. This Rocky Mountain region is one of the great metal-producing districts of our country. The principal metal ores mined are copper, lead, zinc, silver, and gold.
 - b. Butte, Montana, is the center of one of the great mining districts, producing large quantities of copper and manganese as well as lead, zinc, silver, and gold.
 - c. One of the most important centers for the production of silver, lead, and zinc is the Coeur d'Alene district in Northern Idaho.
 - d. The Gripple Creek district in Colorado is one of the more famous gold mining centers.
5. The Rocky Mountains have a great deal of lumber, and the grassy pastures above the tree line is

- used for the raising of cattle and sheep.
6. The Rocky Mountain district has become a popular vacation land. There are many national parks in this area: Glacier National Park in Montana, Yellowstone National Park in Wyoming, Grand Teton National Park in Wyoming, and Rocky Mountain National Park in Colorado.
 7. The Western Plateaus lie between the Rocky Mountains and the Sierra Nevadas. They are a region of arid or semi-arid lands where food crops can be produced only by irrigation.
 - a. The Great Basin, Colorado Plateau, and the Mexican Plateau are mainly grazing and mining lands. Sheep are raised in great numbers and huge quantities of copper are produced. Arizona is our leading copper-producing state.
 - b. There are many irrigation projects in this region. The largest is the Boulder Dam built on the Colorado River on the boundary between Arizona and Nevada.
 - c. Salt Lake City is in the Salt Lake oasis and is the largest city of the western plateaus. It is a distribution center for the

ranches and mines.

- d. The southwestern plateaus have several national parks. The most famous of these is the Grand Canyon National Park which contains the most beautiful section of the Grand Canyon of the Colorado in Arizona.
8. North of the southwestern plateaus is the Columbia Plateau taking its name from the Columbia River.
- a. Rainfall is sufficient here for raising spring and winter wheat, but it is still not heavy.
 - b. The Columbia River is used for irrigation purposes. Two great dams, the Grand Coulee in Washington and the Bonneville, supply water and hydro-electric power to large areas.
 - c. Spokane, Washington, is the eastern gateway for the Columbia Plateau. It is the only large city in the plateau and is a manufacturing and distributing center.
9. The Cascade Range of Washington and Oregon extends southward to join the Sierra Nevadas. It is a range of high rugged mountains covered with

forests. The Coast Range is lower, but it also has heavy rainfall and, therefore, is thickly forested.

a. The forests are soft woods, excellent for lumber, and the Northwest has become our greatest lumbering section.

10. The great farming region of the Pacific Northwest is in the Puget Sound Lowlands and the Willamette Valley in Oregon. This region has heavy rainfall and a mild climate. Much dairying and fruit raising is done.
11. In fishing, as well as lumbering, the Northwest is the top-ranking section of our country. The most important fish caught is the salmon which is canned and sent all over the world.
12. The three largest cities of this region are also seaports -- Seattle and Tacoma on Puget Sound in Washington, and farther south, Portland, Oregon, the largest city of Oregon and an important seaport.
13. California is the largest of our western states, and it contains half of the people in the western states. The discovery of gold started California on its way to becoming a rich state, but its real

wealth and growth has been due to its many other resources that have been developed.

- a. Southern California has some of the richest oil fields in our country. It is second only to Texas in the amount of petroleum produced.
- b. The Sierra Nevada mountains furnish lumber and streams and rivers for power and irrigation in the Central Valley. The most important crops here are oranges and lemons.
- c. The climate of southern California has attracted thousands who dislike cold weather.
- d. The San Francisco Bay district of central California is one of the most densely populated sections. San Francisco is one of our most important west coast ports and also ranks high among the outstanding manufacturing centers of our country.
- e. Los Angeles has grown with the discovery of oil in California. With the oil to use for cheap power, there has been a rapid increase in mills and factories of all kinds. Today it is the fifth largest city in the United States, and with the addition of

San Pedro, one of our most important west coast seaports.

List of probable indirect and incidental learning products.--

A. Indirect

1. The desire to travel and to see the varying topography and peoples described in the unit.
2. Respect in place of tolerance for people whose habits and customs are not the same as ours.
3. Pride in our country, its size, resources, and people.

B. Incidental

1. An increased ability to read and understand physical and political maps.
2. Advancement in oral and written expression.
3. An increased ability to follow directions and work for the good of the group.
4. A concept of the magnitude of the United States and its global stature.
5. An understanding of the educational advancement and cooperative responsibility of the entire population necessary to unify all sections of the United States to face world aggression, if such becomes necessary.

6. An appreciation of the problems facing national leaders and lawmakers in administering a democracy that includes people from so many walks of life.
7. A realization of the varied fields of opportunity that present themselves to the properly prepared person in the United States.
8. Better comprehension of news coverage from all parts of our country.

The unit assignment.-- (Tentative time allotment: five weeks, four periods per week.)

A. Introduction

A class discussion reviewing New England's good harbors, railroads, and other transportation facilities, emphasizing the point that they indicate an exchange between New England and all of the United States. Center the discussion around such questions as: (1) What type of climate is needed to produce the varied raw materials that pour into New England? (2) What national resources, mines, soils, etc., stand behind these materials? (3) Where is much of the food consumed in New England raised? (4) What types of land are needed to raise this food? (5) If it is possible to drive across New England by car

in a day, how many days would it take to drive across the United States where all this production takes place? (6) Would the people encountered dress the same as we do and live in the same kind of homes? Close the discussion with the consideration of the importance of knowing just what peoples, lands, and climates are found in the United States. It is important to have shown how the people live and work, and what they produce. Direct the discussion to make the point that this knowledge of our resources is doubly important now that the tension, or in some cases open hostility, is growing daily among the nations of the world.

B. General directions

The questions and references following these directions are intended to help you in your study of the United States. As you work on them, it is hoped that you will begin to get a picture of our country. During your studies, it will add a great deal to our knowledge if you can find actual photographs from magazines, postcards, pamphlets, etc. of the people, lands, customs, cities, and wildlife that we are studying. Arrangements have been made for you to share your findings with your classmates. A

few reminders might serve to insure that the work you do on this will receive credit and be properly displayed so as to be of greatest help to the class. Choose your pictures carefully; be sure that they are typical of the section of the country that you want to portray. See that they are given good handling and that they are carefully cut out and mounted. Be sure that there is a title for each picture and that your first initial and last name is on the lower right-hand corner of the picture. All titles and names should be printed on the mounting, not on the picture itself, so that the pictures may be re-mounted if they cannot be fitted into our display exactly as they are submitted. The back wall of the Social Studies room is to be used for the display, and space is limited; so remember that quality, not quantity, is the important thing. If your pictures are not chosen for the final display, they will still be useful to us in our day-to-day work and discussions. The bulletin board at the back of the room has been reserved for snapshots of local interest in New England. Do not try to mount them, but be sure they are identified on the back and that your name is on them.

