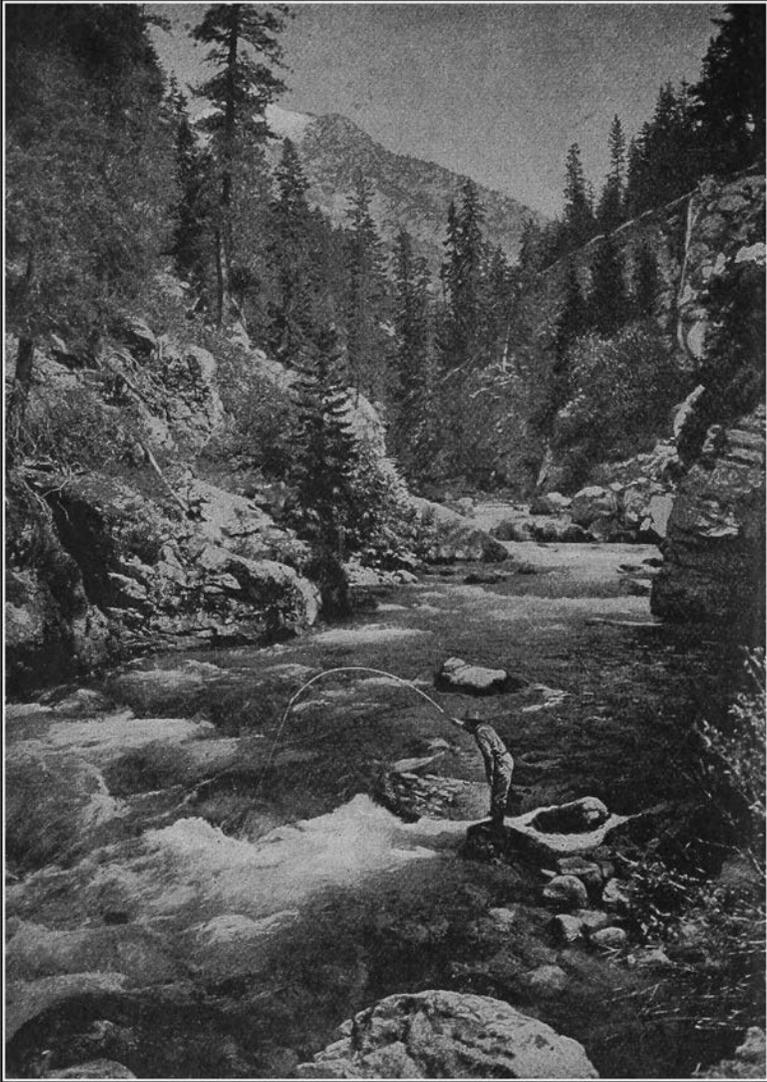


# **NORTH AMERICA**



*For Beauty of Scenery, For Enjoyment of Nature,  
No Continent Excels Our Own*

**NORTH AMERICA**

by

*Nellie B. Allen*

**YESTERDAY'S CLASSICS**

**ITHACA, NEW YORK**

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## PREFACE

The socialized recitation, with its projects and problems, is doubtless the most democratic form of class work that has ever been practiced in our schools. Geography lends itself more readily, perhaps, than any other subject to this method of teaching. In these pages many problems are brought up, many subjects for class debate suggested, and many opportunities given for independent work on the part of the pupils. It is through such activities that self-reliance is developed and real strength and knowledge are gained.

In former days people were accustomed to think of the schools as a place where children were prepared for real life. We know today that life and activities in a school-room are just as real to the child as any which will come to him later. With this thought in mind the author has made many suggestions for doing real things, writing real letters, making real comparisons, building up a real reference library, using public-library facilities and reference books, and learning at first hand many of the lines of work of the various departments of government. The people in the different countries of North America are our nearest world neighbors.

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We should know as intimately as possible their life and activities and the provisions of nature which govern them. There is a mutual dependence between people of different localities for many materials and products. If troubles and misunderstandings arise the interchange of commodities is retarded and inconvenience or suffering results. One of the best ways of preventing such troubles is by increasing our knowledge of peoples in other countries. The study of our North American neighbors may well result in a greater confidence and a more intimate relationship between them and us.

The effect of environment on the life and occupations of a people and the gifts of nature in soil, climate, minerals, power, and other resources should be emphasized as the underlying foundation of man's activities. Therefore regional geography has been made the basis of the various chapters in this book.

The value of locational geography is well known, and exercises for the location of places, sketching and filling in of maps, and other forms of handwork are included in the topics at the ends of the chapters. From the names of places mentioned in the text of each chapter the most important should be selected and their locations and the most essential facts concerning them should be thoroughly mastered.

The subject of geography affords opportunity to the teacher to stimulate the reasoning power of his pupils, to broaden their outlook, to develop their knowledge of and sympathy for other peoples of the world, to create a respect on the part of our girls and boys for

## *PREFACE*

our government and a love for our country, and to develop a sense of their responsibility for its future growth and prosperity.

The author hopes that the teachers and pupils who use this book may find therein material which will help in accomplishing these ends.

NELLIE B. ALLEN



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## **CHAPTER I**

# **INTRODUCTION**

We live in North America; that is one reason why we should know a great deal about this continent. It is one of the most important land masses on the earth. The countries of which it is composed supply many products and manufactured goods to other countries; their people are found in every country in the world; the influence of their schools, hospitals, churches, government, and other institutions has spread into every continent and country and island on the face of the earth,—these are other reasons why we should know a great deal about the countries, the people, and the occupations of the continent on which we live.

Some of the countries of North America are much richer and more prosperous than others, and it is well for us to know the reasons for this. Our own country is rich and powerful. This is a fine thing, and we are glad that it is true; but this is not enough—we should know the reasons why it is so. We should know also how we are using our riches and strength. So, you see, this great wealth and power of our own United States become a responsibility which every man and woman and every boy and girl in the country must share. We

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must always uphold the best things or we shall put our country to shame.

In the chapters which follow we shall see the people of the United States, Alaska, Canada, Mexico, Central America, and the neighboring islands at work and at play. We shall visit their farms, their factories, and their homes. We shall learn that the kind of region where they make their homes determines to a large extent what they shall do and how they shall live.



*Figure 1—This is one of our Canadian neighbors. His father owns a fox farm.*

In the western part of North America, stretching from Alaska in the north to Panama in the south, lies the lofty Rocky Mountain Highland. To the west of it are great plateaus made dry and barren by the wall of mountains on either side, the Rockies on the east and the Sierra Nevada and Cascade Mountains on the west. All through these western highlands Nature has stored treasures of gold, silver, and copper.

Still nearer the Pacific lie those wonderfully fertile valleys of California, Oregon, Washington, and British Columbia. Here are raised delicious fruits which make one's mouth water to think of. In these regions also are vast stretches of deep forests wherein grow the largest trees on the continent.

East of the Rocky Mountain Highland are high,

## INTRODUCTION

dry, treeless plains where cattle and sheep feed. Most of the rain which might be brought to these plains by the westerly winds is shut out by the Rocky Mountain wall. Here, as in the regions farther west, men have done a wonderful work in irrigating some of these dry lands and changing them into fertile farms.



*Figure 2—These American Indians live in northern Canada, on the plains near the great Mackenzie River. Describe their home.*

To the east of the Great Plains lie those marvelous Central Plains of North America—fertile, level, rich beyond measure in their farms, their pastures, their minerals, and their cities. Deprived of this region we should suffer hunger, our factories would have little or no coal, our mills would lie idle, our railroads would lack freight, and our exports to other countries would cease.

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Still traveling eastward we should next climb the Appalachian Highlands, or, if in Canada, the lower hills of the ancient Laurentian Upland. How different these mountain regions are, with their low, rounded peaks and gentle slopes, from the younger, higher mountains in the West, with their sharp, jagged summits and precipitous sides. In these eastern highlands valuable minerals are found—not as much gold and silver and copper as is found in the West, but coal and iron, nickel and asbestos.

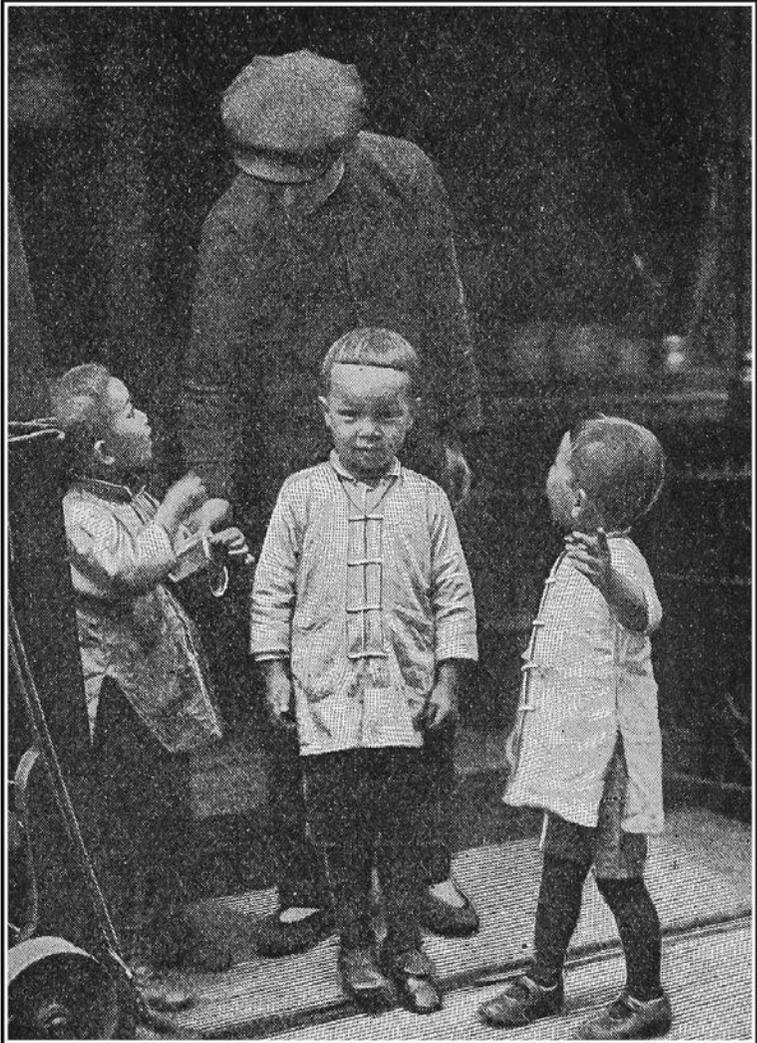


*Figure 3—Here is a nestful of American Indians in the West.*

Beyond the eastern slopes of the Appalachians the level Coastal Plain, with its clay beds, fruit and vegetable farms, pine woods, and drowned valleys, stretches down to the Atlantic Ocean. Here are situated great seaports, to which come all manner of necessities and luxuries from countries across the water. From these ports and

