

Find Your Way on the Parkway

Blue Ridge Parkway Quarter

Grades Seventh and Eighth



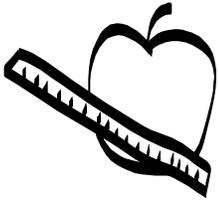
OBJECTIVES

Students will research different types of maps and create a 3-D map to scale of the Blue Ridge Parkway. Students will solve proportion problems to find scale.



MATERIALS

- 1 overhead projector or equivalent technology
- 1 overhead transparency (or photocopy) of the “Blue Ridge Parkway Quarter” page
- Copies of the following:
 - “Blue Ridge Parkway Map” worksheet
 - “Blue Ridge Parkway Map Answer Key
 - “Map Math” worksheet
 - “Map Math Answer Key”
 - “Blue Ridge Parkway 3-D Map” worksheet
 - “Blue Ridge Parkway 3-D Map Rubric”
- 1 class map of the United States
- Locate age-appropriate texts that contain information on the Blue Ridge Parkway, such as:
 - *Blue Ridge & Smoky Mountains (Moon Handbook)* by Deborah Huso (excerpts)
 - *Blue Ridge Parkway: An Extraordinary Journey Along the World’s Oldest Mountains* by Charles Maynard (excerpts)
 - *Best of the Blue Ridge Parkway* by Nye Simmons (excerpts)
 - *National Geographic Complete National Parks of the United States* by Mel White (excerpts)
- Locate age-appropriate texts that contain information on maps, such as:
 - *If Maps Could Talk: Using Symbols and Keys* by Erika L. Shores
 - *The Story Behind Maps* by Barbara A. Somerville
 - *Maps: Getting From Here to There* by Harvey Weis
- Chart paper, whiteboard, or interactive whiteboard
- Computers with Internet access
- Butcher paper, bulletin board paper, or other long paper



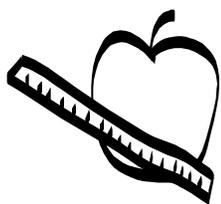
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- Materials to build models (styrofoam, glue, paint, clay, wood, other)
- Rulers
- Index cards (5 by 8 inches)
- Calculators

PREPARATIONS



- Make an overhead transparency (or photocopy) of the “Blue Ridge Parkway Quarter” page.
- Make copies of each of the following:
 - “Blue Ridge Parkway Map” worksheet (1 per student)
 - “Map Math” worksheet (1 per student)
 - “Blue Ridge Parkway 3-D Map” worksheet (1 per student)
 - “Blue Ridge Parkway 3-D Map Rubric” (1 per student)
- Locate age-appropriate texts that contain information on the Blue Ridge Parkway (see examples under “Materials”).
- Locate age-appropriate texts that contain information on maps (see examples under “Materials”).
- Arrange to use the school computer lab for two to four sessions.
- Bookmark Internet sites that contain information about the Blue Ridge Parkway, such as:
 - www.usmint.gov/mint_programs/atb
 - www.nps.gov/blri/index.htm
 - www.virginia.org/blueridgeparkway/
 - docsouth.unc.edu/blueridgeparkway/
- Bookmark Internet sites that contain information about maps, such as:
 - www.usa.gov/Topics/Maps.shtml
 - www.usgs.gov/pubprod/maps.html
 - www.usgs.gov/pubprod/
 - <https://www.cia.gov/library/publications/the-world-factbook/docs/refmaps.html>
 - memory.loc.gov/ammem/gmdhtml/
- Grade the “Map Math” worksheets after Session 2.
- Determine the best place in the room to set up the map.
- Determine student groups (3 or 4 students) for Session 1.
- Gather materials for making models.



Find Your Way on the Parkway



GROUPINGS

- Whole class
- Small groups
- Pairs
- Individual work



CLASS TIME

Five 45- to 60-minute sessions, total 225 to 300 minutes



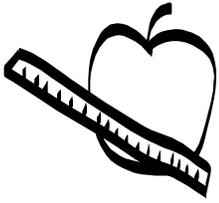
CONNECTIONS

- Geography
- Math
- Art



STANDARDS (NATIONAL/Common Core)