If you are especially interested in this part of our unit, why not volunteer your services to form a committee to edit and display the pictures. One suggestion this committee might follow would be to form a picture map of the United States on the back board, using the material brought in by the class.

C. For individual study and investigation

1. From the maps listed in the references below, fill in on the attached outline map of the United States the seven divisions commonly used when studying the United States. (New England, Middle Atlantic, North Central, Southern, Mid-Western, South-Western, and Western.) Can you suggest any improvement on this division? What factors make this division seem logical (1:27,37,71,105, 103,141,144,177,180)?^{1/}
2. How important is coal mining in the Middle Atlantic States? Where is much of the coal produced used? What city is the center of the coal and mining industry (1:77-83; 2:87-90; 3:233-239; 4:201,202-203; 5:227-234; 6:598-599; 7:220-221; 8:207-210)?

^{1/}Code to the pupils' reading list: 1:27,37,etc. means pages 27,37,etc. of the first reference in the reading list at the end of the unit.

3. Review the factors that control climate. Which of these affect the climate of the Middle Atlantic States? Compare their growing season with that of New England (1:11-13, 65, 67; 4:46-51, 128-130; 9:7-12).
4. Locate New York, Philadelphia, and Washington, D.C. on your outline map. Whenever you put a city on a map, write L after it if it is larger than Boston; S if it is smaller.
5. What special crop is raised in Virginia? Is it of national importance? What special conditions make it possible to grow this crop (1:68-69; 3:99-101)?
6. Write two of the leading products produced in the Middle Atlantic States on your map.
7. What famous crop belt is found in the North Central States? How is much of this crop used? Why is it very important to New England? Can you explain why New England is not able to raise its own supply (1:125-133; 2:154-161; 3:178, 185-186; 4:136-137; 5:161-163, 280; 6:520-522; 7:172-174; 8:309-312)?
8. Locate Chicago, Detroit, Cleveland, and Milwaukee on the outline map, using key of L or S. How

- have the Great Lakes influenced their growth?
Can you name any other factors that have helped them grow?
9. Write two of the leading products produced in the North Central States on the outline map.
 10. What is the length of the growing season in the Southern States? How does this affect the homes and dress of the people? Would your home be comfortable in the South (1:89; 3:78; 9:366-367)?
 11. What is the leading money crop in the South? How do we make use of this crop? Where is much of it manufactured (1:90-97; 2:108-112; 3:83; 4:150-152; 5:181; 7:177-178; 8:356-360)?
 12. What Southern States lead in the production of tobacco? Write them on your map. What other crops are raised (1:67-69; 2:119-123; 3:99-101; 6:531-535; 7:178; 8:105-107; 11:72-75)?
 13. Locate Savannah, Charleston, Wilmington, and Birmingham on your map. How are they gateways to the South?
 14. What projects can you find which have been built by the National Government to increase the power supply of the South (1:111-113; 2:125-126; 3:108-109)?

15. What can you contribute to a group discussion of Florida - its farming, fishing, and tourist industry (1:113-115; 2:117-118; 3:72-73; 5:96-97; 6:531; 8:113-118)?
16. Find out why the Mid-Western States are especially suited to the raising of wheat. What is winter wheat? What is spring wheat (1:138-139; 2:187-188; 3:188-189; 4:132-134; 6:518-520,522; 8:311-312)?
17. Why do you think this wheat raising is so important to New England? Would it be possible for us to raise our own supply?
18. Locate Kansas City, Missouri; Kansas City, Kansas; and St. Louis, Missouri, on your map. Use L or S. What river system has influenced the growth of St. Louis?
19. What are the food crops raised in Minnesota? What city in Minnesota is the lake port for this group? What do you think it would export? (1:143-146; 3:192-193; 4:153;183-184; 8:305-307)?
20. Write two important products of the Mid-Western States on your map.
21. What are the three great oil-producing districts

- of the South-Western States? What state is the leading oil producer? What products are obtained from crude oil? How is crude oil transported (1:101-104; 2:134-137; 3:109-113; 5:234-236; 6:587-589; 7:225; 8:360-364; 9:148-155)?
22. Locate Tulsa and Oklahoma City on the outline map. What part do they play in the production of oil (1:103; 2:136-137)?
23. What can you find out about the world-wide importance of these oil fields? Do you think any of this oil is used in New England? in Korea (4:114; 7:225; 9:149)?
24. Trace the extent of the cotton belt across Texas and Oklahoma. What happens to the rainfall as you go west? What changes does this make in the crops raised (1:91,161; 3:136-138; 4:164-165; 5:176-179)?
25. Locate Dallas and Fort Worth on your map. What products have built these cities (1:95-96; 2:133-134; 3:123)?
26. Find out what bauxite is used for. Where is it mined? Why is this especially important to us now (1:96-97; 2:126; 3:116; 7:215; 11:81)?
27. Compare the area of the Western States with the

- other sections studied. How does it compare in population? Look up the range of rainfall. Look up the word "antithesis" in the dictionary. How do you think this term could be used when speaking of New England and the Western States (1:159-161; 2:194-198; 3:136-138)?
28. How do the growing seasons in these regions differ in length? Do you think this is a help or a hindrance to the development of the West (1:88,125,161; 2:16-17; 3:79; 4:129; 10:366-367)?
29. Why is the section of the Great Plains found in the Western States used principally for grazing (1:162-165; 2:25-25; 4:165; 11:28-29)?
30. Sketch in the Rocky Mountains on the outline map. What are the principal materials mined here? What other products can the people living here produce (1:168-176; 8:387-388; 10:146-152)?
31. What can you add to a class discussion of the Western Plateaus, the Great Basin, Colorado Plateau, and the Mexican Plateau? What is the yearly rainfall? How do the people earn a living (1:179-186; 2:204-206; 3:160; 4:165-167; 11:143-144)?