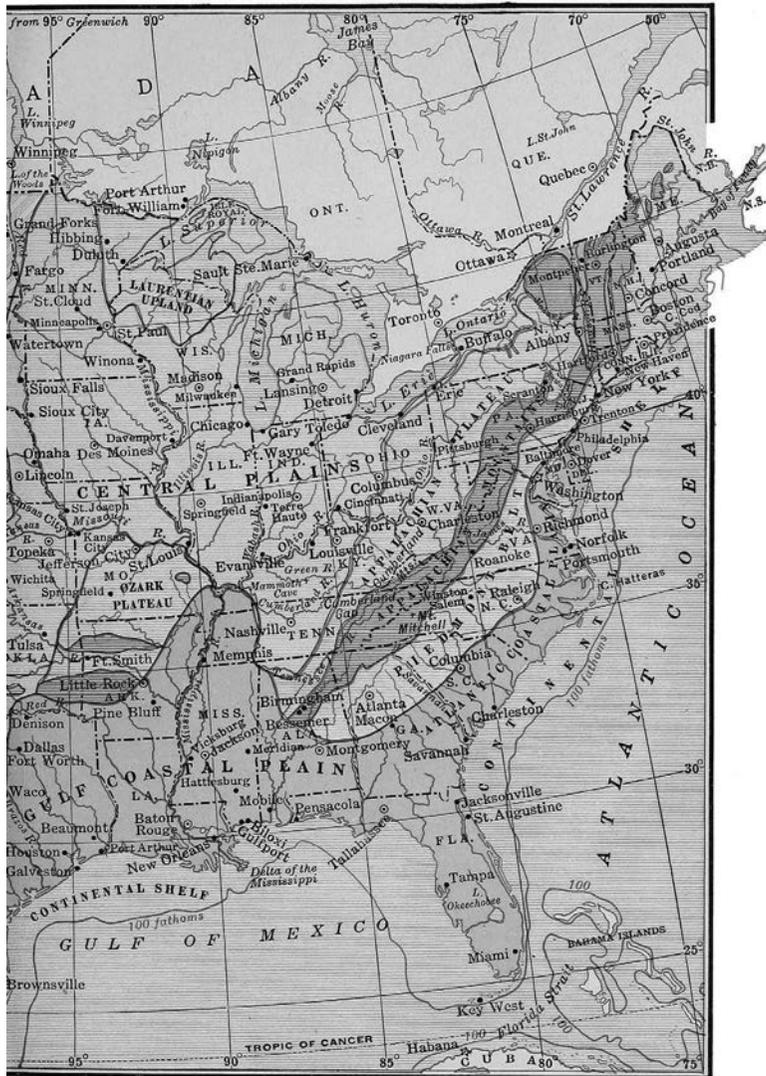
## INTRODUCTION

from those on the western and southern coasts go the meat, grain, cotton, oil, furs, and lumber, the flour, cloth, shoes, machinery, and hundreds of other things which the people of North America have worked to produce.



*Figure 4—These are some of our little Chinese neighbors who live in the largest city of the world. Where is this city located?*





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We must not forget that Nature has had a great deal to do with filling our factories and stores, our trains and our ships. Her rich gifts make possible our products and manufactures and therefore our exports to other countries. Her agents have accomplished wonderful things in building up and wearing down and changing the face of this old earth of ours. Her book is an interesting one. She has written her stories in the soil, the rock, and the rivers, and he who has sharp eyes, keen ears, and an alert mind may read and profit thereby.

The author wonders as she writes these pages what work in the world the boys and girls who read them will do. Some of them will doubtless be factory workers, helping to feed or clothe or make more comfortable in some way the lives of their world neighbors. Some will work in the great out-of-doors,—in forests or in fields,—and their work will help in supplying materials which others must use. Some will help sail the great ships over the ocean, build bridges, dig tunnels, work in mines, in crowded cities with thousands of others, or alone on grassy plains or lonely mountains. Wherever you are, remember that your work always counts for something, that you are helping to make the world better or worse according as your work is done well or ill. Neglect or failure to do your best hurts not only yourself but others whom you may never have seen.

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### **TOPICS FOR STUDY**

1. Name the countries of North America. Which is the largest? the smallest? the most northern? the most southern? How many of them touch two oceans? Does any one touch more than two oceans?

2. Name all the reasons of which you can think which have caused the United States to become rich and powerful. Name some of her riches. Why does she excel Canada and Mexico in these directions?

3. What have you done or what has your school done to make your home town or city a better place to live in? Can you think of any other things which it would be worth while to do?

## CHAPTER II

# A TRIP THROUGH NEW ENGLAND

New England is an interesting section of our country—interesting in its formation, its industries, its history, and in the spirit of its people. Here in 1620 the Pilgrims first set foot. Here our earliest industries—fishing, farming, lumbering, and manufacturing—developed, and from here pioneers have traveled to all parts of the United States and to Canada and Alaska, settling new regions, building new towns, and developing new industries.

The six states in the northeastern corner of the country comprise only one forty-fifth of the entire area of the United States, yet they contain one fourteenth of its population. Nowhere else in the country are there so many cities and towns so closely clustered together. Nowhere else is there such a large proportion of the people living in mill towns and manufacturing centers, and nowhere else is there such an amount and so great a variety of goods manufactured in so small an area.

New England produces no coal for its furnaces, no gold and silver or iron and copper for its metal manufactures, no cotton and but little wool for its textile

## *A TRIP THROUGH NEW ENGLAND*

mills. Why is it, then, that New England has become so thickly populated and so important in manufacturing? Let us keep this problem in mind and see if we can find at least a part of the answer as we read of the position, surface, rivers, coast line, climate, and other factors on which the life and occupations of a people depend.

Look at the map on the next page and notice that New England lies nearer to European countries than any other part of the United States. This fact alone has tended to stimulate commerce between the lands on either side of the ocean. Here, then, is the first part of the answer to our problem.

Look again at the map. Notice how many bays and inlets there are in New England. Can you find a coast as irregular as that of Maine? The sheltered inlets make excellent harbors. These are necessary before any region can develop to any great extent. Here is another part of the answer to our problem.

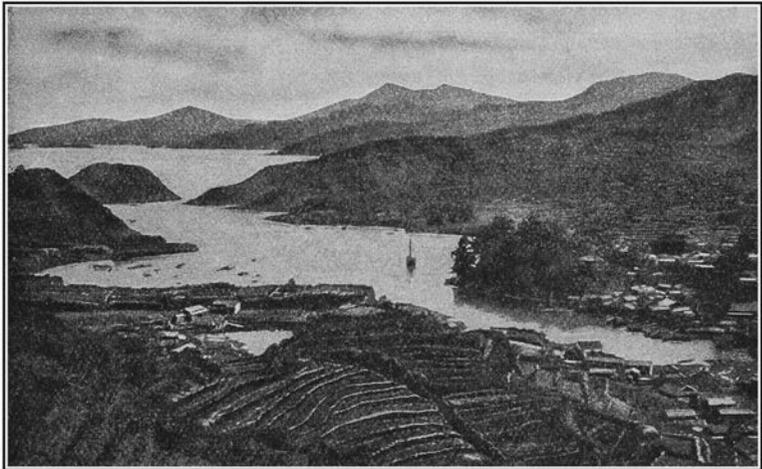
Perhaps you are wondering why it is that New England has such an irregular coast line while the south Atlantic coast and most of the Pacific is so much more even. We shall find the answer to this question in Mother Nature's storybook. Let us see what she has to tell us.

Ages and ages ago this earth on which we live was an intensely heated ball. Through a longer period of time than you can imagine—even for millions of years—it has gradually been growing cooler. The outside, the part on which we live, has become cold and hard. This cooled and hardened crust is many miles thick. The



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hot water from geysers, the melted rock from erupting volcanoes, the heat in deep mines, tell us that the interior of the earth is still very hot. It is slowly cooling, however, and shrinking as it cools. The crust is constantly trying to adjust itself to the shrinking interior much as the skin of a baked apple wrinkles as it cools. In places the earth's crust has been pushed up into huge wrinkles which we call mountains. In some places the crust is slowly rising, in others it is as gradually sinking.



*Figure 5—This is a picture of a drowned valley. See how the ocean has filled the lowlands. Why do drowned valleys make good harbors? If the land along this coast should rise, how would the length of the inlet compare with the length as shown in the picture?*

These movements take place very, very slowly indeed, perhaps at the rate of only a few inches a year, but as the long centuries go by great changes are wrought. The sinking of the crust is more noticeable along the shore lines, for there the ocean waters push up farther into the land, fill the river valleys, and change

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them into deep bays. Narragansett Bay, Buzzards Bay, and Penobscot Bay are drowned valleys made in this way.



*Figure 6—This is a scene on the Maine coast. Why is this coast so irregular? Why are many lighthouses needed?*

In Maine the hilly region came close to the shore. With the sinking of the land the valleys were filled with water, and in many cases the mountain tops appear as islands. The deep bays make excellent harbors, but many lighthouses are needed to warn vessels of the rocky isles. On the peninsulas fishermen live, and on the islands and the mainland there are pleasant summer resorts.

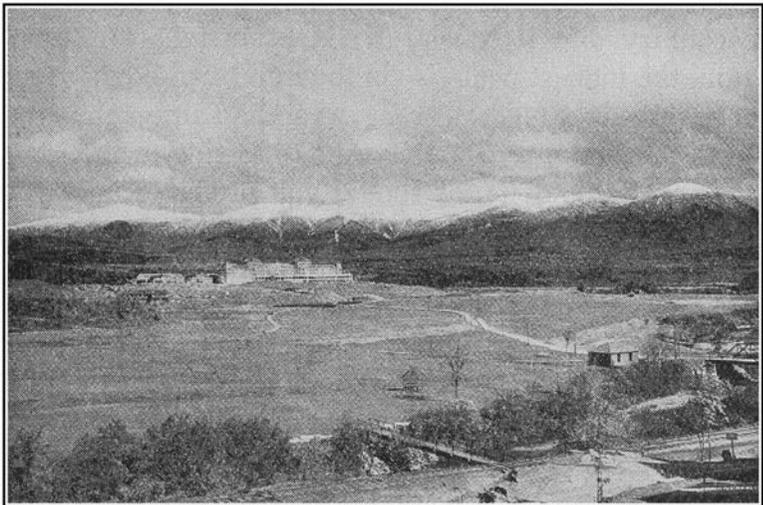
The larger part of New England is made up of a hilly belt which extends from the interior nearly or quite to the shore. It is a pleasant region of green, rounded hills and broad valleys, winding rivers, and sparkling lakes.

North of Cape Cod the hilly region extends nearly or quite down to the water. Along the shores

## A TRIP THROUGH NEW ENGLAND

of Connecticut, Rhode Island, and southeastern Massachusetts there is a narrow coastal lowland. In Rhode Island this lowland region and the drowned valley of Narragansett Bay occupy the greater part of the state, and more than seven eighths of the people live in this lowland area.

The Green Mountains of Vermont and the White Mountains of New Hampshire make up the chief mountain region of New England. The Green Mountain belt extends southward through Massachusetts, where the range is known as the Berkshire Hills, into northwestern Connecticut. Through the Hoosac Mountains in northwestern Massachusetts the Hoosac Tunnel has been cut. This tunnel, the first of any great length to be built in the country, is about five miles long. It gives Boston direct connection across northern



*Figure 7—This is a view of the White Mountains. How do they differ in appearance from those in the West?*

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Massachusetts with Albany and the rich plains of the Middle West. The White Mountain belt extends in lower hills into Maine and southward through Massachusetts into northern Connecticut. Between the two mountain belts is the rich valley of the Connecticut River, and west of the Green Mountain belt the land slopes down to the Hudson-Champlain Lowland. All these natural regions—the low coastal plain, the hilly belt, the mountain areas, and the river and lake lowlands—are important and have determined to a large extent the occupations of the people who live in them.

New England is a very old region. Its hills and mountains were once much higher than at present. Through long ages the rains, the frosts, the streams, and the great glacier have been slowly wearing away the rock and soil and washing it into the valleys and the ocean. Therefore the mountains of New England are not very high and the scenery is not so wild and grand as it is in some parts of the country, but it is restful and beautiful. Mt. Washington, the highest peak, is six thousand two hundred and ninety-three feet high. A railroad and an automobile road lead to the summit. Should you like to ride to the top in a train or automobile, or should you prefer to take your time and “hike” through the wooded trail?