- CCSS.MATH.CONTENT.7.RP.A.2.C—Represent proportional relationships by equations.
- CCSS.MATH.CONTENT.7.RP.A.3—Use proportional relationships to solve multistep ratio problems.
- CCSS.MATH.CONTENT.7.RP.A.2—Recognize and represent proportional relationships between quantities.
- CCSS.ELA-LITERACY.RH.6-8.7—Integrate visual information (e.g., in charts, graphs, photographs, videos, or maps) with other information in print and digital texts.
- (NCSS) National Council for the Social Studies—People, Places, and Environments: They learn to use maps, globes, and other geographic tools. The World in Spatial Terms: STANDARD 1: How to use maps and other geographic representations, tools, and technologies to acquire, process, and report information.
- (NCTM) National Council of the Teachers of Mathematics—Students will:
 - understand both metric and customary systems of measurement;
 - solve problems involving scale factors, using ratio and proportion;
 - understand and use ratios and proportions to represent quantitative relationships;
 - analyze proportional relationships and use them to solve real world and mathematical problems.
- Arts Edge—Students intentionally take advantage of the qualities and characteristics of art media, techniques, and processes to enhance communication of their experiences and ideas.



Find Your Way on the Parkway



TERMS AND CONCEPTS

- Quarter
- Obverse (front)
- Reverse (back)
- Scale
- Physical map
- Political map
- Contour/topographic map
- Historical map
- Climate map
- Population density map
- Road map
- Scale bar



BACKGROUND KNOWLEDGE

Students should have a basic knowledge of:

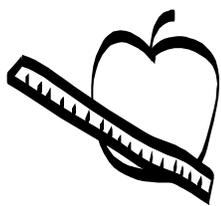
- Tourism
- Maps
- Map key components
- Proportions



STEPS

SESSION 1

1. Display and examine the “Blue Ridge Parkway Quarter” page. Locate this site on a class map. Note its position in relation to your school’s location.
2. As background information, explain to the students that the United States Mint began to issue the quarters in the America the Beautiful Quarters® Program in 2010. By the time the program ends in 2021, there will be a total of 56 designs. Each design will focus on a different national site—one from each state, territory, and the District of Columbia.
3. Tell the students that the front of a coin is called the “obverse” and the back is called the “reverse.” Answer any student questions.

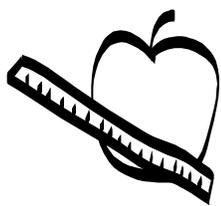


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4. Display the “Blue Ridge Parkway Quarter” page. With the students, examine the coin design. Have the students identify the elements in this design. This design depicts the grace and curvature of the road hugging the side of a mountain, and includes the stonework typical of many of the parkway’s facings and bridges, with the North Carolina state flower in the foreground.
5. Lead a class discussion on tourism and how it might affect an area’s economy. Emphasize the “America’s Favorite Drive” slogan and the scenery and highlights of the ride from the National Park Service Web site.
6. Lead the students in a discussion of what it would be like to take a ride on the Blue Ridge Parkway. Ask the students what types of things they would see and how they would prepare for the trip. Record student responses on chart paper. Lead the students to conclude that maps would be useful.
7. Refer the students back to the class map from step 1 of this session. Ask the students to identify what type of map it is. If necessary, review map types. Record student responses on chart paper. Lead a class discussion on the different types of maps.
8. Distribute the “Blue Ridge Parkway Map” worksheet. Divide the class into groups of 3 or 4 students. Assign each group a different type of map from the worksheet. Explain to the students that they will be researching the type of map, finding examples of the type, and researching other information for the worksheet.
9. Allow time for the students to do their research using computers or selected printed texts.
10. Display the map worksheet. Review the research results as a class, adding information to the displayed worksheet. Have the students complete the worksheet based on the class discussion.
11. Lead a class discussion on the parts of a map. Lead the students to conclude that the title, key, and scale bar are important when reading any map.

SESSION 2

1. Review the different types of maps from the previous session. Lead a class discussion on the scale bar and how it is used with a map. Ask the students to define the word “scale.” Lead the students to conclude that scale is a ratio between the length of a drawn thing and the length of the real thing.
2. Look at some examples of scale bars on different maps. Lead a class discussion



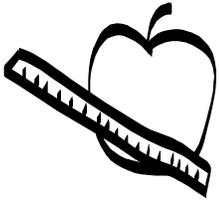
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about the scale bar. Lead the students to conclude that the scale bar shows the actual scale for the map.

3. Distribute the “Map Math” worksheet. Read the sample problem. Have the students underline or highlight important information in the problem and brainstorm what they will do to solve the problem. Lead the students to conclude that setting up a proportion would be the best way to solve the problem. Review setting up proportions and solving them.
4. Solve the sample problem with the students. Allow time for the students to complete the remaining problems. Remind the students to show their work.
5. Collect the “Map Math” worksheets. Grade them before Session 3.