32. Compare the Columbia Plateau with above-mentioned plateaus. Write their names on your outline map (1:187-189; 2:224-225; 4:166; 7:173).
33. Sketch in the Cascade Range and the Coastal Range on the map. What has made this the greatest lumbering region of the United States (1:190-192; 2:219-221; 6:565-566; 10:128)?
34. What important fisheries are found in the Pacific Northwest? Compare them with our New England fisheries (1:195-205; 2:222; 3:169-171; 4:69-70; 6:557-558; 9:93-95).
35. Be able to locate on the map the dairying and fruit-raising regions of the Northwest. What type of climate do you think is needed to raise these crops? What parts of New England might it be like?
36. Locate Seattle, Tacoma, and Portland on your map. See if you can find out why they have become population centers.
37. The discovery of gold gave California its start, but its real wealth and growth has been due to its many riches that have been developed. See how many of these you can find. Give special attention to its other minerals, crops, and

climate (1:195-205; 2:210-215; 3:147-156;
5:185-186).

38. Locate San Francisco and Los Angeles on your map. See if you can discover what has made them grow into important cities. Are they still growing (1:200-201,203-204; 2:209-210,215; 3:173-175; 5:335)?

List of references.--

1. Atwood, Wallace W., and Helen Goss Thomas, The American Nations, Boston: Ginn and Company, 1943.
2. McConnell, W. R., Geography of the Americas, New York: Rand McNally and Company, 1945.
3. Smith, J. Russell, American Lands and Peoples, Philadelphia: The John C. Winston Company, 1942.
4. Thurston, E. L. and E. H. Faigle, World Geography, Syracuse, New York: Iroquois Publishing Company, Inc., 1947.
5. Casner, Mabel B. and Roderick Peattie, Exploring Geography, New York: Harcourt, Brace and Company, 1937.
6. Stull, DeForest and Roy W. Hatch, Our World Today, Boston: Allyn and Bacon, 1945.
7. Atwood, Wallace W., The World At Work, Boston: Ginn Company, 1938.
8. Meyer, J. G. and O. Stuart Hamer, The New World and Its Growth, Chicago: Pollott Publishing Company, 1942.
9. McConnell, W. R., The United States in the Modern World, New York: Rand McNally and Company, 1933
10. McConnell, Wallace R. and Helen Harter, Geography of a Working World, New York: Rand McNally and Company, 1947.
11. Huntington, Ellsworth, C. Beverley Benson, and Frank M. McMurry, Living Geography, New York: The MacMillan Company, 1932.

D. Optional related activities.--

1. Oral reports on some prepared topic or personal experience.
 - a. Have you taken a trip to any of the sections of the United States that we are studying? If you have, be prepared to tell the class about your trip. List the points of interest you want to discuss, and follow your outline throughout your talk.
 - b. What are population centers? Find out what you can about them and what makes them grow. Choose one that you are interested in, and be ready to tell the class your opinions on its growth and development.
 - c. If you had to leave New England and choose a new home in the United States, what section would you choose? Be prepared to tell the class why you made your choice and to defend it against their questions. Have some information to back up your argument, i.e. climate, schools, opportunities for employment, etc.
 - d. What magazine or newspaper articles have you read recently that deal with an industry not found in New England? Bring it

to class. Mark one or two paragraphs of interest to be read, and be able to answer questions about the rest.

- e. Use a period in the library trying to find as many new developments in farm machinery as you can. Why is much of it more suitable for midwestern farm lands rather than New England? Take notes on your findings and report them to the class.
- f. Look up the history of the cotton gin. What effect did it have on the price of cotton garments? on the growth of the South? Be able to explain briefly to the class how the cotton gin operates.
- g. Norman Harris is a graduate of your junior high school. Follow his television show "Living Wonders" Wednesday at six o'clock. Make a list of the animals he displays and talks about. When you report to the class, be able to tell the class what climate each animal requires, and how it is possible to find these climates in the United States.

- 2. Written reports on some prepared topic or personal experience.

- a. Have you traveled by airplanes? If so, write a short account of your trip. Pay special attention to the number of miles covered and the time spent. Compare this to the time the same trip would require by train; by automobile; by boat (if possible). Can you find any comparison of the amount of money each method of travel would take?
- b. Choose four widely separated sections of the United States, and describe the heating or cooling systems necessary for comfortable living. How cold is a "cold" day in Florida? in Minnesota? Would you want an insulated home no matter what the temperature range?
- c. Write a report of the west coast fisheries. The librarian can help you with references on this topic.
- d. Look up and write an account of the steps in the manufacture of flour. Be sure your article contains the names of some of our wheat-raising states and a list of the cities in which flour is manufactured.
- e. Why do we associate the raising of corn with meat animals? Write up your findings.

f. Look at the "Help Wanted" advertisements in today's paper. Can you write some "Help Wanted" advertisements that might seem strange to us but might appear in a local paper in Tennessee? in Oregon?

3. Maps, graphs, and special projects.

- a. Using the outline maps of the United States, prepare a distribution of one of the following topics: rainfall, growing seasons, crop belts, grazing lands, lumber, fisheries, minerals, or any product that may interest you. Do not try to do several, but choose one and do it as well as you can.
- b. In the next two weeks see how many postcards you can collect from interesting places outside of New England. If you were going to send a postcard to a friend in California, what card would you choose as typical of New England? Add it to your collection. Plan with your teacher for a day when they may be shown to the class with the opaque projector. Interested classmates may help you with this project.
- c. A United States bulletin board would make

an interesting display. Form a committee to help you, and take care of the home room bulletin board for a week. Magazines and postcards might be one source of material.

- d. Borrow catalogues from the visual aids director. See if you can find one good film that we can add to our list of social studies films. Choose one that you think will help to make our picture of the United States a little clearer.
- e. Plan a vacation trip of a month's duration. See if you can get vacation folders from some of the interesting points you plan to include in your trip. Find out, if you can, what single item will be most expensive on the trip.
- f. Make a collection of labels taken from canned goods packed outside of New England. See how many states you can get in your collection. Ask some of your classmates to help you.

Unit test.--

Directions: Each of the following sentences can be completed or answered by one of the phrases following it. Place on the blank at the left of the sentence, the number of the phrase that makes the sentence true.