Most of the rivers in New England have falls and rapids which furnish valuable power. This is one of the chief reasons why manufacturing developed so early in this section. Mills for grinding grain, for sawing lumber, and later for manufacturing cotton and woolen goods were located on the streams near the early settlements,

## *A TRIP THROUGH NEW ENGLAND*

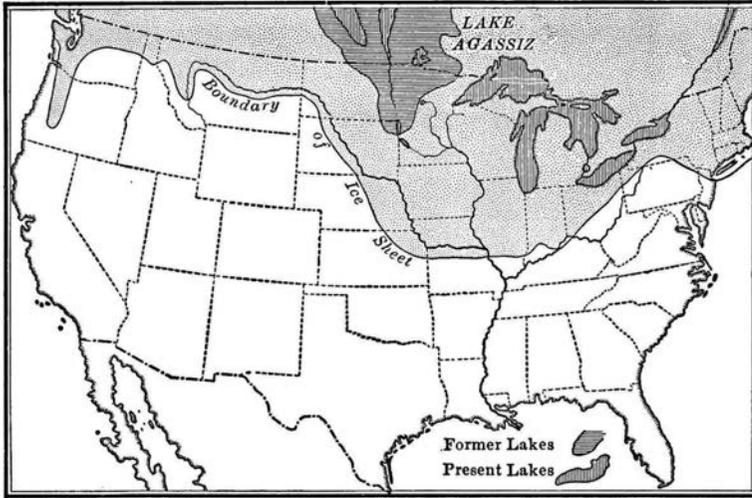
and many of these places have since grown into important manufacturing centers.

In Rhode Island and southeastern Massachusetts the falls in the streams are near the coast. The cities situated at these power sites have a double advantage. They have become important not only in manufacturing but in commerce as well. They can easily bring their raw material and send away many of their manufactures by water. Can you explain now why Fall River has grown to be a large, important city and why more than half of the people in Rhode Island live in the cities of Providence and Pawtucket?

The rivers of New England have been important lumber highways, and millions of logs from the forests of Maine, New Hampshire, and Vermont have come down the streams to the sawmills. Many of the rivers, as well as many lakes in New England, also yield a winter harvest of ice.

If you would like to know why it is that New England has so many falls in its rivers, so many lovely lakes and ponds, and such rounded hilltops you must read another story in Mother Nature's book. Long, long ages ago the climate of North America was much colder than it is at present, and all of Canada and the northern United States were covered with a great ice sheet hundreds of feet thick, just as Greenland is today. The ice filled the valleys and rose higher than the tops of the highest mountains. Very slowly it crept along from its home in the colder regions of the north, rounding the hilltops as it passed, scraping the rock waste from the

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*Figure 8—This map shows the part of the United States once covered by glaciers. Name the states which lay under its southern edge. What states were wholly covered by the glacier?*

land, carrying many great boulders and much gravel and fine sand embedded in its mass, digging the beds for hundreds of lakes, and scouring out the valleys.

The New England rivers, clogged and dammed by the material brought by the glacier, were turned into new courses. Here they encountered rocks of varying hardness. The softer ones were of course worn away first. Where the stream leaped from the harder rock bed to the lower one worn in the softer material, falls occurred. Ever since the early settlers made use of this water power to grind their grain it has been of tremendous value to the people of this section.

The Connecticut is the longest and most important river of New England. Not only the river itself but many of its branches have falls and rapids on which

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manufacturing towns and cities are situated. In several places the falling water is used to generate electricity, which is carried on wires to cities many miles away. Some of the largest cities in western Massachusetts are located on the Connecticut River, and about half of the people in Connecticut live in its valley. Can you tell why this is so?

Besides the manufacturing cities there are many fine farms in the Connecticut valley where tobacco is cultivated and dairy cattle are raised.

The Merrimack River turns more spindles in textile manufacturing than any river in the world. What important cities are located on it? In New Hampshire nearly half of the people in the state live in or near its valley.

The little Blackstone River is one of the best-harnessed streams in the country, and mill towns and manufacturing cities are located all along its banks.

On the map of New England find the largest rivers of Maine and New Hampshire. These furnish power for the many manufacturing centers situated on them. They are the means, also, by which lumber is floated down from the forests to the sawmills, the paper and pulp mills, and other establishments.

The early settlers of New England were much influenced by the surface and the rivers of the region. Their first settlements were on the shore, where good harbors made landing easy and commerce with the homeland possible. Some of their towns were founded near river mouths and the colonists followed the

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streams inland to build new homes. The first English settlements in Vermont were made by colonists who followed the Connecticut River northward. Before this time, however, the Frenchman Samuel de Champlain had entered the state by way of Lake Champlain. The early Maine settlements were near the mouths of the rivers and spread northward along the river valleys. The rivers were the first highways of the colonists, just as they had been of the Indians.

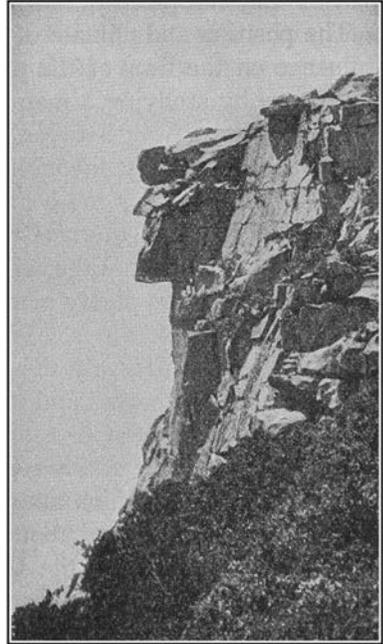
The position and climate of a region also have a large influence on the lives of the people who live there. Can you prove by studying a map that New England lies almost exactly halfway between the equator and the north pole? This is a very favorable position, for the climate is neither too hot nor too cold. The winters are seldom severe enough to fill the harbors with ice and thus check commerce. The heat of the summers is good for the growing crops. There is plenty of rainfall for agriculture, and the moisture in the air is favorable for textile manufactures. In a very dry air the threads break much more quickly. The hot waves and the cold waves which chase one another from west to east over the country tend to develop in the people of any region over which they pass a strength and energy which affect their work and their lives.

Now that we have read about the ways in which Nature has favored this part of the United States, we are more ready to understand the reasons for its development into an important manufacturing and commercial section. Its water power, its fine harbors, its favorable position for commerce with Europe, its

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stimulating climate, its energetic, inventive people, and its highly skilled workmen all help to offset the fact that nearly all its fuel and its raw materials for manufacture—its cotton, wool, hides, and iron—must be brought from other sections.

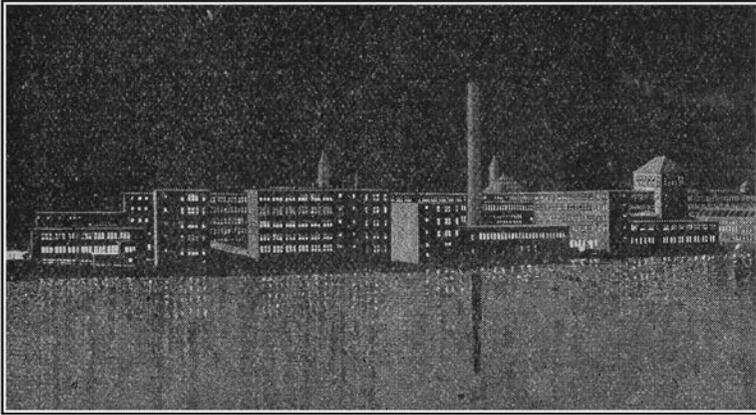
Because the raw material must be brought from a distance, many of the articles made in New England are small, specialized goods requiring not so much a vast amount of material as highly skilled workmen. For example, Athol, Massachusetts, contains the largest concern in the world for making fine tools, Waltham the largest watch factory, and Plymouth the largest cordage company. Hartford, Connecticut, has the largest typewriter company. Worcester, Massachusetts, makes more wire and wire goods than any other city; New Britain, Connecticut, more builders' hardware. Leominster, Massachusetts, makes two thirds of our combs and hairpins, Holyoke more than half of our fine writing paper,



*Figure 9—Nature's agents are skillful sculptors. They have carved the face of the "Old Man of the Mountains" from the solid rock. Have you ever read the story of "The Great Stone Face" by Nathaniel Hawthorne?*

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and Dalton the paper for our government bank notes. Westfield is the whip city of the world; Providence, Rhode Island, is the jewelry city; Danbury, Connecticut, is the hat city; and Waterbury is the brass city.



*Figure 10—This picture shows a part of the largest watch factory in the world as it looks at night across the river. What are the two cities in New England which are noted for the manufacture of watches?*

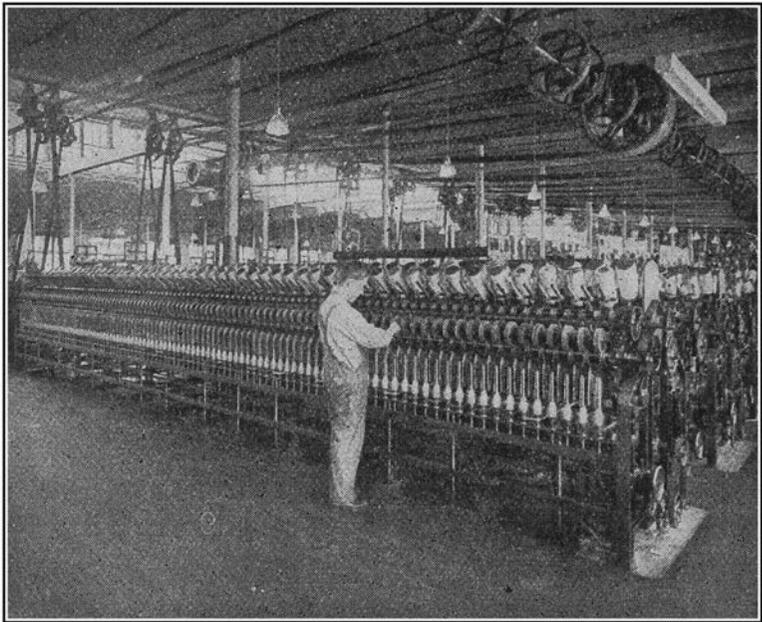
The textile manufactures—cotton, wool, and silk—are the most important industries in New England. The preparation of the raw material, the spinning and weaving, and the dyeing and finishing of the goods use more capital and engage more workmen than are employed in any other occupation in this section. New England also leads all other parts of the country in its output of sewing silk.

Between fifteen and twenty miles of cotton cloth are made each minute in New England factories. Nearly half of all the woolen mills in the entire country are in New England. One mill in Lawrence, Massachusetts,

## A TRIP THROUGH NEW ENGLAND

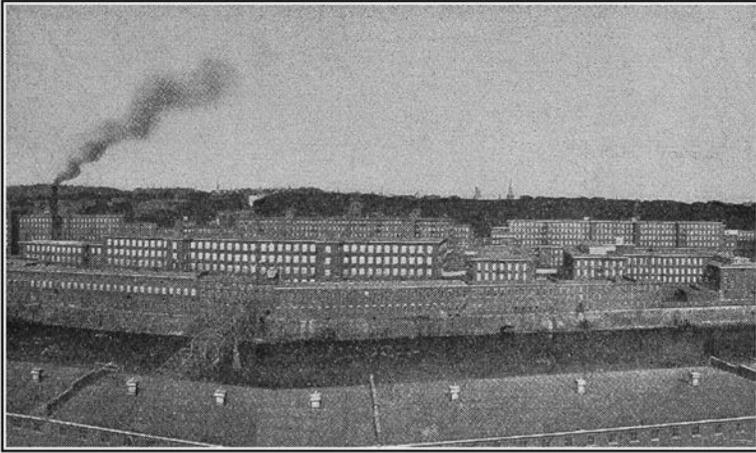
uses daily the fleece of twenty-five thousand sheep. One company in Willimantic, Connecticut, makes more than a million miles of thread per week. The largest cotton-manufacturing establishment in the world is located in Manchester, New Hampshire, and the largest woolen-manufacturing company in the world has more than thirty different mills in New England cities. Manchester, in the state of New Hampshire, Lowell, Lawrence, Fall River, and New Bedford in Massachusetts, and Providence in Rhode Island are textile centers of world-wide reputation.