SESSIONS 3 THROUGH 5

1. Review the types of maps and the way to set proportions from the previous session.
2. Distribute the “Blue Ridge Parkway 3-D Map” and the “Blue Ridge Parkway 3-D Map Rubric” to the students. Review the directions with the students. Explain to the students that they will be working in pairs to create a 3-D map of the Blue Ridge Parkway. The objects created for the map will be to scale.
3. Help the class determine what the scale for the map should be. Record the scale on an index card and display it by the map. Explain to the students that the index card will serve as the map key.
4. As a class, create the base for the map. Remind the students that they may need to do some research for their place.
5. Allow time for the students to research and create their model. As the students finish their projects, add them to the map. Add any symbols, colors, etc. to the map key.
6. Have the students complete the “Blue Ridge Parkway 3-D Map Rubric.”
7. Collect the “Blue Ridge Parkway 3-D Map” worksheet and the “Blue Ridge Parkway 3-D Map Rubric.”
8. Display the Blue Ridge Parkway 3-D map.



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ASSESSMENTS

- Use the “Map Math” worksheet to assess student understanding of proportions and scale.
- Use the “Blue Ridge Parkway 3-D Map Rubric” to assess student understanding of maps and scale.



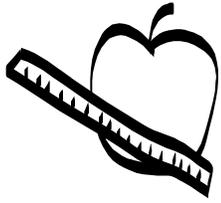
ENRICHMENTS/EXTENSIONS

- Have students create an interactive map using mapping software or websites.
- Have students create a multimedia presentation of the narratives and illustrations.
- Have students research different types of maps and create them for a bulletin board display or picture book.
- Have students create math word problems using facts about the Blue Ridge Parkway for 4th graders through 6th graders.



DIFFERENTIATED LEARNING OPTIONS

- Provide a pre-designed model, determine the scale, or make the model for the students.
- Provide information in audio or video versions for the student research.
- Simplify the problems on the math worksheet or allow the students to use a calculator.



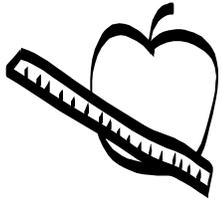
Name _____

Blue Ridge Parkway Map

Names of group members _____

Directions: Working in groups of 3 or 4 students, find examples of your assigned map type, then fill in the table below. During the class discussion, fill in the rest of the table.

Types of Maps	What Does It Show?	How Does It Show Differences Between Areas?	Additional Information
General Purpose			
Physical			
Political			
Special Purpose/Thematic			
Historical			
Contour/ Topographic			
Climate			
Population Density			
Road			

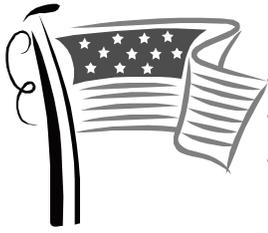


Answer Key

Blue Ridge Parkway Map

Directions: Working in groups of 3 or 4 students, find examples of your assigned map type, then fill in the table below. During the class discussion, fill in the rest of the table.

Types of Maps	What Does It Show?	How Does It Show Differences Between Areas?	Additional Information
General Purpose			
Physical	Landscape Features/Rivers/Mountains	Color / Shading / Words	
Political	State and national boundaries Cities, capitals	Lines / Dots / Words	Does not show physical features
Special Purpose/Thematic			
Historical	Historical events Change in an area over time	Colors / Symbols / Lines / Words	
Contour/ Topographic	Physical landscape features Elevation, terrain	Contour lines / Words Numbers	Different from physical map
Climate	Shows information about climate or weather over time, climatic zones	Colors / Words	
Population Density	Shows population concentrations	Symbols / Colors / Words	
Road	Highways, roads Airports Parks, forests Rivers, lakes Cities	Lines / Colors / Symbols / Words	



Name _____

Map Math

Directions: Solve the following map math problems. You may need to use information from the sample problem or previous problems to find answers. Make sure you show your work. Round your answers to the nearest tenth.

Sample: The scale bar on a map shows that 1 inch on the map is equal to 43 miles in the real world. The length of the actual Blue Ridge Parkway is 469 miles. How long will the parkway be on the map?

1. The Blue Ridge Parkway actually starts in Virginia at milepost 0. At milepost 220, it enters the state of North Carolina. How many miles of the Blue Ridge Parkway are in North Carolina? If the map scale is still 1 inch to 43 miles, how long will the North Carolina part of the parkway be on the map?
2. The Peaks of Otter are popular mountain peaks at milepost 86 of the Blue Ridge Parkway. The elevation of Sharp Top is 3,862 feet (1,177 m). If your class wanted to make a clay scale model of Sharp Top at a scale of 1 cm to 50 m, how tall would the peak be?
3. Mount Mitchell is the highest peak of the Appalachian Mountains and the highest U.S. peak east of the Mississippi River. It is located at milepost 355 on the Blue Ridge Parkway. Mount Mitchell has an elevation of 6,684 feet. To make a scale model of the mountain, 1 model inch will equal 750 feet. How tall will your mountain model be?



