



Lesson: Natural Resources in New Hampshire

(To follow Amplify CKLA K, Knowledge 11: Taking Care of the Earth,
Lesson 3: Natural Resources)

At a Glance

In this lesson, students will learn about New Hampshire resources: fish, forests, granite, and rivers.

Primary Focus Objectives

- Students will identify and describe natural resources and will explain why they are important.

Formative Assessment

- Invention activity

Standards

CCSS.ELA-LITERACY.SL.K.2

Confirm understanding of a text read aloud or information presented orally or through other media by asking and answering questions about key details and requesting clarification if something is not understood.

CCSS.ELA-LITERACY.RI.K.3

With prompting and support, describe the connection between two individuals, events, ideas, or pieces of information in a text.

CCSS.ELA-LITERACY.RI.K.1

With prompting and support, ask and answer questions about key details in a text.

Materials

- Focus Texts:
 - [Unit 1: New Hampshire Geography, Learn It! "Features of the Land," page 4 \(rivers\).](#)
 - [Unit 3: Settling New Hampshire, Learn It! "New Hampshire's Early Industries," pages 2–3 \(fish\).](#)
 - [Unit 3: Settling New Hampshire, Learn It! "New Hampshire's Early Industries," pages 9–11 \(forests\).](#)
 - [Unit 12: Big Factories and New Industries, 1820–1920, Learn It! New Hampshire's Main Industries, pages 10–12 \(forests\).](#)
 - [Infographic: All About Granite](#)
- Natural resource discussion chart
- Optional: [Virtual Field Trip: New Hampshire Rocks!](#)
- *Marvelous Mattie: How Margaret E. Knight Became an Inventor*, by Emily McCully Arnold
- Invention planning packet

Time Needed

Three 30-40 minute class sessions

Learning Activity

1. **Read the Focus Texts.** Read the recommended Learn It! selections about New Hampshire's natural resources. Use the provided chart to organize student responses. (30 minutes)



2. **Optional: Take a Virtual Field Trip.** Watch the “New Hampshire Rocks!” video and learn about how rocks have been used in New Hampshire. (20 minutes)
3. **Read about a young inventor.** Read aloud as a group *Marvelous Mattie: How Margaret E. Knight Became an Inventor*, by Emily McCully Arnold. (20 minutes)
4. **Invent with natural resources.** Guide students to plan, draw, and make a model of an invention that uses or helps New Hampshire’s natural resources. (30 minutes)



Educator Rationale and Answer Guide

Connection to Amplify

In this lesson, students will think about New Hampshire resources by reading non-fiction texts, learning more deeply about one New Hampshire resource, and then will create an invention either out of a New Hampshire resource or to help a New Hampshire resource. They will apply the things they've learned in the Focus Text to a hands-on creative project.

Read the Focus Texts

There are many Learn It! selections that discuss historic uses of New Hampshire's natural resources. The recommended selections address the resources that are the focus of this lesson: forests, fish, granite, and rivers. Discussion might center around how a fish or rocks can be a resource. Try talking about what our state would look like without these resources. Discuss how students can be stewards and protectors of New Hampshire's resources. Use the provided chart to organize student responses to these questions: Where do we find this resource? How can you use this resource?

Optional: Virtual Field Trip

If time allows, watching this video will help students have a deeper understanding of one New Hampshire resource. Rocks have been used for more than just building in New Hampshire and this virtual field trip explores many of those historic uses. It is not necessary for students to complete the pre- and post-trip activities for this lesson.

Read about a young inventor

This illustrated biography of Margaret E. Knight, who was born in Maine and moved to Manchester, New Hampshire, at a young age and worked in the mills, can be used to inspire students before they begin the invention activity. Mattie, as she was known, kept a sketchbook of invention ideas and even invented something to improve safety in the mills where she worked before going on to found a company that made use of a natural resource to solve a problem.

Invent It

In this step, students will think about how to use or how to help New Hampshire resources. Working individually or in small groups, students first need to think about a problem to solve or something that would be helpful for their community. Or they could think of an invention that could be helpful to the New Hampshire resource. Then they will draw and describe their invention. You could take this another step by having students build their invention using recycled materials or (if it's part of their plan) sticks and rocks.

ALL ABOUT GRANITE

What is New Hampshire's nickname? Why, the Granite State, of course! You've probably seen lots of granite in your community on sidewalks, in buildings, or in parks and yards. Granite is a very important part of New Hampshire's landscape and history.

What is granite?

Granite is a kind of rock that is very hard. It's harder than lots of other rocks! At the end of the last ice age, the glaciers left behind a huge amount of granite in New Hampshire. There are still granite boulders all over the state. New Hampshire has many famous natural rock formations made of granite, like the Old Man of the Mountain and the Flume. About half of New Hampshire is covered with granite under the soil.

Why is granite useful?

Granite is a great material for buildings. For example, it was used to make the New Hampshire State House in Concord and the U.S. Capitol in Washington, D.C. It is also used to make curbs for roads and in parking lots. Because it is so hard, it stands up to harsh weather without chipping or crumbling.

How did people get granite?