The variety of metal manufactures made in New England seems almost endless. It includes all kinds



*Figure 11—This is a spinning-room in one of the mills of the largest cotton-manufacturing company in the world. Along what rivers in New England shall we find textile manufactories?*

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*Figure 12—The picture shows a part of a great manufacturing plant on the Merrimack River in Manchester, New Hampshire. Why is so much manufacturing carried on along the Merrimack? Name the important manufacturing cities on this river.*

of articles from bridges and automobiles to the tiny hairspring of a wrist watch. If you would like to weigh either a locomotive or a postage stamp go to St. Johnsbury and Rutland, Vermont, where more scales for weighing are made than anywhere in the world. Millions of watches are made each year in Waterbury, Connecticut, and Waltham, Massachusetts. Connecticut ranks first in the country in a great variety of metal products, such as edge tools, silver-plated ware, brass, bronze, and copper articles, clocks and watches, needles and pins, and hooks and eyes.

An important class of metal manufactures is machinery, especially the machinery needed in shoe factories and in textile and paper mills. Beverly, Massachusetts, supplies the shoe factories of the world with machinery. New England leads the world in the

## A TRIP THROUGH NEW ENGLAND

manufacture of boots and shoes. So much leather for this industry is needed in its many large shoe factories that Boston has become the greatest leather market, and Peabody, Massachusetts, the greatest sheepskin-tanning center, of the world.

Now let us see something of another important New England industry. If you will look at the map below you will see that there are several large forested areas in the United States. One of these lies in New England, and lumbering has been carried on here longer than anywhere else in the country. Maine is often called the Pine Tree State. Enormous numbers of trees have been cut there, but large areas are still covered with pine and spruce forests. Many streams flow southward from

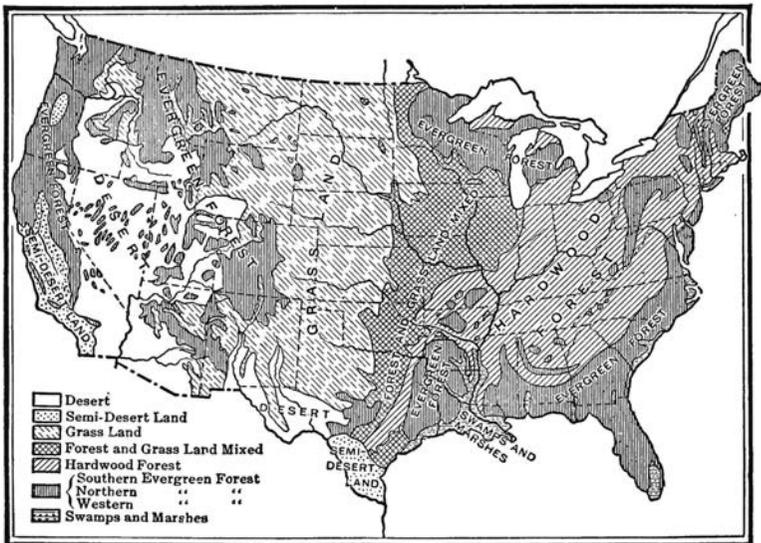


Figure 13—Map of the forest areas of the United States. Make a list of the states included in the hardwood area. What natural regions are wholly or partly included in the grassland area? How many regions of evergreen forests do you see?

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*Figure 14—This is a logging camp in the Maine woods. What season of the year is it? Why is lumbering in New England usually carried on during this season?*

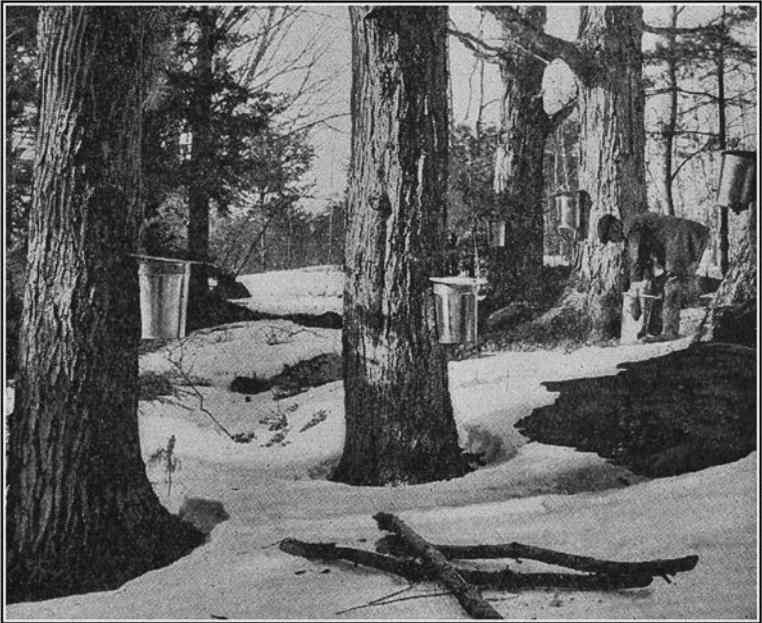
its forested areas. On these, where falls furnish power, there are great sawmills, and mills for making pulp and paper. These manufactures of Maine exceed all others in value. Many of the cities and towns of the state are connected in some way with the lumber industry and make an enormous variety of wooden articles, such as shingles, lathes, sleds, toys, spools, clothespins, matches, snowshoes, toothpicks, boxes, and furniture. Bangor is one of the most important lumber markets of the country. Portland and other Maine cities have a large lumber trade, while Burlington, Vermont, receives and ships away large quantities of lumber.

The forests of New England yield other products besides lumber. One of these is maple sugar. This is

## A TRIP THROUGH NEW ENGLAND

made from the sap of the sugar-maple tree. Thirteen states furnish our supply of maple sugar. Vermont is perhaps the most famous for its maple products, but New Hampshire and Massachusetts, in New England, and New York, Pennsylvania, Ohio, Michigan, Wisconsin, and Indiana make quantities of both sugar and sirup.

In the spring, when the sap begins to flow, the men tap the sugar-maple trees and hang buckets to catch the liquid, which slowly runs through the little tubes that have been inserted. The sap is collected in barrels and drawn to the sugarhouse, where it is boiled down into sirup and made into sugar.



*Figure 15—The picture shows a part of a maple-sugar orchard in Vermont. What other states help to furnish our maple sugar and sirup supply? From the sap of what other trees are useful products made?*

## NORTH AMERICA

Ever since the settlement of New England the fishing industry has been of great importance there. The fish not only furnished food for the settlers but were also an important article of commerce. The necessity for boats and ships stimulated shipbuilding, which soon became an important New England industry. The dangers and hardships of fishing voyages developed expert sailors. They went on long trips carrying New England exports—fish, lumber, and farm products—to the West Indies, England, and southern European countries. Later, after the Revolutionary War, their voyages were extended even to China and the East Indies. In those days Salem was one of the most important commercial cities of the New World, and the city of Providence carried on at one time more commerce than New York.



*Figure 16—This picture shows large quantities of codfish drying on the frames in Gloucester. In what other places in New England might you see similar sights? Where was this fish probably caught?*

## A TRIP THROUGH NEW ENGLAND

In those early days nearly every coast town was engaged in fishing, and Marblehead, New Bedford, and Gloucester were important centers. Some of the fishermen, especially those from Nantucket and New Bedford in Massachusetts, and New London and Stonington in Connecticut, went on long voyages to northern seas in search of whales and seals. It was a hard, adventurous life, and the stories told by some of these old seafaring men of their exciting experiences, when the whale dove or lashed the water into fury in his struggle to free himself from the harpoon, are as interesting as the scenes in Stevenson's "Treasure Island." Much of the whaling and sealing at the present time is carried on from the Pacific ports, and New England's share in this industry is comparatively small. Fishing is still very important. Many vessels sail from Gloucester and two thirds of the world's supply of salted codfish is prepared in that city. The fishing schooners of today are fine large vessels fitted with all conveniences for handling the fish. Ice and salt for packing and curing are taken on the long voyages to the banks of Newfoundland, where much of the fishing is carried on. Boston is one of the largest fish markets of the world, and its great Fish Pier is considered finer than any similar structure at any other port.

Formerly those parts of the fish not used for food were thrown away. Now every part yields some useful product,—oil, glue, gelatin, or fertilizer.

The shore fisheries of Maine are important. Many men are employed in catching and canning lobsters. Millions of boxes of sardines also come from Maine; in

## *NORTH AMERICA*

fact the larger part of our domestic supply is prepared in this state.

Along the shores of southern New England we should find fishermen dredging for oysters. Because of the oyster industry, the ocean bottom under Long Island Sound is said to be more valuable than some of the land on its shores. We shall learn more about the oyster industry when we visit the states farther south, for Chesapeake Bay is more famous for oysters than any other place in the country.

What are the principal occupations around your home? Have you ever stopped to think that of all the different kinds of work which people do, farming is more important than any other? The whole world depends on the farmer. Without him the world would starve. For two hundred years farming was the most important occupation in New England. Now, as you have already read, more of the people are employed in manufacturing. Farming, however, is still very important. The people in the many cities of this section have little or no land to cultivate. They need fruits, vegetables, milk, and eggs. These are produced on nearly all New England farms. Most farmers raise hay for their cattle and have orchards of apples, pears, and, in the three southern states, peaches. Near the large cities there are truck farms, often with great hot-houses, where many vegetables and small fruits are raised.

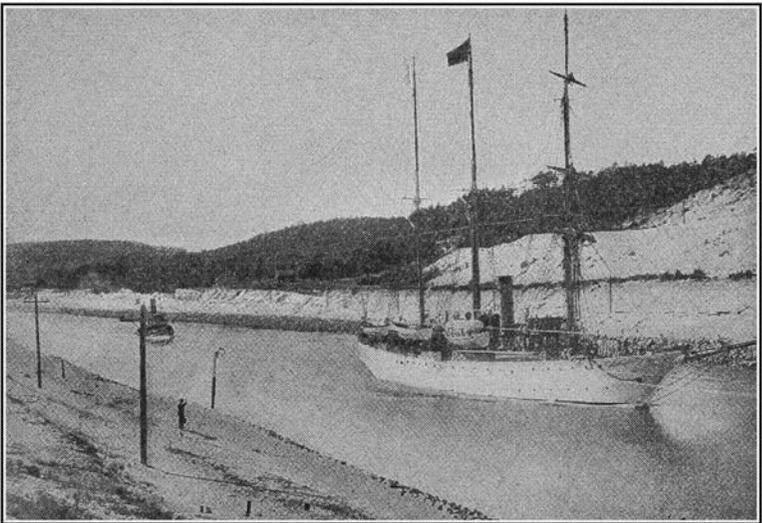
The tobacco fields of the Connecticut valley are an interesting sight. Do you know of any other plant which has leaves a yard or more long? Many acres in the

## A TRIP THROUGH NEW ENGLAND

tobacco area are overspread with white cloth, making the region resemble an immense camp. This shade-grown tobacco is considered of excellent quality. The long leaves are cured for market in open sheds in the fields.

To see the splendid farms which produce the famous Aroostook County potatoes we must go to the fertile valley of the Aroostook River, in northern Maine. The soil here is well adapted to the growing of potatoes. The finest ones are sold in the spring to farmers all over the country for planting. Many are used for food. Starch factories have been built in which the smaller potatoes are used for the starch which they contain.