1. 1 The climate of a locality may be described as:
 - (1) The general weather conditions through a period of years
 - (2) The general weather conditions for any one year
 - (3) The general weather conditions for any one week
 - (4) The local conditions during one day

2. 1 The climate of the east coast is affected by:
 - (1) The Gulf Stream
 - (2) The West Wind Drift
 - (3) The North Equatorial Current
 - (4) The South Equatorial Current

3. 3 What fraction of the world's coal supply is mined in the Middle Atlantic States?
 - (1) One half
 - (2) One eighth
 - (3) One fourth
 - (4) One sixteenth

4. 3 The city that is the center of the coal and iron industry in the Middle Atlantic States is:
 - (1) New York
 - (2) Philadelphia
 - (3) Pittsburgh
 - (4) Boston

5. 4 Three important cities of the Middle Atlantic States would be:
 - (1) Boston, New York, and Philadelphia
 - (2) Chicago, Washington D.C., and Philadelphia
 - (3) Boston, Detroit, and New York
 - (4) New York, Philadelphia, and Washington, D.C.

6. 3 The state of Virginia is a leader in the production of:
 - (1) Corn
 - (2) Cattle
 - (3) Tobacco
 - (4) Wheat

7. 2 Corn is most valuable as:
(1) Food for man
(2) Food for animals
(3) A canned product
(4) Seed for next year's crop
8. 3 A lake port ranking next to New York in size is found in the North Central States. It is:
(1) Columbus
(2) Indianapolis
(3) Chicago
(4) Detroit
9. 1 Akron, Ohio, is our greatest center for the production of:
(1) Rubber products
(2) Textiles
(3) Iron and steel
(4) Meat products
10. 3 Cleveland, Ohio, is one of the nation's centers for the:
(1) Meat products industry
(2) Textile industry
(3) Coal and iron industry
(4) Rubber manufacturing industry
11. 1 Kentucky lies south of the corn belt and its leading crop is:
(1) Tobacco
(2) Cotton
(3) Wheat
(4) Rye
12. 3 Kentucky mines an important amount of:
(1) Gold
(2) Iron
(3) Coal
(4) Tin
13. 2 The growing season in the Southern States is approximately:
(1) 100 days
(2) 200 days
(3) 300 days
(4) 400 days
14. 3 In general would you say that the rainfall in the Southern States as compared with New England was:
(1) More than twice that of New England

- (2) Lighter than in New England
 - (3) Heavier than in New England
 - (4) About the same as that of New England
15. 1 How would you rate the Southern States' production of cotton as compared to any other country in the world?
- (1) First
 - (2) Second
 - (3) Third
 - (4) Fourth
16. 2 Our greatest cigarette-manufacturing state is:
- (1) Georgia
 - (2) North Carolina
 - (3) South Carolina
 - (4) Tennessee
17. 4 The iron and steel center of the south is:
- (1) Savannah
 - (2) Charleston
 - (3) Wilmington
 - (4) Birmingham
18. 2 In the cotton belt a second important crop is:
- (1) Wheat
 - (2) Corn
 - (3) Potatoes
 - (4) Barley
19. 2 The leading Southern State in fishing and fishery products is:
- (1) Mississippi
 - (2) Florida
 - (3) Georgia
 - (4) Tennessee
20. 1 The metal ore mined in huge quantities in the Laurentian Upland is:
- (1) iron
 - (2) copper
 - (3) lead
 - (4) coal
21. 4 The great food crop of the Mid-Western States is:
- (1) Potatoes
 - (2) Rye
 - (3) Corn
 - (4) Wheat

22. 2 The state that shares all the oil-producing districts of the south and is the leading oil producer is:
- (1) Oklahoma
 - (2) Texas
 - (3) Kansas
 - (4) Louisiana
23. 3 Bauxite is the ore from which we get the metal:
- (1) Zinc
 - (2) Tin
 - (3) Aluminum
 - (4) Brass
24. 4 Many of the plains and plateaus found in the Western States are used for the raising of cattle and sheep because:
- (1) The land is not rich enough to raise crops
 - (2) Level land is suitable for cattle raising
 - (3) There would be no market for food crops
 - (4) The rainfall is insufficient for the raising of most crops
25. 1 In the north-western fisheries the most important fish is the:
- (1) Salmon
 - (2) Cod
 - (3) Hake
 - (4) Tuna

Directions: Read each statement carefully. If you think the statement is true, write true in the space provided. If you think the statement is false, write false in the space provided.

26. true Chicago is the second largest city and greatest railroad center of the United States.
27. true The highest mountains in the United States are found in the western part of the country.
28. false The leading agricultural regions of the United States are found in the north-eastern part.
29. true The section where there is the most mining of metal ores is the western part of the country.

30. true New York is the largest city and greatest seaport of the United States.
31. false The discovery of oil in California gave it its start as a state.
32. true California is the largest of our western states.
33. false San Francisco was made into a seaport by the addition of a small seaport town called San Pedro.
34. false The Northwest is the top-ranking section of our country in both lumbering and dairying.
35. true Southern California rivals Florida in the production of oranges and lemons.
36. true Among the various types of farming done in New England, dairying is the leader.
37. false New England produces many of the raw materials used in its factories.
38. true Philadelphia is a great railroad center, a great manufacturing center, and also one of our important seaports.
39. true Although the Middle Atlantic States make up only a small part of our country, they have more than one fourth of our people.
40. false The cotton belt is in the southern part of the United States because cotton is a money crop.
41. false The South has paper mills because paper is needed for wrapping the cotton bales.
42. true Products refined from petroleum are gasoline, fuel oil, and lubricants.
43. false The population of Florida is much larger in summer than it is in winter.
44. true A Florida truck farmer's busiest season would be in winter.
45. true Georgia's most famous fruit crop is peaches.

46. false Most of the corn produced in the North Central States is sent to market in cans.
47. true Iron ore is mined in large quantities in the Laurentian Upland.
48. false Much of the land in the Great Plains is used for grazing because the soil is not rich enough to raise crops.
49. false The first settlers in the Rocky Mountains were attracted there by the large quantities of lumber available.
50. true Boulder Dam has been built by our government on the Colorado river.
51. false The discovery of coal in California has been especially valuable to the people of that state.
52. true The Western states have more irrigated land than any other section of our country.
53. true The Western states rank first in the production of precious metals.
54. true The fisheries of the Western States rank first in the United States.
55. true San Francisco and Los Angeles have become great manufacturing centers of the far west.

