Lesson 1.8 "Mapping Your Town"

Unit 1: New Hampshire Geography

Lesson Objectives

- Students will investigate town geography through maps and outside sources.
- Students will create a map or add layers to an existing map of the local area.
- Students will explain in writing the data in their map.

Lesson Competencies

- I can analyze primary and secondary sources and draw appropriate conclusions. (Moose SS)
- I can analyze, use, and construct maps and other geographic representations to explain relationships between people and the environment. (Moose SS)
- I can integrate information, distinguish relevant–irrelevant information (e.g., fact/opinion), and (visually, orally, in writing) present what was learned. (ELA 8)

Essential Questions

How has New Hampshire come to be the way it is?

Focus Questions

What physical and human characteristics define New Hampshire?
How did New Hampshire's boundaries and regions come to be the way they are today?
How has the way people explored and represented New Hampshire changed over time?
How does where you live impact how you live?

Estimated Time

At least three 40-minute class sessions

Materials & Equipment

Map of your town for projection (from town source or Google Maps)
Class set of map of your town and/or tools for students to create map
Class set of "My Town:_____" worksheet
Class set of "Mapping Your Town" worksheet
Class set of "Mapping Your Town Project Rubric" worksheet

Educator Introduction & Rationale

Through New Hampshire's varied land, towns have been the centerpiece of life for generations. While students must study the regions, land, and weather of the state as well as mapping skills, without applying this knowledge locally, they will not internalize it. The opportunity to interact with maps of familiar places gives students a deeper understanding of how maps function. Reference the Educator Overview for more information.

This is the summative assessment for Unit 1: New Hampshire Geography. In this lesson, students take unit knowledge and apply it to local areas. They choose an aspect of their town that interests them and investigate it geographically, creating a map or adding layers to an existing map. They show their knowledge through explaining the data in their map in writing.

Achievement of the learning objectives in lessons 1.1 "Map Vocabulary and Introduction," 1.2 "New Hampshire in the World," and 1.7 "Mapping New Hampshire" is recommended before engaging with the activities in this lesson so that students have the skills to succeed in this lesson. Ideally, students will also practice skills from other lessons in the unit. Reinforcement and extension activities are provided through differentiation of the mapping skills and locations; use the lesson and objectives to reinforce or extend learning for students. Please note, lesson vocabulary and definitions are at the end of the document. You may wish to preview these with your students.

Teaching Tips: This lesson is open and flexible with the intention that students investigate what interests them most about the geography of the town. Ideas for local mapping are provided but let student interest guide selection of their map and data rather than limit options. There are many further options for representation of data on a map; encourage students to brainstorm how geography affects them and how they can show that on a map. Alternatively, if your students are new to or uncertain of mapping, guiding their choice of topic would be helpful. Please adapt all the material in this lesson, as necessary, to meet the needs of the students in your classroom.

Learning Activity

Activation

Town borders. Project a map of your town with borders. If you do not have one, typing your town's name into Google Maps will show an appropriate map. Invite students to look at the map for one minute in silence to think about what questions they have about the town or the map, then have them voice their questions. Write the questions either on a white board or chart paper.

After students have exhausted their questions, answer what questions you can and note some of the following together:

- Town shape: why is it shaped the way it is?
- Natural and man-made made resources
- Main roads
- Water ways and land types
- Town center with applicable buildings
- Location of school
- Special features of your town including conservation areas, sports fields, landmarks, etc.
- Where students live (without identifying information)

What do you know about the history of your town? Why was it founded where it is? Is it along a travel route or waterway? Are there special resources available? Consider contacting the local library or historical society for information to help students understand the geography of the founding of the town.

Hand out the worksheet "My Town: _____." Have students write your town's name in the title and work with students to use unit knowledge to complete the worksheet.

Guided Practice

Mapping layers of the town data. Inform students that their assessment for this geography unit is to work with or create a map of your town or part of your town. Invite them to turn and talk with a partner about what on the town map interests them the most. Waterways? Names of streets? Perhaps the town center or the school? Their bus routes? They can use the "My Town" worksheet to give them ideas if necessary.

Hand out project directions. To each student, give "Mapping Your Town" with "Mapping Your Town Project Rubric." Review as appropriate for your classroom. Best practice is to help students envision what an "Above Standard" project might look like, using the rubric and instructions. Determine and be explicit about due dates; posting them in an appropriate place in the classroom works well.

This is planned as an individual project but could also be done in pairs. Decide what works best for your class or give students a choice. Use vocabulary words as inspiration if necessary.

Independent Practice	**Planning their map.** Once students understand what they will do in the project, have them work in groups to complete their planning worksheet. Specifically, help them with what they will need for the project, and use class and community resources to provide it. See "Supporting Materials" for suggestions for helpful websites and additional resources. **Teaching Tip:** This is a good spot to pause if you will divide the lesson between teaching periods.
Independent Practice	**Creating their map.** Work with students to complete their maps according to project directions. This is a flexible, independent project. Use this opportunity to encourage different learning styles as well as construct a project that works well for your class. **Teaching Tip**: Maps should take approximately one or two class sessions to complete, and writing can be done at home or in school.
Summative Assessment	**Present the projects.** When students have completed their maps and writing, they should grade themselves on the rubric before they hand in the maps, writing, and rubric. Give students a chance to present their expertise. They can share them in groups, with other classes, or even in a local public space like the town library or school lobby. Invite each student to present their maps and to talk about the questions that inspired their data.
Reinforcement & Extension	Provided through differentiation of project.

Supporting Materials

Other Resources

New Hampshire Division of Historical Resources has thorough lists of the New Hampshire Historical Highway Markers by town, marker number, or viewable on a map. Go to www.nh.gov/nhdhr/markers/ for details.