On Cape Cod peninsula many cranberries are raised. Wisconsin, New Jersey, and Massachusetts

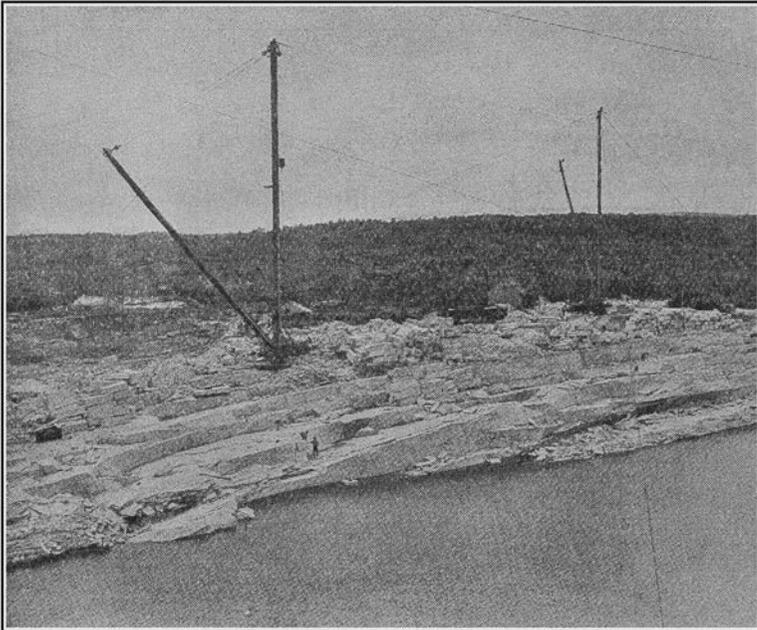


*Figure 17—This is the training ship Newport passing through Cape Cod Canal. Where is this canal? What route is shortened by it? What dangers are avoided?*

## NORTH AMERICA

produce nearly all the country's supply. On the large farms in Massachusetts the berries are picked, cleaned, and sorted by machines. Several million quarts have been picked here in a single season. What immense quantities of sugar it must take to sweeten such an amount of cranberry sauce!

Nature was generous in her gifts to New England. The forests, the fish, the good harbors, and the swift rivers have all been of great value to the people of this section. Even the rock found here has made New England famous, and quarrying has become an important industry. Marble, granite, and slate are quarried in immense quantities, and other stones are



*Figure 18—A granite quarry in New England. Which of the New England States is most noted for granite? Explain the use of the derricks in the picture.*

## *A TRIP THROUGH NEW ENGLAND*

also worked. Some of the government buildings in Washington, the public library in New York City, some of the state capitols, and many other buildings are made of Vermont marble. The Green Mountain Belt is the greatest marble region of the world. In a ride through this section you would know that you were in a marble area, for the foundations of the houses, the steps, and even the stone fences and hitching posts are made of marble.

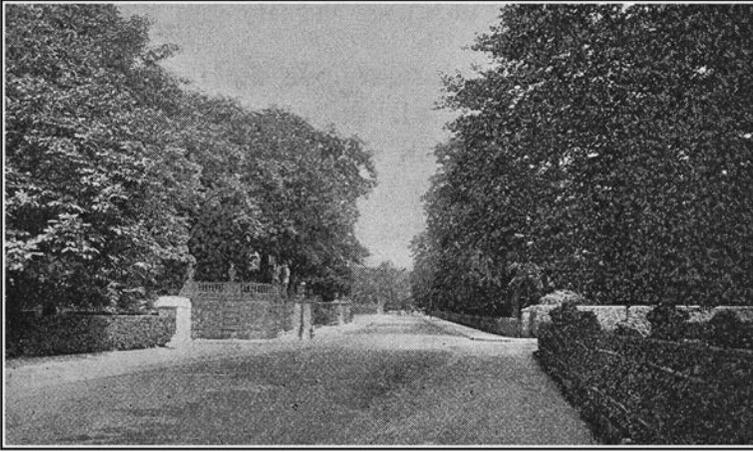
Granite is more widely distributed than marble and is quarried in all the New England States. More granite for monuments is sold in Vermont than in all the other states of the country, and more granite for building purposes than in any other one state. Granite is quarried also near the coast in Maine, Massachusetts, and Connecticut, where it can be easily shipped away. Both granite and marble are quarried in other sections of the country. What is there in your town or city made of either kind of stone? Can you find out where it was quarried?

In Vermont there is also a belt of fine slate rocks useful for roofing and other purposes. These are quarried in such quantities that, next to Pennsylvania, Vermont produces more slate than any other state.

New England has many noted summer resorts. Bar Harbor, on Mount Desert Island, is one of the most famous of these. About eight square miles of the island are now included in Lafayette National Park. Rhode Island owes not only its important commerce and industry but much of its popularity in summer as well

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to the deep indentation of Narragansett Bay. Newport, situated near the southern end of the largest island in the bay, is one of the most fashionable resorts of the United States.



*Figure 19—This is one of many beautiful boulevards in Newport. Behind the walls and trees on either side are lovely estates. What advantages does Newport have which make it a summer resort?*

There are many other places in New England which we should like to visit. One of these is the old city of Portsmouth, the only seaport of New Hampshire, where, in 1905, at the invitation of President Roosevelt, the delegates from the warring countries came to sign the peace treaty which closed the Russo-Japanese War.

We should not wish to leave New England without a glimpse of the historic gates and old dormitories of Harvard University in Cambridge or the elm-shaded buildings of Yale at New Haven. We must be sure to go to the bridge in Concord, where, in 1775, was fired “the shot heard round the world.” We must follow the

## *A TRIP THROUGH NEW ENGLAND*

roads on which Paul Revere rode when he went to warn the villagers that the British were coming, and where, a few hours later, as the British soldiers marched along,

the farmers gave them ball for ball,  
From behind each fence and farm-yard wall.

At Plymouth you must surely see the famous rock on which the Pilgrims landed “on a stern and rock-bound coast.” In Memorial Hall is the cradle in which Peregrine White was rocked, the sword with which Miles Standish fought the American Indians, and many other interesting relics of Pilgrim days.

Our visit to New England would be very incomplete without a visit to Boston.

If you are interested in history we can go to the belfry of the church where the lanterns were hung as a signal to Paul Revere of the approach of the British troops. We can visit Faneuil Hall, the birthplace of liberty, or climb to the top of Bunker Hill Monument.

If you wish to see some of the big things which people are doing we can go to the building where a hundred million pounds of wool can be stored. Boston is the greatest wool market of the country and handles enough wool each year to make an all-wool suit for every man, woman, and child in the country. We can visit the offices, headquarters, or factories of more than a thousand firms engaged in the manufacture or sale of leather, hides, footwear, and shoe machinery. We can go down to the waterside and see the largest dry dock in the world, watch the vessels discharging their slippery cargoes on Fish Pier, the largest in the world,

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and visit Commonwealth Pier, one of the largest freight and passenger piers of any country.

Boston is as important in manufacturing as it is in commerce. We shall find in the city great sugar refineries, establishments where quantities of men's and women's clothing are made, factories for making rubber boots and shoes, the largest shoe factory in the world, many printing and publishing houses, and the largest cocoa and chocolate manufacturing plant of any country.

### **SUGGESTIONS FOR STUDY**

#### **I**

1. Size and population of New England.
2. The coast line and drowned valleys.
3. Surface and drainage.
4. The great glacier and its work.
5. Influence of physical features on history.
6. The New England climate.
7. Manufacturing in New England.
8. Forest and forest products.
9. Fishing and farming.
10. Marble, granite, and slate.
11. New England scenery and summer resorts.
12. Some New England cities.

## II

1. Name the New England States. Which is the largest? the smallest? the most western? the most eastern? the most southern? Which one has no seacoast? Which ones border on another group of states? Which ones have rivers for boundaries? Which one borders on a lake? Which one has the highest mountains? the deepest bays?

2. Why do so many people in New England live in cities?

3. On what waters must Champlain have sailed to get from the ocean to Lake Champlain?

4. Who was Lafayette? Why should one of our national parks be named for him?

5. Write to the National Park Service, Department of the Interior, Washington, D. C., and ask for pamphlets describing our national parks. State in your letter that they are for use in your geography classes.

6. Name the capital of each New England state; the largest city; the longest river; the chief manufactures.

7. On page 11 the following problem is suggested: Why has New England become so thickly populated and so important in manufacturing? What reasons have you found, in reading the chapter, which will help you in solving the problem?

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### **III**

Make a list of all the places mentioned in this chapter. Arrange them by countries, cities, mountains, rivers, etc. Be able to locate each place and tell what was said about it in the chapter.

## **CHAPTER III**

# **IN AND AROUND THE APPALACHIAN HIGHLANDS**

The New England area of which you have just read includes the northern part of the Appalachian Highlands. From here they stretch southward through several states into northern Alabama. To the east is the low, level Coastal Plain, while stretching away to the west lie the fertile lands of the Central Plains.

The Appalachian Highland region is one of the most important industrial areas of the United States. The swift rivers and deep forests and the coal, iron, petroleum, and natural gas have made possible many busy cities, with their furnaces, foundries, and factories. Before we visit these cities let us hear Nature's story about the materials which she has so generously supplied here.

This area is a very ancient one. For many, many centuries the frosts, the rains, and the streams have been busy wearing down the mountains and carrying the material into the sea, just as they are doing all around us today. The mountains are therefore much lower than the younger ranges in the West, their tops

## NORTH AMERICA

are smoother and rounder, and the valleys between them are wider. The highest mountain peak east of the Rockies is Mt. Mitchell in North Carolina—six thousand seven hundred and eleven feet high. This is only a baby in size compared with some of the Western giants.

Some of the mountains in this region are much more ancient than others. Those on the eastern border of the area are so old that they have been worn down into hills. This older region is called the Piedmont Belt—a very appropriate name, meaning “foot of the mountains.”

When studying the map of this region perhaps you have noticed that many of the rivers rise west of the mountains, and you may have wondered how it was possible for them to flow across the highland.

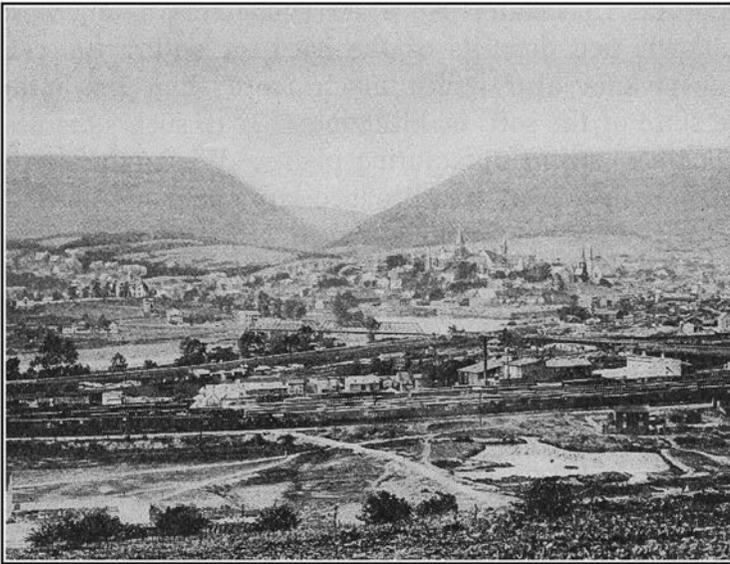
These rivers are older than the mountains and wore down their valleys faster than the great mountain wrinkles were pushed up. Thus they were able to keep their eastward courses. The Delaware at the Delaware Water Gap and the Potomac at Harpers Ferry are good examples of the work of rivers in cutting passes through the mountains. The Cumberland, flowing west into the Ohio, has also cut a pass in the mountains at Cumberland Gap.

The cutting of the river valleys through the mountain wall was of great benefit to the early colonists along the coast. Because of the rich mineral deposits we think of the Appalachian Highlands today as a source of great wealth, but in the days of the early settlements,



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when roads were unknown, we cannot imagine a greater barrier to westward expansion. The parallel ranges, about three hundred miles wide and thirteen hundred miles long, were covered with dense forests. Wild beasts lurked in the undergrowth and American Indians skulked in ambush there. In order to cross to the western side of the highlands the colonists followed a river valley into the mountains and made their way along some valley between the ranges until they came to a place where a westward-flowing stream began. This they followed down to the Central Plains. It was in this way that the early pioneers first reached the fertile lands of these great plains.