Directions: Here is a list of some of the large cities in the central part of the United States. Write in the space provided in front of the city the number from the list at the right that best describes the city. You may use a number more than once as indicated.

- | | | | | |
|-----|----------|--------------|----|----------------------------------|
| 56. | <u>5</u> | Akron | 1. | The Twin Cities of Minnesota |
| 57. | <u>2</u> | Cincinnati | 2. | A city on the Ohio River |
| 58. | <u>4</u> | Columbus | 3. | A city on the Missouri River |
| 59. | <u>4</u> | Des Moines | 4. | A state capital in the corn belt |
| 60. | <u>4</u> | Indianapolis | | |
| 61. | <u>3</u> | Kansas City | | |

62. 2 Louisville
 63. 6 Milwaukee
 64. 1 Minneapolis
 65. 3 Omaha
 66. 1 St. Paul
 67. 6 Toledo
 68. 5 Youngstown

5. An Ohio city in the Appalachian Plateau
 6. A lake port in Wisconsin and one in Ohio

Number the following places in the order that you would see them when crossing the United States from east to west.

69. 1 Atlantic Coastal Plain
 70. 3 Central Plains
 71. 4 Great Plains
 72. 6 Great Basin
 73. 2 Appalachian Mountains
 74. 5 Rocky Mountains
 75. 7 Cascade Mountains

Pupil opinion poll.--

- Do you like this method better than other methods we have used in the Social Studies?
 Encircle: Yes No
- What did you like most?
- What part did you like least?
- In our next unit, what changes would you like to see made?
- Were any parts of the unit too difficult? If so, what part?

CHAPTER III
AN EVALUATION OF THE UNIT

Results of objective testing.--- The results of the objective testing done are reported below in detail. In general they were very satisfactory with all pupils showing growth. The test given for the pretest was used for the final examination. Table 10 which follows shows the raw scores as they were obtained from the pretest and final test with the gains made by the 30 pupils taking part in the unit. The arithmetical means and standard deviations for each are also reported in Table 10 and their calculations are given in Tables 11, 12, and 13.

The arithmetical mean of the pretest was 27.33 with a standard deviation of 7.2. Comparing this with the final test with its arithmetical mean of 50.47 and standard deviation of 11.01 shows a mean gain of 23.32 with a standard deviation of the gain of 3.19.

The range of the gains was from 3 points to 44 points. These upper and lower extremes were due in the most part to the influence of the high and low ability groups taking part in the unit.

(See following pages for Tables 10, 11, 12, and 13.)

Table 10. Pre-Test and Final Test Results, Showing Gain

Pupil	Pre-Test Score	Final Test Score	Gain
(1)	(2)	(3)	(4)
1.	29	49	20
2.	38	61	25
3.	17	22	5
4.	21	31	10
5.	24	63	39
6.	47	68	21
7.	25	43	18
8.	35	61	26
9.	41	63	22
10.	24	39	15
11.	38	55	17
12.	21	45	24
13.	36	50	14
14.	33	60	27
15.	42	73	31
16.	21	24	3
17.	31	55	24
18.	25	39	14
19.	32	52	20
20.	20	38	18
21.	38	63	25
22.	30	55	25
23.	21	37	16
24.	32	50	18
25.	20	47	27
26.	25	55	30
27.	20	45	25
28.	21	40	19
29.	20	36	16
30.	21	41	20
31.	21	50	29
32.	28	54	26
33.	31	61	30
34.	29	63	34
35.	39	55	16
36.	20	36	16
37.	20	41	21
38.	24	53	29
39.	34	50	16
40.	20	33	13

(concluded on next page)

Table 10. (concluded)

Pupil (1)	Pre-Test Score (2)	Final Test Score (3)	Gain (4)
41.	28	53	25
42.	37	60	23
43.	23	52	29
44.	25	47	22
45.	28	51	23
46.	30	48	18
47.	26	47	21
48.	24	49	25
49.	33	36	3
50.	26	55	29
51.	18	59	41
52.	29	51	22
53.	25	50	25
54.	20	49	29
55.	22	64	42
56.	23	53	30
57.	28	54	26
58.	24	45	21
59.	18	38	20
60.	35	68	33
61.	39	61	22
62.	22	58	36
63.	36	60	24
64.	36	65	29
65.	29	53	24
66.	22	41	19
67.	45	69	24
68.	28	42	14
69.	36	66	30
70.	31	52	21
71.	19	26	7
72.	19	37	16
73.	25	53	28
74.	25	55	30
75.	30	64	34
76.	22	60	44
77.	28	59	31
78.	23	50	27
79.	14	28	14
80.	17	52	35
Mean	27.33	50.47	23.32
Standard Deviation	7.2	11.01	8.19

Table 11. Calculation of the Mean and the Standard Deviation for the pre-Test Results

Raw Scores in Class Intervals of Three	Scores Made By a Class of 80 Pupils Talled in Appropriate Class Intervals	Pre- quencies	Devi- ations	Product of Columns 3 and 4 FD	Product of Columns 4 and 5 FD ²
(1)	(2)	(3)	(4)	(5)	(6)
47-49	1	1	+3	8	64
44-46	1	1	+7	7	49
41-43	11	2	+6	12	72
38-40	1111	5	+5	25	125
35-37	1111 11	7	+4	28	112
32-34	1111	5	+3	15	45
29-31	1111 1111	10	+2	20	40
26-28	1111 111	8	+1	8	8
23-25	1111 1111 1111	15	0	0	0
20-22	1111 1111 1111 1111	19	-1	-19	19
17-19	1111 1	6	-2	-12	24
14-16	1	1	-3	-3	9
Totals		80		+89	567

Assumed Mean = 24

$M = A.M. \div (\text{Sum of FD} \div N) \times \text{Class Interval}$

$M = 24 \div (89 \div 80) \times 3$

$M = 24 \div (1.1) \times 3$

$M = 24 \div 3.33$

$M = 27.33$

$S.D. = \sqrt{\frac{\text{Sum of FD}^2}{N} - \left(\frac{\text{Sum of FD}}{N}\right)^2} \times \text{Size of Class Interval}$