Answer Key

Map Math

Directions: Solve the following map math problems. You may need to use information from the sample problem or previous problems to find answers. Make sure you show your work. Round your answers to the nearest tenth.

Sample: The scale bar on a map shows that 1 inch on the map is equal to 43 miles in the real world. The length of the actual Blue Ridge Parkway is 469 miles. How long will the parkway be on the map?

$$1/43 = x/469 \quad x=10.9 \text{ in}$$

1. The Blue Ridge Parkway actually starts in Virginia at milepost 0. At milepost 220, it enters the state of North Carolina. How many miles of the Blue Ridge Parkway are in North Carolina? If the map scale is still 1 inch to 43 miles, how long will the North Carolina part of the parkway be on the map?

$$469 - 220 = 249 \quad 1/43 = x/249 \quad x = 5.8 \text{ in}$$

2. The Peaks of Otter are popular mountain peaks at milepost 86 of the Blue Ridge Parkway. The elevation of Sharp Top is 3,862 feet (1,177 m). If your class wanted to make a clay scale model of Sharp Top at a scale of 1 cm to 50 m, how tall would the peak be?

$$\text{Sharp Top} = 23.5 \text{ cm}$$

3. Mount Mitchell is the highest peak of the Appalachian Mountains and the highest U.S. peak east of the Mississippi River. It is located at milepost 355 on the Blue Ridge Parkway. Mount Mitchell has an elevation of 6,684 feet. To make a scale model of the mountain, 1, model inch will equal 750 feet. How tall will your mountain model be?

$$1/750 = x/6681 \quad x = 8.9 \text{ in tall}$$



Name _____

Blue Ridge Parkway 3-D Map

Directions: You will be creating a 3-D map of the Blue Ridge Parkway. Use the following steps.

Site, landmark, or feature used for model _____

1. Find out where the class will set up the map in the classroom. Measure the table or counter to determine the amount of space you have available.
2. Based on the length of the Blue Ridge Parkway, determine what your scale will need to be to make sure that the map won't be too long. Create a scale bar on an index card to attach to your map.
3. Use the scale to draw the parkway on the map. Use symbols, colors, and lines to enhance the map by identifying important features along the parkway such as those listed in step 4.
4. Work in pairs to create a model, display, or illustration to identify important sites, landmarks, and features along the parkway. These places may include those mentioned on the "Math Map" worksheet as well as:
 - Blue Ridge Parkway Visitor Center (MP 384)
 - Folk Art Center (MP 382)
 - Craggy Gardens (MP 367)
 - Pisgah Inn (MP 408)
 - Cold Mountain Overlook (MP 412)
 - Doughton Park (MP 240)
5. Decide the final scale you will use for your model. You may change to a different scale from your original scale, but you need to put it on the index card (map key) that goes with your model. Enter on the index card any colors or symbols used on the model. On the back of the card, write the actual proportion problem used when figuring the model's scale.



Name _____

Blue Ridge Parkway 3-D Map

CATEGORY	4	3	2	1	Self	Teacher
Knowledge Gained	Student used a map key to read a map very accurately.	Student used a map key to read a map accurately.	Student used a map key to read a map somewhat accurately.	Student had difficulty using a map key to read a map.		
Labels, Accuracy	All items were labeled and labels are well-placed.	Most items were labeled and located correctly.	Some items were labeled and located correctly.	Few items were labeled or located correctly.		
Scale	All features were drawn to scale clearly indicated on the map key.	Most features were drawn to scale clearly indicated on the map key.	Some features were drawn to scale indicated on the map key.	Few features were drawn to scale and/or scale was missing or incorrect.		
Labels and Features, Neatness	All were neat and easy to read.	Most were easy to read.	Some were easy to read.	Few were easy to read.		
Map Key	Easy to find. All symbols were complete.	Symbols were complete.	Symbols were mostly complete.	Key or many symbols were missing.		
Information Gathering	Excellent use of the research materials.	Very good use of the research materials.	Fair use of the research materials.	Poor use of the research materials.		
Model, Materials	Very appropriate materials were used.	Appropriate materials were used.	Somewhat appropriate materials were used.	Incorrect materials were used.		
Model, Construction	Neat, attractive, followed plans accurately.	Neat, followed plans well.	Mostly neat, roughly followed the plans.	Not well-executed or faithful to plans.		

STUDENT REFLECTION

TEACHER COMMENTS



Blue Ridge Parkway Quarter



The United States of America