*Figure 20—Do you see in the background of the picture the gap which the Cumberland River has cut through the mountains? Can you imagine how different this region looked at the time when Daniel Boone and the colonists who followed him passed through this gap?*

## APPALACHIAN HIGHLANDS

Daniel Boone, that brave old pioneer, was one of the first to make his way across the mountains. From his home on the Yadkin River in North Carolina he followed up the stream and its branches into a long valley between the ranges. Here he found the headwaters of the Cumberland River, which he followed through Cumberland Gap into the rich lands of Kentucky.

The river valleys not only furnished highways for the American Indians and the early colonists but they have determined the routes of most of the railroads which connect the cities of the Atlantic coast with those of the Mississippi Valley. You will read later what an influence the Hudson-Mohawk Valley and the railroads which follow it have had on the growth of New York City.

Coal is one of the very valuable products of the Appalachian Highlands, and Pennsylvania is our most important coal state. No other equal area in the world has such rich deposits of the hard, or anthracite, coal. Pennsylvania also mines much more than any other one state of the soft, or bituminous, coal, such as is used in engines and manufacturing plants. What other states in the Appalachian area produce large amounts of coal?

Perhaps you have already read Nature's story about coal. If so, you know that coal is made from vegetable matter, for in it have been found impressions of leaves, twigs, and roots. You read in the story of the great glacier that the climate of North America was once much colder than it is today. That was many centuries ago. Ages and ages before that, in what the scientists call the Carboniferous Period, the climate was much

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warmer than it is at present. Tropical trees and plants of immense size grew far beyond the torrid zone. These great forests of giant ferns and trees grew and died for many long ages until their decaying leaves, trunks, and twigs formed a thick mat of vegetation. With the sinking of the land the sea came in, covering everything with water. Through long centuries the rivers and streams brought sand and gravel and clay and deposited them over the old forests, making the vegetation more and more compact as the accumulation grew deeper. Then came another movement of the earth's crust, this time an upward one, and the land gradually rose until it appeared above the old sea. Forests grew again and made the thick carpet of vegetation at their feet. Their growth was again checked by the water which

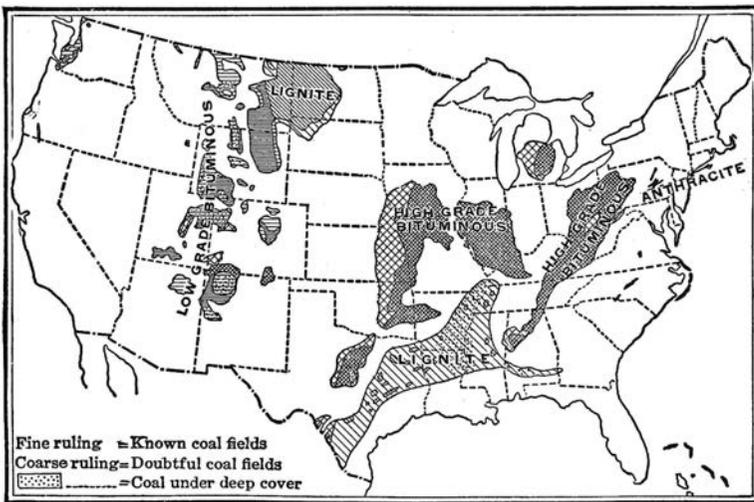


Figure 21—This map shows the chief coal fields of the country. Make a list of the states where bituminous coal is found; another list of those containing lignite. What is the difference between these two kinds of coal?

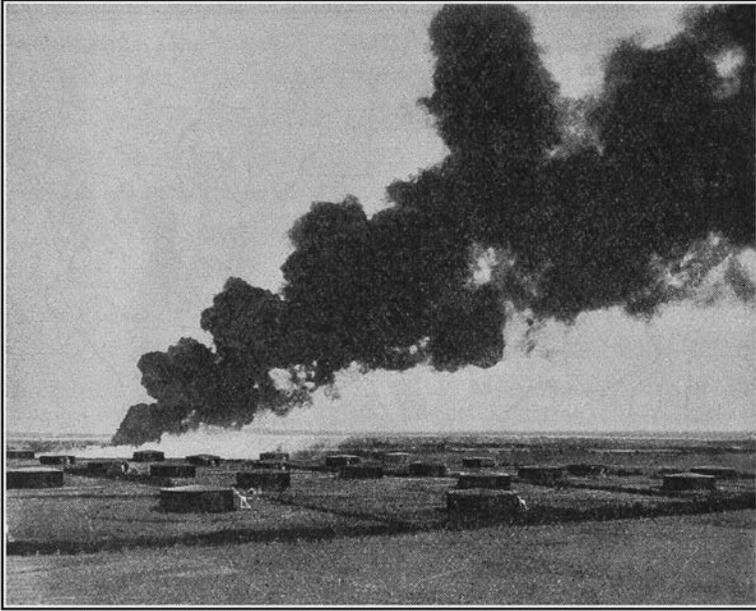
## *APPALACHIAN HIGHLANDS*

covered the area when the land sank once more. This happened several times, so that various layers, or seams, of vegetable matter were formed. Shut off from the air by the covering of soils, and subjected to heat and pressure, this buried vegetable matter changed slowly into coal. Since the old Carboniferous Age, when the coal beds were formed, the busy agents of Nature have been wearing away the overlying rock and soil. Thus the layers of coal have been brought nearer the surface, and man has been able to make use of them.

Should you like to go down in a mine? In some you would descend in an elevator through a deep shaft. In others you could ride in on a car through a sloping tunnel. What a curious world it is here beneath the surface of the ground, where thousands of men spend their days! The long gangways are lighted with electricity and made safe by props of heavy timbers. The miners blast out the coal from the walls, and laborers break it up and load it on the waiting cars. In some mines these are lifted up on elevators; in others they are run out through tunnels.

The hard anthracite coal has to go through more processes than the softer bituminous kind. These processes are carried on in big buildings called breakers. Here the coal is broken into smaller pieces, sorted according to size, and separated from the slate which it contains. It is then loaded on cars which carry it to the seaports or to cities in the interior. Thus you see that the labor of many different workers is necessary before your coal is ready for you to burn in your stove or furnace.

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*Figure 22—These tanks for the storage of petroleum are located near the oil wells. The dark smoke cloud comes from one of the tanks which has been set on fire by lightning.*

Coal is not the only fuel found in the Appalachian Highlands. This is one of the areas where deposits of petroleum occur. What should we do without petroleum? It runs locomotives and automobiles, propels aircraft and seacraft, and moves machinery in mills, factories, and power plants. From it are obtained naphtha, gasoline, kerosene, vaseline, benzine, and paraffin.

To reach the petroleum deposits, pipes are sunk to great depths—sometimes, though rarely, more than a mile—before reaching the oil-bearing rock. A well often yields thousands of barrels a day, and the value of the product pays for the enormous expense of getting it.

## APPALACHIAN HIGHLANDS

Natural gas is often found in connection with petroleum. It is a valuable fuel and, in cities near the source of supply, is used in industrial establishments and in houses for both heating and lighting. In the

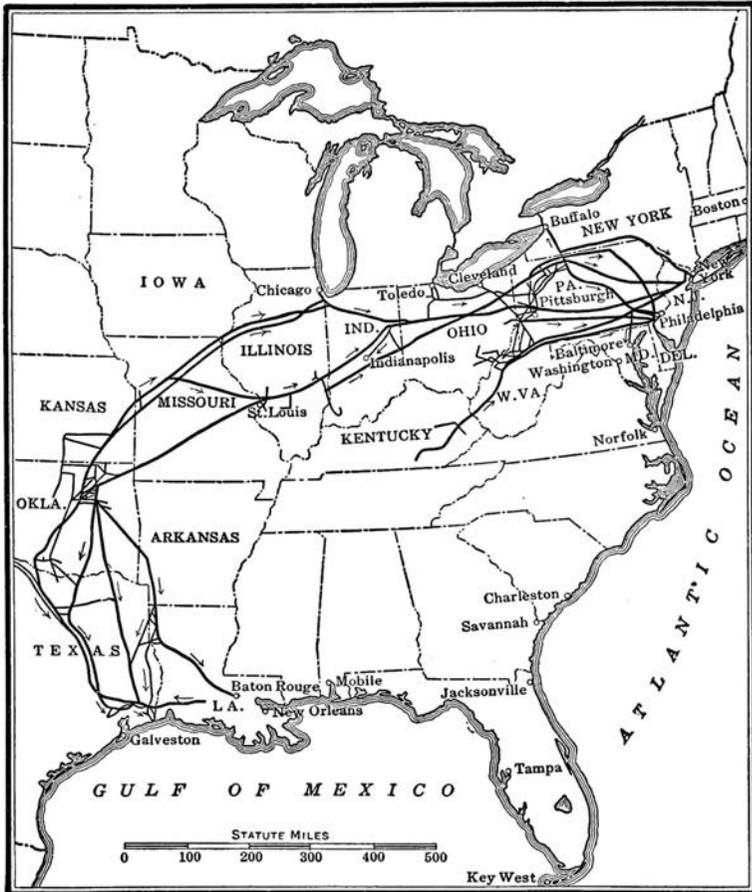
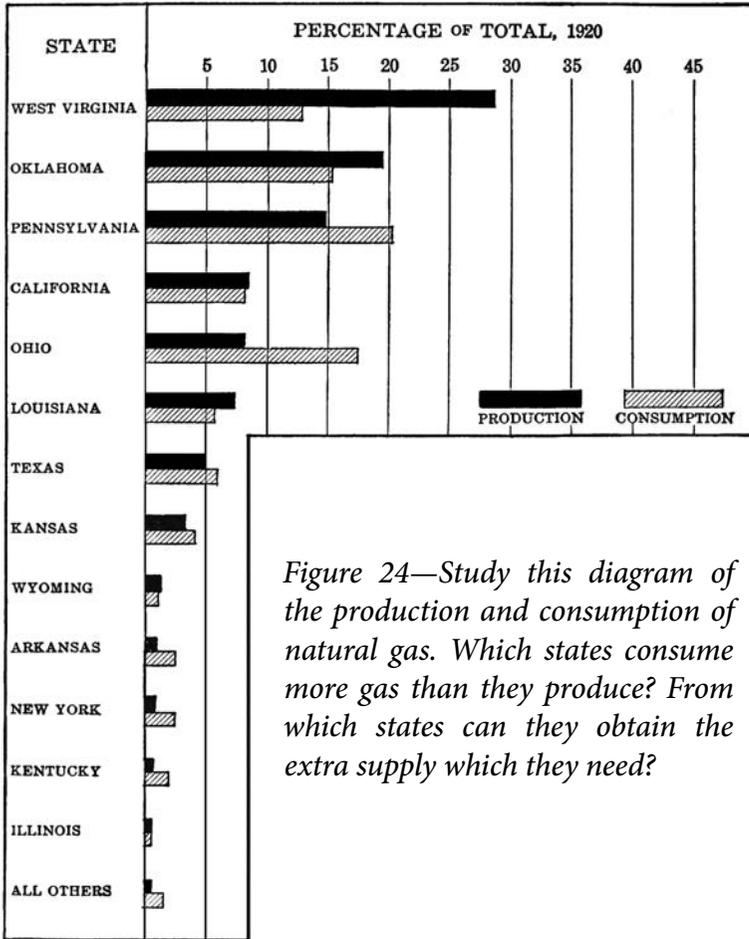


Figure 23—Some petroleum is shipped in tank cars and boats, but much the greater part goes in underground pipes. This map shows the pipe-line system of the eastern United States. There are enough miles of these pipe lines in the United States to girdle the earth at the equator and still have five thousand miles to spare.