$S.D. = \sqrt{\frac{567}{80} - \left(\frac{89}{80}\right)^2} \times 3$

$S.D. = \sqrt{7.09 - (1.11)^2} \times 3$

$S.D. = \sqrt{5.85} \times 3$

$S.D. = 2.4 \times 3$

$S.D. = 7.2$

Table 12. The Calculation of the Mean and the Standard Deviation for the Final Test Results

Raw Scores in Class Intervals of Three	Scores Made By a Class of 80 Pupils Tallied in Appropriate Class Intervals	Fre- quencies	Devi- ations	Product of Columns 3 and 4 FD	Product of Columns 4 and 5 FD ²
(1)	(2)	(3)	(4)	(5)	(6)
71-73	1	1	+7	+7	49
68-70	111	3	+6	+18	108
65-67	111	3	+5	+15	75
62-64	1111 1	6	+4	+24	96
59-61	1111 1111	9	+3	+27	81
56-58	1	1	+2	+2	4
53-55	1111 1111 1111	14	+1	+14	14
50-52	1111 1111 11	12	0	0	0
47-49	1111 11	7	-1	-7	7
44-46	111	3	-2	-6	12
41-43	1111	5	-3	-15	45
38-40	1111	5	-4	-20	80
35-37	1111	5	-5	-25	125
32-34	1	1	-6	-6	36
29-31	1	1	-7	-7	49
26-28	11	2	-8	-16	128
23-25	1	1	-9	-9	81
20-22	1	1	-10	-10	100
Totals		80		-14	1090

Assumed Mean = 51

M = A.M. $\frac{(\text{Sum of FD} + N)}{N}$ x Class IntervalM = 51 $\frac{(-14 + 80)}{80}$ x 3M = 51 $\frac{(-.175)}{1}$ x 3

M = 51 - .525

M = 50.475

S.D. = $\sqrt{\frac{\text{Sum of FD}^2}{N} - \left(\frac{\text{Sum of FD}}{N}\right)^2}$ x CIS.D. = $\sqrt{\frac{1090}{80} - \left(\frac{-14}{80}\right)^2}$ x 3S.D. = $\sqrt{13.51 - .03}$ x 3S.D. = $\sqrt{13.48}$ x 3

S.D. = 3.67 x 3

S.D. = 11.01

Table 13. The Calculation of the Mean and the Standard Deviation of the Gains Made in the Final Test

Raw Scores in Class Intervals of Three	Scores Made By a Class of 80 Pupils Tallied in Appropriate Class Intervals	Fre- quencies	Devi- ations	Product of Columns 3 and 4 FD	Product of Columns 4 and 5 FD ²
(1)	(2)	(3)	(4)	(5)	(6)
42-44	11	2	+6	+12	72
39-41	11	2	+5	+10	50
36-38	1	1	+4	+4	16
33-35	1111	4	+3	+12	36
30-32	1111 11	7	+2	+14	28
27-29	1111 1111	10	+1	+10	10
24-26	1111 1111 1111	15	0	0	0
21-23	1111 1111 1	11	-1	-11	11
18-20	1111 1111	10	-2	-20	40
15-17	1111 111	8	-3	-24	72
12-14	1111	5	-4	-20	80
9-11	1	1	-5	-5	25
6-8	1	1	-6	-6	36
3-5	111	3	-7	-21	147
Totals		80		-45	623

Assumed Mean = 25

M = A.M. \neq (Sum of FD \div N) \times C.I.M = 25 \neq (-45 \div 80) \times 3M = 25 \neq (-0.56) \times 3

M = 25 - 1.68

M = 23.32

S.D. = $\sqrt{\frac{\text{Sum of FD}^2}{N} - \frac{(\text{Sum of FD})^2}{N^2}}$ \times C.I.S.D. = $\sqrt{\frac{623}{80} - \frac{(-45)^2}{80^2}}$ \times 3S.D. = $\sqrt{7.78 - .32}$ \times 3S.D. = $\sqrt{7.46}$ \times 3S.D. = 2.73 \times 3

S.D. = 8.19

Relative growth of pupils.--- In order to obtain a picture of the pupil's growth in the unit, it is necessary to determine the relative growth of the pupil as well as his actual growth. For this reason, a comparison of the pupil's actual growth with the growth made by the others in the class, and with the average growth of the class, has been made by means of a relative growth scale.

The calculated means and standard deviations were used to draw the relative growth scales below. The method used is described in Fundamentals of Secondary School Teaching.^{1/} Group I represents pupils of superior achievement; Group II, those who are above average; Group III, those whose growth is average; Group IV, those whose growth is below average and Group V, those whose growth is very inferior. Figures 3, 4, and 5 below show this actual distribution on the pre-test, final test and the gains.

^{1/}Billett, Roy O., Fundamentals of Secondary School Teaching. Houghton-Mifflin Company, Boston, 1940, pp.630-635.