National Geographic's "MapMaker Interactive" allows you to put different layers of data on to base maps. More layers are available on large-scale areas rather than locally, but helpful for inspiration. mapmaker.nationalgeographic.org/#/

The New Hampshire Department of Environmental Services has a "New Hampshire Stone Wall Mapper" that identifies stone walls in your local area and asks for help mapping ones that aren't listed. www.des.nh.gov/media/pr/2019/20190115-stone-wall-mapping.htm

The Dartmouth College Library has a free, online collection of historical maps of many towns in New Hampshire titled "Sanborn Fire Insurance Maps: New Hampshire Towns, 1880s-1940s" that would be useful for a comparison of your town's historic map and a modern day one. www.dartmouth.edu/~library/digital/collections/maps/sanbornmaps/

Standards

"Moose on the Loose" Content:

- ✓ Students will understand that New Hampshire has a diverse geography, with mountains, seacoast, and farming land. They will understand it has been inhabited for thousands of years and has a variety of resources. (3-5.T1.1)

"Moose on the Loose" Skills:

- ✓ Gathering, Interpreting, and Using Evidence (3-5.S1.1)
- ✓ Communicating and Critiquing Conclusions (3-5.S2.1, 3-5.S2.2)
- ✓ Comprehensive Geographic Reasoning (3-5.S4.1, 3-5.S4.2)

New Hampshire Social Studies Frameworks:

- ✓ Geography: The World in Spatial Terms (SS:GE:4:1.1, SS:GE:4:1.5)
- ✓ Geography: Places and Regions (SS:GE:4:2.1, SS:GE:4:2.5)

NCSS Themes:

- ✓ Theme 3: People, Places, and Environments

C3 Frameworks:

- ✓ Determining Helpful Sources (D1.5.3-5)
- ✓ Geographic Representations: Spatial Views of the World (D2.Geo.1.3-5, D2.Geo.2.3-5, D2.Geo.3.3-5)
- ✓ Gathering and Evaluating Sources (D3.1.3-5)
- ✓ Communicating Conclusions (D4.2.3-5)

Common Core ELA Grade 3:

- ✓ Craft and Structure in Informational Text (RI.3.6)
- ✓ Integration of Knowledge and Ideas in Informational Text (RI.3.7, RI.3.9)
- ✓ Text Types and Purposes in Writing (W.3.2)
- ✓ Production and Distribution of Writing (W.3.4)
- ✓ Research to Build and Present Knowledge (W.3.7)
- ✓ Conventions of Standard English (L.3.1)
- ✓ Knowledge of Language (L.3.3)
- ✓ Vocabulary Acquisition and Use (L.3.6)

Common Core ELA Grade 4:

- ✓ Integration of Knowledge and Ideas in Informational Text (RI.4.7, RI.4.9)
- ✓ Production and Distribution of Writing (W.4.4)
- ✓ Research to Build and Present Knowledge (W.4.7)
- ✓ Vocabulary Acquisition and Use (L.4.6)

Common Core ELA Grade 5:

- ✓ Craft and Structure in Informational Text (RI.5.6)
- ✓ Integration of Knowledge and Ideas in Informational Text (RI.5.7, RI.5.9)
- ✓ Production and Distribution of Writing (W.5.4)
- ✓ Research to Build and Present Knowledge (W.5.7)
- ✓ Vocabulary Acquisition and Use (L.5.6)

Lesson Vocabulary

absolute location	(noun) The exact location of a place on Earth determined by the intersection of longitude and latitude measurements
border	(noun) A real or imaginary line that divides two places. Usually a human feature; also called a boundary
cardinal direction	(noun) One of the four main directions featured on a compass rose: north, south, east, and west
climate	(noun) The typical weather conditions, such as temperature and precipitation, in a specific area
compass	(noun) A tool used to determine directions by following a metal needle drawn toward magnetic north
compass rose	(noun) A symbol that represents a compass showing cardinal and intermediate directions
county	(noun) A section of a state with defined boundaries and its own governmental services. New Hampshire has ten counties
elevation	(noun) The height of land measured from the level of the sea
geography	(noun) The study of the physical, biological, and cultural features of Earth's surface
granite	(noun) A hard rock naturally occurring in New Hampshire and used particularly for buildings and monuments
human feature	(noun) An element added to Earth's surface by people, usually to provide shelter, create borders, or support transportation
intermediate direction	(noun) A point between two of the main points on a compass: northwest, southwest, northeast, and southeast
key	(noun) An explanation of abbreviations or symbols used on a map, sometimes called a legend
latitude	(noun) The distance north or south of the equator, measured in degrees, represented by invisible parallel lines running east to west around Earth
longitude	(noun) The distance east or west of the prime meridian, measured in degrees represented by invisible parallel lines running north to south around Earth
natural resources	(noun) Something found in nature that is used by people, such as animals, plants, or fossil fuels

physical feature	(noun) A naturally occurring feature on Earth's surface such as a landform or body of water
quarry	(noun) A deep pit created by humans in order to dig up certain types of stones or other materials like gravel or sand
region	(noun) A section of a state or country that has specific characteristics but does not have an official boundary
relative location	(noun) The location of a physical or human feature described with cardinal and intermediate directions from another physical or human feature
renewable resource	(noun) Any material, such as wood or solar energy, that can or will be replenished naturally in the course of time
rural	(adj) An area of land that is primarily used for farming, where there are no large towns or cities
scale	(noun) A tool, printed or drawn, to show how distances should be measured on a map
urban	(adj) A large town or city, where there are lots of buildings and people
wetlands	(noun) Areas of land that do not drain well such as swamps, marshes, and bogs