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*Figure 24—Study this diagram of the production and consumption of natural gas. Which states consume more gas than they produce? From which states can they obtain the extra supply which they need?*

Pittsburgh district enormous quantities are used in the blast furnaces, foundries, and rolling mills. West Virginia produces about twice as much natural gas as any other state, but she uses much less than either Pennsylvania or Ohio. Both of these states rank high in the production of gas, but they use so much more than they produce that they import large quantities from West Virginia. The supply of natural gas is limited. When the present deposits are gone there will be no

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more. Such enormous quantities have been used and have been allowed to escape that it is feared that the supply will soon be exhausted.

We have already learned of three kinds of fuel which Nature has provided in the Appalachian Highlands. The white coal, as water power is often called, which is found in this region is also very important. The river which furnishes more power than any other in the country is the Niagara, which leaps in one great fall more than a hundred and sixty feet. This falling water has been harnessed and is working for man—lighting his cities, running his cars, and moving machinery in his mills and factories.

The Coastal Plain to the east of the highland is composed of looser material and softer rocks than those of the ancient mountain region. The rivers which flow from the mountains to the sea cross both areas. They can wear away the softer material in the Coastal Plain much more quickly than they can the harder rocks of the Piedmont Belt. Therefore, at the place in the rivers where the two regions meet, there are falls and rapids. In early days the American Indians, and later the white men, sailed up these rivers in their canoes. Arriving at the falls, they were obliged to leave the streams and carry their canoes to the smooth waters above. Therefore it was natural that settlements should spring up at the places where navigation was blocked. Many of these early towns, situated at the head of navigation on the streams and with water power for manufacturing, have since grown into important industrial centers. The line between the Piedmont Belt and the Coastal Plain

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where falls and rapids occur in the streams is called the fall line. On the map opposite trace this line and see what cities are located on it.

There seems to be plenty of both fuel and power in the Appalachian Highlands. Now let us see what materials Nature has supplied for manufactures. Iron is the most important of such materials. It is impossible to think of any industry in which some iron or steel tool or machine is not used. The first step in providing these is to get the ore from the earth. In mountainous regions this work is carried on much as coal-mining is. When we visit regions farther west we shall see iron mined in a very different way.

After the iron is mined it must be separated from the rock which contains it. This is done in blast furnaces—tall, round structures, sometimes a hundred feet high. There are many blast furnaces at Pittsburgh, Birmingham, and other manufacturing cities. What an enormous amount of material it must take to fill them! First a quantity of ore is poured in, then some coke, and then limestone. Coke is coal which has had some of its gases burned out. It makes a hotter fire than coal. But even this great heat is not enough to melt the iron, so a strong blast of air is forced in to make the fire burn even more fiercely.

In the fierce heat the iron melts, and on account of its weight it sinks to the bottom of the furnace. The impurities in the ore combine with the limestone and form a lighter material called slag.

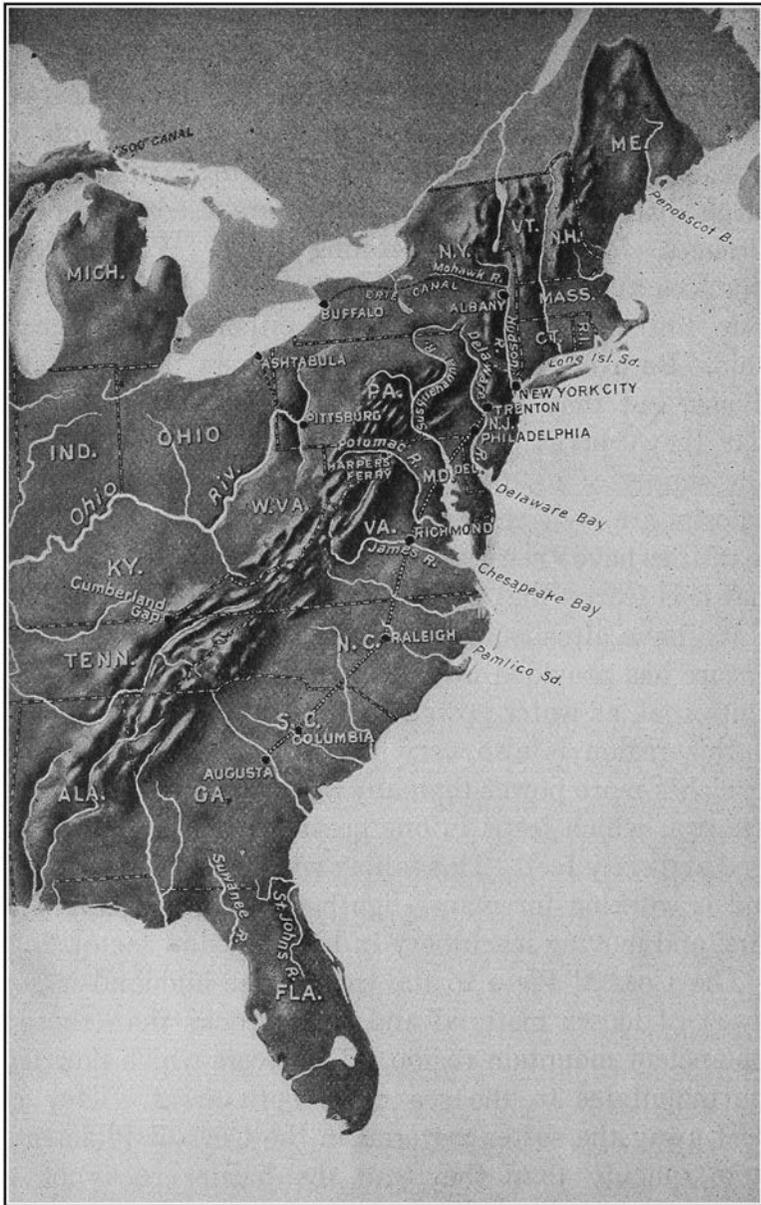
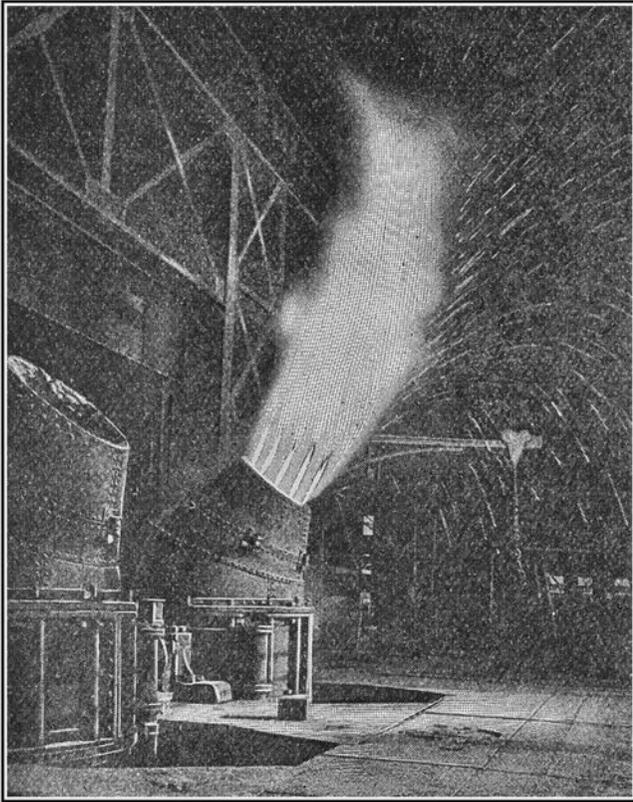


Figure 25—Follow the course of the fall line on this map. Between what two regions does it lie? Why are there falls in the rivers here? How has the fall line helped in the growth of cities on it?

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When an opening is made in the lower part of the furnace the molten iron starts out, making a shower of bright sparks which look like a display of Fourth of July fireworks. The iron flows freely like a stream of liquid fire and is so bright that it dazzles one's eyes to watch it. It is run into molds, where it grows darker and blackens as it hardens. In this form it is known as pig iron. Pig iron is too brittle to work easily and must be still further purified and made into wrought iron and steel.



*Figure 26—Making steel by the Bessemer process. Find out from a cyclopedia what causes the shower of sparks. Find out also by what other process steel is made.*

## *APPALACHIAN HIGHLANDS*

Can you think of any industry which can be carried on without the use of steel? We need such enormous quantities of articles made of it that the manufacture of steel is a most important occupation and is carried on in many cities in the eastern highland, where coal can be easily obtained. There are many important steel-manufacturing cities on and near the Great Lakes to which both coal and iron can be easily brought. We shall read about some of these in later chapters.

In the western part of Pennsylvania you will find two rivers, the Allegheny and the Monongahela, which unite to form the Ohio. Pittsburgh is located at the junction of these rivers. The Monongahela River valley connects the city with the coal fields of West Virginia, and the Allegheny River links it with the coal and oil regions of western Pennsylvania. The Ohio River leads west and south to the Mississippi River and the Gulf of Mexico. Through the Great Lake route, iron is brought from the rich mines west of Lake Superior. Many railroads enter the city, bringing materials and carrying away its manufactured products. With all these advantages it is no wonder that Pittsburgh has become a great steel-manufacturing center. There are establishments for making steel for building, steel rails, wire, nails, boilers, armor plate, projectiles for great guns, agricultural implements, stoves, engines, and other articles too numerous to mention. Later you will read about Birmingham, another very important steel-manufacturing city, situated near the southern end of the Appalachian Highlands.

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There are many other products besides those of steel manufactured in Pittsburgh. The largest cork factory in the world is located here. Sandstone, useful in glass-making, is found in the Ohio Valley, and Pittsburgh has become famous also for its glass manufactures.

Philadelphia is greatly influenced by the coal deposits of the state. Her position on the Delaware River is favorable both for her manufacturing and for her commerce. Many raw materials needed in her manufactures can be brought by water. The river is deep enough for large ocean vessels, and her commerce has become of great importance. More locomotives are made in Philadelphia than in any other city of the United States. There are shipyards also, where we can see great ships in all stages of completion, from the barest skeletons to the finished product. The woolen industry is important, too. Yonkers, near New York City, and Philadelphia are famous for the manufacture of carpets.

Instead of inspecting these or any of the other industrial plants of Philadelphia, perhaps you would prefer to go to the old mint, the first one to be established in the United States, where in 1793 the first copper cents were coined. This mint is a very important one. More money is coined here today than in any other mint in the world. Among your trips to places of historical interest you will enjoy a visit to Independence Hall, from whose belfry, on July 4, 1776, pealed out the joyful news that the Declaration of Independence was signed and that our country was no longer a colony of England, but a free and independent nation.

## APPALACHIAN HIGHLANDS

That old bell now is silent and hushed its iron tongue,  
But the spirit it awakened still lives forever young;  
And when we greet the sunlight on the Fourth of each July,  
We'll ne'er forget the bellman, who, 'twixt the earth and sky,  
Rang out our independence which, please God, shall never die.

Around Trenton, the capital of New Jersey, there are deposits of clay which are useful for making porcelain, chinaware, bricks, and tiles. In Trenton there are between forty and fifty establishments engaged in clay manufacture. In the year 1918 one of these establishments made a beautiful china dinner set for the use of the president of the United States. This service was the first White House china designed by an American citizen, made from American clays at an American pottery, decorated by American artists, and fired in American kilns. There are about seventeen hundred pieces in the complete set, and each piece is decorated in gold with the Stars and Stripes and the president's seal.

The Appalachian Highlands extend into Alabama, and the richest mineral deposits of the South are located there. Near these deposits there has grown up the city of Birmingham, which has become one of our most important steel-manufacturing centers. Iron and steel are not its only manufactures. It has great cotton factories, cottonseed-oil mills, lumber mills, and woodworking establishments. Can you tell why such industries should prosper in Birmingham?

In other cities and towns of northern Alabama and in the mountainous districts of eastern Kentucky and

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Tennessee the tall chimneys of blast furnaces, foundries, and factories may be seen and important manufactures are carried on.