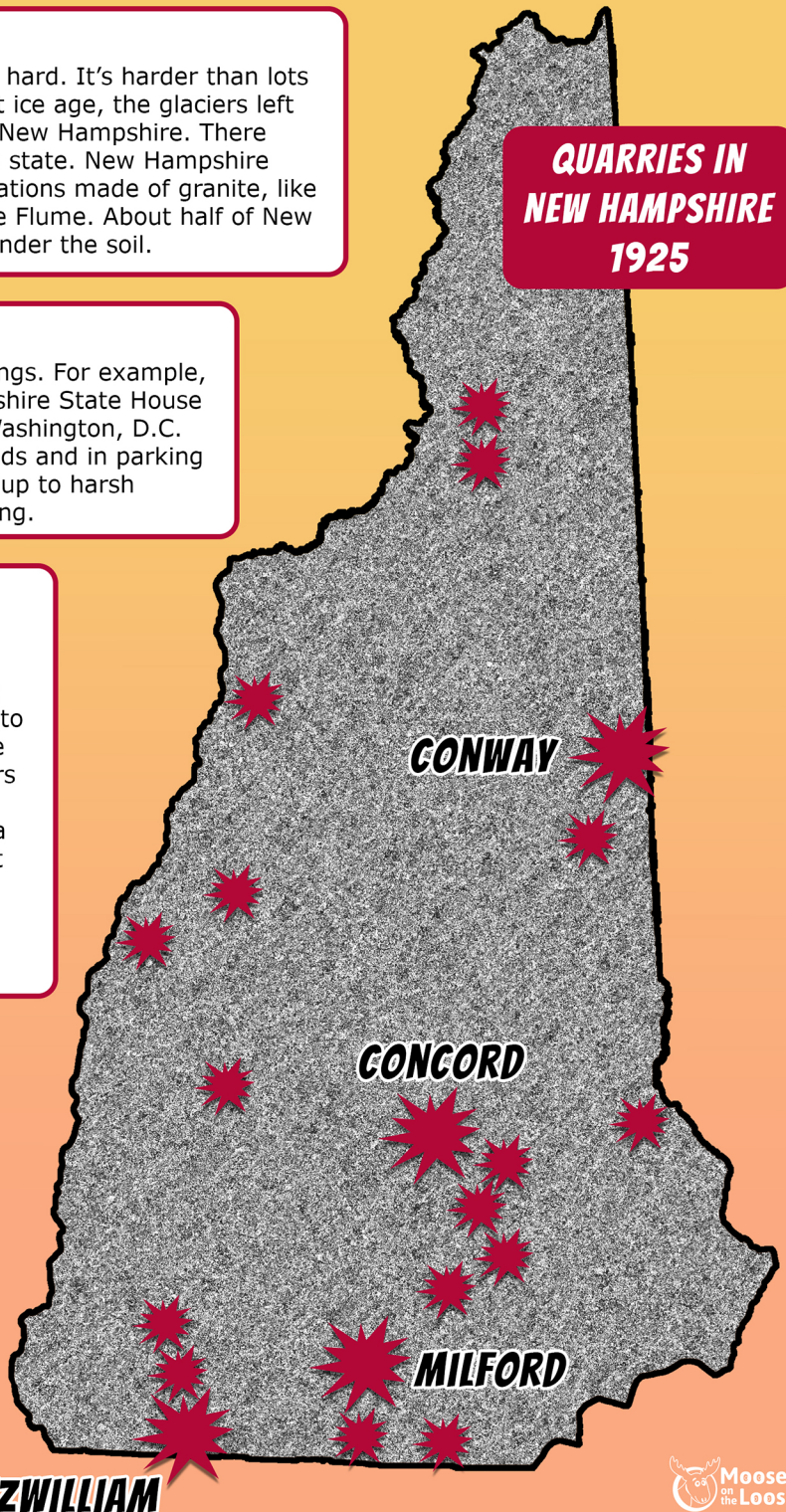
The process of turning granite into blocks of stone is called quarrying. Quarries are places where there is a lot of granite naturally. People dig into the earth to reach more of it. People used tools called feathers and wedges that would allow them to hammer a crack into the granite. It split the granite in a straight line! This is how they made the square blocks to use in curbs and buildings.



Why is New Hampshire called the Granite State?

In the early 1800s, people began to quarry granite in New Hampshire. The state got a reputation for having lots of granite that was both beautiful and strong. In 1825, a man named Philip Carrigain wrote a poem and a song that described New Hampshire as the Granite State. People liked the nickname and started using it right away!

**QUARRIES IN
NEW HAMPSHIRE
1925**



1. Why do you think some of the marks on the map are bigger than others?
2. Why is granite such an important natural resource for New Hampshire?
3. Where have you seen granite in your house, neighborhood, school, or town?
4. People liked the nickname the Granite State not only because it described the state's natural resource, but also because New Hampshire's people can be compared to granite. What do you think that means?



Where do we find this
natural resource?

How can we use this
natural resource?

WATER

WOOD

FISH

GRANITE



Inventor _____

Name of the Invention _____

Diagram of my invention



Describe your invention

Handwriting practice lines for describing an invention. The page contains 10 sets of horizontal lines, each consisting of a solid blue top line, a dashed blue middle line, and a solid red bottom line.



What New Hampshire resources did you use or help?

Handwriting practice lines consisting of solid blue top and bottom lines with a dashed blue middle line. Each set of lines is preceded by a solid red line, likely for margin or section marking. There are five such sets of lines provided for writing.