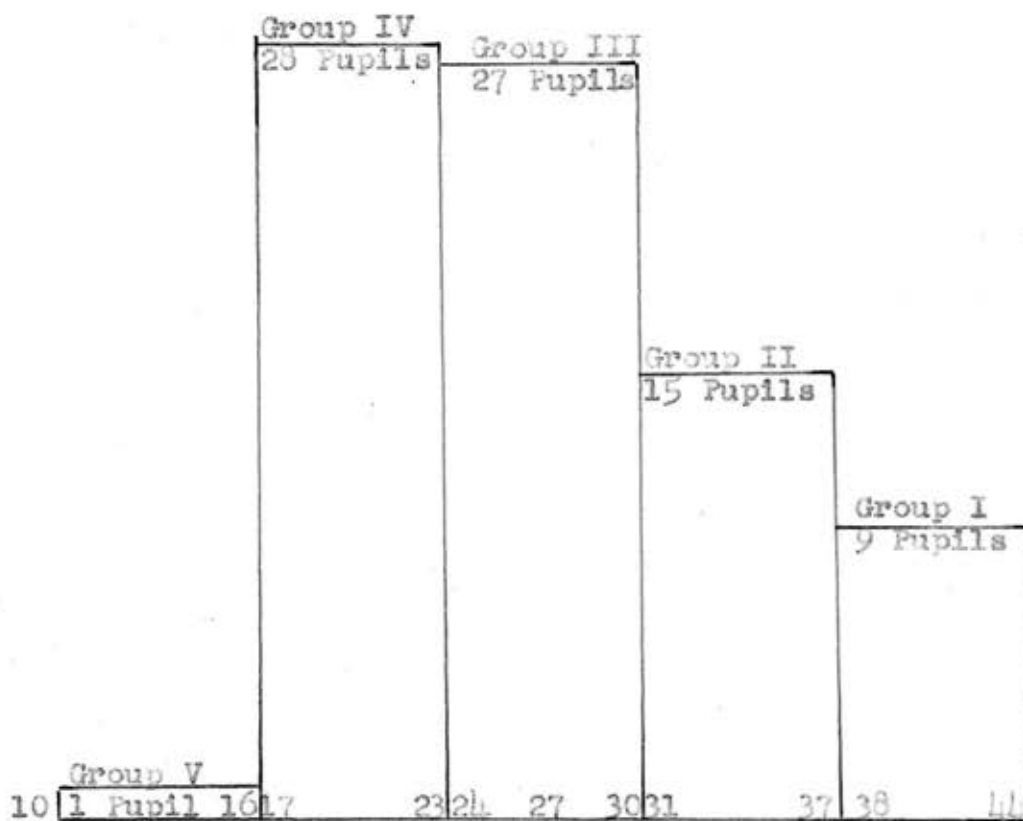


Figure 3. Relative Growth Scale -- Pre-Test

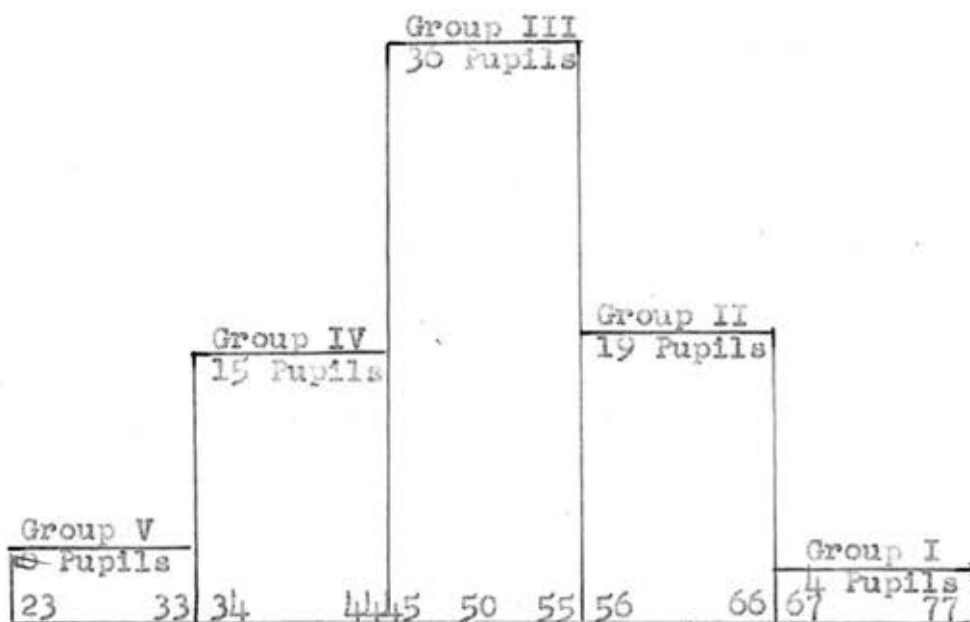


Figure 4. Relative Growth Scale -- Final Test

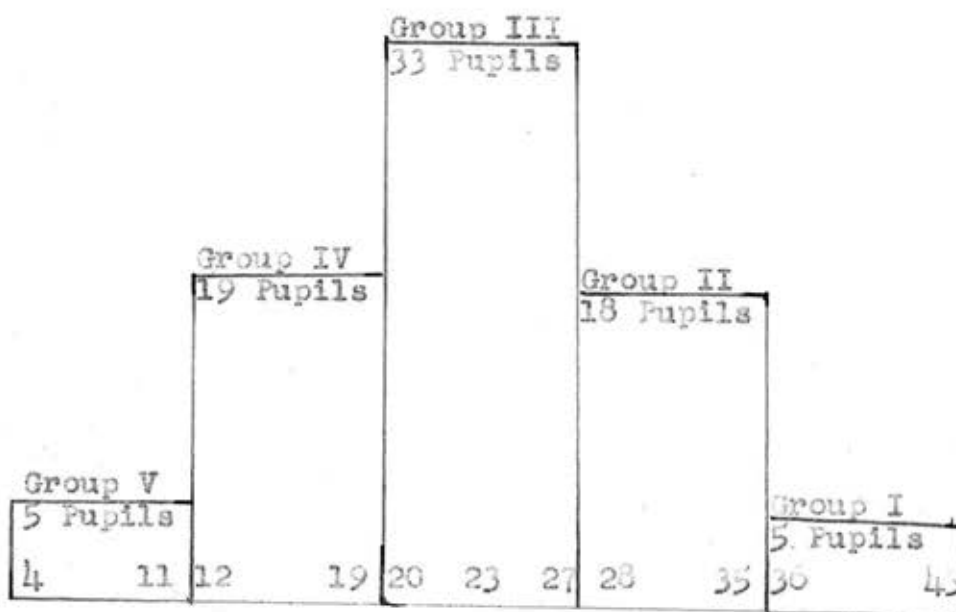


Figure 5. Relative Growth Scale -- Gains

Report based on the daily log.-- A log was kept by the teacher during the development of the unit. This provided a written record of the unit's successes and failures. It is discussed here in detail to provide the reader with a more complete picture of the methods used in teaching and evaluating the unit.

As the preceding unit on New England neared completion, mention was made of the new unit to be started. It was mentioned that a test would be given to start the unit and also that the test was not to serve the traditional purpose of determining at least in part the pupil's report card mark. Rather, this test was to be given to find out the parts of the new unit that would need the most time and energy spent on them. The reception of this idea by the classes was good. Care was taken not to give the impression that the test was not important, and that because it did not "count," to use an expression common to the classroom, it would not be necessary for them to make their best effort. This preliminary explanation was given before, rather than on, the actual day of the test because of the inflexible bell schedule that made it impossible to lengthen the forty-two minute classroom period most of which would be needed for a short explanation of the mechanics of the test and its completion. The first day was used for the taking of the test. Interest was high

with requests from many students for information as to when the results of the test would be reported back to them. The format of the test (see Chapter II) seemed usable, and the time limit was adequate.