Coal and iron are the most important minerals of the Appalachian Highlands, but there are others born in the waters of the old sea which once covered much of this region. Then, as now, the streams collected mineral matter from the soils and deposited it in the water into which they flowed. Among these minerals salt is important. Like the other deposits it was deeply covered by sands and gravels, until today some of the beds are more than two thousand feet underground. In the salt works in the state of New York, wells are drilled by sinking an iron pipe down to the salt rock. Water is forced into the pipe to dissolve the salt, and the brine is then pumped out through another pipe. The water is evaporated by heating, and the salt which is left is refined and made ready to use. There are different methods of obtaining salt in other states, one of which you will read about on page 85. New York, however, is second only to Michigan in its production.

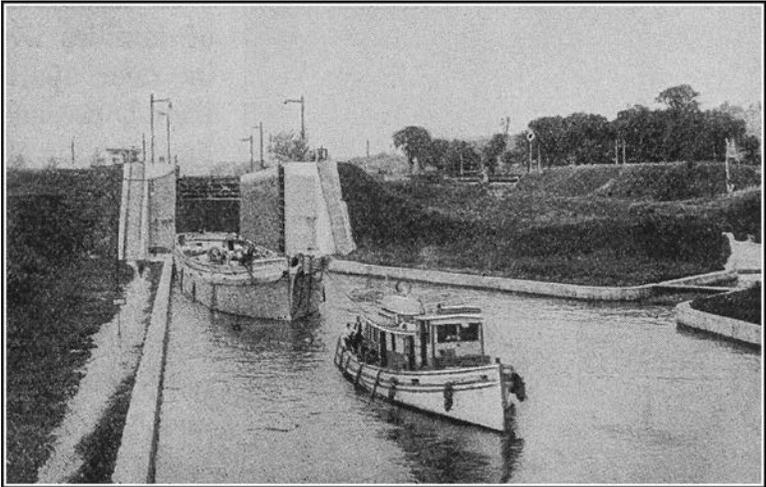
Beautiful marble is found in the southern part of the Appalachian Highlands as well as in the northern part, and large quantities are quarried in both Tennessee and Georgia. The highland regions of Maryland, Alabama, and some other states also have marble quarries.

What articles have you ever seen that are made of aluminum? Most of the bauxite from which aluminum is made comes from Alabama, Georgia, and Tennessee in the Appalachian Highlands and especially from the interior highlands of Arkansas farther west.

## APPALACHIAN HIGHLANDS

There are many places in this highland region which we wish that we had time to visit before leaving for other parts of the country. In the forested Adirondacks we could watch the lumbermen at work, visit paper and pulp mills, or join summer campers beneath the green trees on the bank of some stream or lake.

We could visit Albany, the capital of New York, climb the hill, and see its lovely capitol building. We could sail southward on the beautiful Hudson to New York City and see on our way the buildings of the famous Military Academy at West Point. We could follow the Barge Canal northward to Lake Champlain or westward from the Hudson River along the valley of the Mohawk to Buffalo. In these trips we should learn a great deal about the state of New York, for four fifths of its people and nine tenths of its wealth are found along the Hudson River and the Barge Canal. The canal trip would take



*Figure 27—This is a scene on the New York Barge Canal. Why is this canal important? What waters does it connect?*

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us to the largest cities of the state—Schenectady, Utica, Oswego, Syracuse, Rochester, and Buffalo. Can you find out from a cyclopedia what the people in these cities are doing?

New York, the largest city in the world, has twice the population of any other American city and contains more people than live in the ten states of Idaho, Montana, Wyoming, Colorado, Utah, Nevada, New Mexico, Oregon, North Dakota, and South Dakota. An average of fifteen thousand people live on each square mile of its area. Because of this dense population the buildings of the city have grown higher and higher, until today the tallest skyscrapers in the world are located in New York. Dozens and scores, and in some cases even hundreds, of families live in one apartment house, and hundred of offices are located under one roof.

The southern end of the city is its busiest part. Here the streets seem narrower than they really are because the buildings are so high. Here stands the famous Woolworth Building, fifty-five stories (almost eight hundred feet) high. The Metropolitan Life Insurance Building has fifty stories. On this building, nearly three hundred and fifty feet above the sidewalk, is an immense clock, the largest four-faced timekeeper in the world. Each face is twenty-six and one-half feet in diameter, the figures that mark the hours are four feet high, and the minute hand is seventeen feet long. Compare the size of the face of this wonderful clock with the floor of your schoolroom. Which has the greater diameter?

Let us take a seat on the top of a motor bus and ride up the beautiful Riverside Drive. On our left we see

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the Hudson River with all its boats, while on our right are many magnificent residences. On a commanding height where there is a splendid view of the river, the Palisades, and the country beyond, there stands the massive granite tomb of General Grant.



*Figure 28—The tallest building in the picture is the Woolworth Building in New York City. What does the text tell you about it?*

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The Statue of Liberty stands on an island in the harbor. It was designed by a French artist and was given to the United States by the people of France as a token of their friendship. The statue is so beautifully proportioned that it is hard for one looking at it to



*Figure 29—This is a view of Fifth Avenue in New York City. This avenue does not look wide because the buildings are high, but how many automobiles will it accommodate side by side?*

## *APPALACHIAN HIGHLANDS*

realize its immense size. From its heels to the top of its head it is one hundred and eleven feet high. The right arm, which holds aloft the flaming torch, is forty-two feet long and the forefinger is eight feet in length.

To the right of this magnificent statue is Ellis Island, on which are the large buildings of the Immigration Station. Here all immigrants to the United States who arrive at the port of New York must go for examination before they are allowed to enter the country.

The industries of New York are extremely important. The city has become the leading financial center of the world. It is without a rival in the wholesale dry-goods and grocery business. It ranks far ahead of any other city in the making of clothing for men and women and in the printing and publishing of books, magazines, and papers. There are brought from foreign lands to the piers of New York enormous quantities of sugar to be refined, coffee to be roasted, and spices to be ground. Of course these are only a few of the many, many industries which are carried on in this big city.

Clustered around New York are large, important cities. Many of these are on the New Jersey side of the river and are connected with New York by ferries and tunnels. Among these places is Jersey City with its splendid docks and wharves. Newark, New Jersey's largest city, and Paterson, the silk city of America, lie only a short distance away.

In earlier periods of our history both Philadelphia and Baltimore were larger than New York, but as years

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went by they were left behind in the race. Why was this so?

One of the reasons that New York has grown to be the largest city in the world is because it is nearer to Europe than are the ports farther south. Another important reason is that it has an excellent harbor, where vessels from all countries of the world may come and from which great quantities of freight may be shipped away. The city is situated at the mouth of a river leading into the country. The sinking of the land deepened the Hudson and made it navigable as far as Albany. Here it is joined by the Mohawk River, whose valley leads westward to the Great Lakes. Along this valley the Erie Canal and more recently the Barge Canal have been built to Buffalo, the doorway of the Great Lake route into the Central Plains. It was the Erie Canal which gave the first great impetus to New York's growth. The Hudson-Mohawk Valley route and the Great Lakes beyond furnish a splendid highway between New York City and the grain, cattle, and mineral area of the Middle West. Farther south there is no such easy route between either Philadelphia or Baltimore and the rich plains to the west, for the Appalachian ranges bar the way.

Had we time to linger we should find as many interesting places to visit in the South as in the North. At Annapolis, the capital of Maryland, we might see the students at the United States Naval Academy going through their drills. Sailing from here down Chesapeake Bay we could visit Norfolk and Newport News and see the wharves and the vessels loading with coal at these Virginia seaports. We should realize that we were in the

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part of the country where peanuts are grown when we saw the large quantities that are shipped away.

Baltimore is the largest city on Chesapeake Bay. It is an important manufacturing center, while its position on the bay makes it a busy commercial port as well. Virginia is one of our tobacco-growing states, and large quantities are sent to Baltimore to be manufactured.

If you lived near the shores of Chesapeake Bay or its inlets you would see in the early morning scores of men putting out in their small boats to gather oysters. Chesapeake Bay has the largest oyster beds in the United States. Many people who live in Baltimore and other places around the bay earn their living by removing the oysters from the shells, packing them for market, or canning them. So many oysters are shipped from Baltimore that it has become the largest oyster port in the world.

We should like to visit the famous marble quarries in Tennessee and other states and compare the colors of the stone and the methods of quarrying with those in Vermont. We would go also to Atlanta, the Gate City, at the base of the Blue Ridge, and follow the long trainloads of cotton, tobacco, grain, and mules "from Atlanta to the sea."

The most interesting city in this section is Washington, the capital of the United States. It is the only city in the entire country not located in any state. It is in the District of Columbia, an area of sixty square miles lying between Maryland and Virginia.

Washington is located near the falls of the Potomac

## *NORTH AMERICA*

River, but, unlike the other cities on the fall line, it is not an industrial center. It is one of the most beautiful cities in the world, with its broad avenues, magnificent public buildings, splendid hotels, and luxurious homes. To many people who visit the city the Capitol is the center of interest. It contains the Senate Chamber, the Hall of Representatives, and the Supreme Court Room. The building is seven hundred and fifty feet long and three hundred and fifty feet wide. How does it compare with the size of your schoolhouse?

The White House, the home of the president of the United States, is about a mile from the Capitol. It was the first public building to be erected in Washington and is an object of interest to all sightseers. You will wish to visit the buildings where the various departments of government carry on their work. Can you name these different departments? You will wish to see also the National Museum, the Library of Congress, the home of the Red Cross, the headquarters of the National Geographic Society, and, newest of all, the lovely Lincoln Memorial, finished in 1920. The Pan-American Building is one of the most beautiful in the world. It was built in 1910 by the Pan-American Union, an organization made up of all the republics in the Western Hemisphere. How many of these can you name?

Of course you will wish to go to the top of the Washington Monument, the tallest stone column in the world. It is five hundred and fifty-five feet high, and an elevator runs to the top to carry those who wish to enjoy the beautiful view. Most visitors to Washington take a trip to Mount Vernon, the home of George Washington,

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our first president. It is a fine old mansion overlooking the blue waters of the Potomac.

### **SUGGESTIONS FOR STUDY**

#### **I**

1. Nature's story of this mountain region.
2. Influence of mountains and rivers on early settlements.
3. The formation and mining of coal.
4. Petroleum and natural gas.
5. Water power in the Appalachian Highlands.
6. The fall line.
7. Iron and steel.
8. Pittsburgh and Birmingham.
9. The old city of Philadelphia.
10. Trenton and its clay industry.
11. Manufacturing in the southern Appalachians.
12. The salt industry.
13. Some trips through New York State.
14. New York, the largest city in the world.
15. Baltimore and the oyster industry.
16. Side trips in other states.
17. Our capital city, Washington.

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### II

1. Name the states which are included in the Appalachian Highland region.

2. Sketch Lake Erie and Lake Ontario, the Niagara River, and the Welland Canal. In what direction does the Niagara River flow? Make an arrow beside the river to show this on the map which you have drawn. The water in the Falls is constantly wearing away the cliff over which it flows. As this work goes on, in which direction are the Falls moving? Nearer which lake were they formerly? How has the position of the Falls affected the size of the city of Buffalo?

3. Find in a cyclopedia the larger cities mentioned in this chapter. What facts are given which are not mentioned here?

4. The natural supply of oysters long since failed to fill the demand for this sea food. Find out if you can how man has met this problem and tell the class about it.

5. Study the map of the coal areas on page 44 and make a list of the states where coal is mined.

6. Write to the Geological Survey, Washington, D.C., and ask for a pamphlet giving the names of the states in the order of their coal production. Perhaps you would like similar information on iron, petroleum, and natural gas. You can start a valuable reference library for your school in this way. Can you plan a card catalogue for it? The librarian in the public library will help you to do this.

## *APPALACHIAN HIGHLANDS*

### **III**

Make a list of the places mentioned in this chapter. Arrange them by countries, cities, mountains, rivers, etc. Be able to locate each place and tell what was said about it in the chapter.