On the second day the unit was introduced as was planned in Chapter II. Considerable interest and enthusiasm had already been generated as mentioned above. Consequently, the introduction, the passing out and explanation of the study guides with attached maps, and the explanation of the optional related activities were very well received. The period ended with all classes wanting to know more about the work and anxious to get started.

The third day of the unit was spent on further organization of the work. Pupil-teacher discussion of the study guides, how they could be used to the best advantage, how the textbooks available in the room could be arranged to be most accessible, and how they could be left in good order for the next group took up most of the period. There were many suggestions for sources of materials for the proposed pictorial display (see study guide, Chapter II). Notable among these was the writing to Chambers of Commerce in different sections of the United States. The results obtained from these letters were excellent, as was proven later in the unit.

The fourth and fifth days of the unit were spent in the

laboratory phase with each student going ahead with the study guide and the teacher giving advice and making suggestions when necessary. Most were able to go ahead without any difficulty. Suggestions continued to come in on how to improve the individual maps carried on by each pupil and the picture and bulletin board displays. A large percentage made folders for their individual maps and to contain notes on their findings.

At the start of the second week, a pooling-and-sharing period was held that was helpful to all. The interchange of facts and ideas was excellent with the superior students being very helpful to the students whose findings had not been so complete. It was decided by the groups to work ahead for the remainder of the week on their outlines. They seemed to gain much by working in small groups throughout the room. Many of the students moved ahead rapidly enough to enable them to start work on the optional related activities. A plan was worked out so that each child would have an opportunity to go to the library at some time during the week.

Another pooling, sharing, and organization period was conducted at the start of the third week. A committee of two from each of the three sections was chosen to coordinate the materials for display in the room. Boxes were arranged with the labels of the sections on them and placed in the

front of the room. Materials already collected were sorted and filed in these boxes. During the remainder of the week, while the students continued with their group and individual work on the study guides, materials continued to come in. The committee, with the help of each class, started work on displaying these in the room. A snapshot of the results of one of the displays is included in Figure 2 below.

The fourth week included laboratory work with the first ten minutes of each period reserved for reports and individual findings motivated by the optional related activities. Perhaps due to the scope of the problem attempted in this unit, there was never the problem of finding material, but rather the problem of what must be excluded and still leave a meaningful picture of the United States. Each topic on the study guide seemed to have more material available than could possibly be used. By the last week of the unit most children were thorough or nearly thorough with their work on the study guide. It was here that the writer feels that the greatest use of the pooling and sharing phase was made. Almost all the contributions were made by the students themselves with the teacher merely acting as a coordinator. The final day was used for testing. Again it was impossible to set aside any additional time for the final test, but it was found that it was unnecessary as the pupils were able to complete



Figure 2. Classroom showing one of the displays
made during the unit.

the test in the normal class period. The pupil opinion poll was conducted during the following Monday's classes. It was made very clear that this poll was for the purpose of improving the next unit and that any suggestions would be appreciated.

Interest and accomplishment were excellent during the entire unit. At no other time during the year were there as many requests from students to come in for additional work periods. The homeroom reference books were in use in considerable numbers every night, even though the work had been planned so the home work was not necessary.

Three films were used during the unit. The titles were These United States, The Wheat Farmer, and Truck Farming. These were shown during the second and third weeks and did help motivate the unit.

More than half the students out of each class did one or more of the optional related activities, and several worked out original projects. One group drew a map of the United States as it would look if the size of the states were determined by population. Perhaps the most gratifying thing about the whole project was the interest taken by the slow-learning children and the progress they were able to make.

Class reactions to the unit.-- The results of the pupil opinion poll were conclusive in that they indicated student

approval of this type of teaching. The children were asked to be frank in their opinions and were not required to sign their comments or suggestions.

In question one which asked in substance whether they liked this method better than the other methods used in social studies this year, there were 71 students in the three sections involved who checked yes as compared to 9 who answered no. This vote seems to need little comment.

In question two which asked what they liked best about the unit there were a variety of ideas. Summing these up, more or less in the children's own words, the following were comments made by five or more students: (1) the work was all there and you knew what was next, (2) those who work slowly do not have to hurry and the fast can go ahead, (3) there was less routine work, (4) there was a better chance to remember as all the material was there, (5) the teacher does not have to talk so much, (6) bringing in materials and putting up displays was fun, (7) more time for library work, (8) being able to get your own books and choosing what you need, (9) finding out how much you can do by yourself, (10) what you do by yourself you do better, (11) working together on questions, (12) being allowed to choose extra work to do that you are interested in doing.

In question three, parts they liked least were: (1) too

long a time before discussion, (2) didn't stay long enough on some of the topics, (3) some indicated that not enough time was allotted for the unit.

In question four no important suggestions for changes were made. They wanted more of several things including committee work, references, etc. In question five almost no one indicated that any part of the unit was too hard. Some of the slow readers did feel that less reference work would have been easier but this was not peculiar to this unit but rather a difficulty that they have been facing for some time.

Conclusions and suggestions for improvement.-- The writer feels that the working out of this unit was one of the most satisfying experiences he has had in several years of teaching school. The pupil interest and response was gratifying and the results obtained seemed to indicate that an improvement had been made in the teaching process. The work and planning that is necessary to build a unit of this type is repaid many times in the purposeful, well-organized classwork that results. Pupils are able to work up to capacity and are motivated to make the effort. The change from the traditional type of teaching is an easy adjustment for the child to make. They feel themselves to be a more important part of the classroom learning situation when they are not dominated by the teacher. The author has encountered no other type of

teaching that better provides for individual differences and allows the pupil to grow as rapidly as he can.

This unit has proven very usable in its present form; however, next year the writer has planned to increase the amount of audio-visual material used. An increased use of films, film strips, and slides would help the understanding and add to the interest of many of the pupils. It is also hoped that an increased number of references can be made available and perhaps equally important that the number of copies of the more useful of the present references be increased.

When the study guide is reorganized it will be done with the idea of limiting the coverage of the unit, which from the very nature of the topic is large and requires careful selection of materials to be included and excluded. The final decision on the changes to be made will be determined by the needs of the groups who are to take part in the unit.