

Mapping Montana, A to Z

Grade level: Grades 4 through 8

Subject(s): Geography/Montana History

Standards: This lesson aligns with Montana SSCS.3, “Students apply geographic knowledge and skills,” CCRA.R.7, “Integrate and evaluate content presented in diverse media and formats,” and MMP.6, “Attend to precision.”

Duration: Approximately one week

Description

This lesson will familiarize your students with the state of Montana while they practice map skills. Using the state highway map, the students will map a route across the state, learn about the places on their route, use the city index to locate specific places, and use the map key to determine distance, town size, road type, and more. **Note:** Teachers should be aware that among the 1,200 place names included on the map and website is Sex Peak in Sanders County.

Goals: Student will expand their knowledge of Montana’s geography and Montana places and improve their map-reading skills.

Objectives: Students will be able to be able to:

- Use a key and grid system to locate specific places on a map.
- Interpret different symbols on a map.
- Calculate the distance between cities and the distance covered by a particular route.
- Share interesting information about specific Montana places.

Materials

- A 2010 Montana State Highway map for each student or team of students. These

can be ordered by calling (406) 841-2870 or (800) 847-4868 (press 2).

- A ruler and/or string, three colored highlighters, pencil
- Copies of *Montana Place Names: from Alzada to Zortman, A Montana Historical Society Guide* (Helena, 2009) and/or access to the Montana Place Names Companion Website: <http://mtplacenames.org/>. Books can be purchased through the Montana Historical Society Museum Store (1-800-243-9900) or borrowed from the MHS Outreach and Interpretation Department (<http://mhs.mt.gov/education/HandsonHistory>).
- Calculator (optional)
- Small prizes (optional)

Assessment: Completed map and worksheets.

Procedure

Introductory exercise: Ask your students about their favorite towns and cities to visit in Montana. What types of natural features have they encountered on drives across Montana? (Mountains, rivers, plains, forests). What type of human made features have they seen on Montana trips? (Dams, farms, buildings, cities, roads).

Tell your students that they are going to take an imaginary trip to twenty-five different Montana places, tracing that trip on the state map. (For younger grades, have students visit fewer places by dividing the assignment among students or student groups.) But first, they need to familiarize themselves with the map and the map key.

Distribute the maps: Spend some time looking at the map together. Ask your students what

one can learn from looking at a map? Answers can include: where mountain ranges are, towns' names, location or roads, how much area the map represents, etc.

- Be sure to explain the features of a map. Explain the map key in the lower right and how, for example, it demonstrates the population of a town/city based on the size of its identifying marker.
- Look at the ways the map denotes different types of roads. Ask your students why this information might be important to travelers. (To determine the speed of a trip)
- Ask them what the different colors are on the map. (On the 2010 Montana highway map, green represents wilderness areas, light blue represents water, and yellow represents Indian reservations.)
- Ask them how the map visually differentiates county names, river names, reservation names, and the names of mountain ranges.
- Ask them to find your county and to trace its boundaries.
- Point out the “City Index” at the bottom of the map. Discuss how one can use that key to find particular towns.
- Finally, look at the scale that shows map distances. Point out that distances are shown in both miles and kilometers. Look at how distances are marked on the map (in red and black numbers.) Choose two cities and have students calculate the distance between those places both by using the numbers marked on the map and by using the scale. Show them the City Index and how it also can be used to determine distance. (Point out that the distance noted in the City Index typically follows main roads. Someone taking the back roads might travel a different number of miles than what is recorded in the index.)

Note: Placement of map keys, colors used, and other details may vary depending on the year your maps were published.

Hint: You may want to distribute a 10-inch piece of light-colored string for each student (Or have your students measure and cut their own 10-inch pieces of string). Have them lay their strings flat against the mileage scale and use a black marker to mark off ten-mile increments. Then have them use the strings (which can follow the curves of the road) to measure the distances between the towns.

Mapping Montana, A to Z

Students can work in groups or individually, depending on teacher preference.

- Tell students that they are going to create a route for an imaginary trip across Montana. There's one catch: they must travel through towns whose names start with every letter of the alphabet, and they must travel through those towns in alphabetical order, beginning with the letter “A”. For example: Anaconda, Butte, Chinoook. (Modify this for younger students by dividing up the alphabet.)
- Hand out the assignment instructions and the worksheets. Review the instructions. Tell them that they will fill in the town names and distances first, and then go back and add the interesting facts and answer the questions.
- Remind them that they should use one color highlighter to mark the town names and a different color highlighter to trace the routes. If they need to backtrack along a route, have them use a third highlighter color. Remind them that they need to follow roads (they aren't measuring the distance between towns as “the crow flies.”)

Hint: You may find it helpful to work on cities A through D together as a class, with everyone traveling to the same 4 cities, to make sure that all students understand the procedure, know what to do when they need to backtrack, etc.

Once your students have finished their routes and have calculated the overall distance of their

trip, distribute copies of *Montana Place Names: from Alzada to Zortman* or direct them to the Montana Place Names Companion Website. Then have students find one interesting fact about each town or city they visited. (You may want to emphasize that the fact should truly be “fun” and not merely the elevation or county name).

Notes: For a shorter assignment, only have students find interesting facts about some of the towns or have the students work in groups, dividing the town names among themselves. Alternately, choose one map to post on a bulletin board and have all the students work on the fun facts for that map. Have them write their fun fact on a sticky note and post it next to the appropriate town on the map.

Option: You may wish to offer small prizes to the student whose route is the shortest (or longest); passes through the most counties; passes through all seven Indian reservations; crosses the Continental Divide the most times, travels closest to the Canadian border, etc. If you do plan to award prizes, let the students know the categories ahead of time so they can plan accordingly.

Concluding exercise

Have your students hang up their maps around the classroom to show the various routes that the students chose to take. Have each student share one fact that (s)he found especially interesting about a Montana town or city.

Extension activities

- Download and distribute copies of the Montana Counties Crossword Puzzle (<http://svcalt.mt.gov/education/textbook/Chapter1/MontanaCounties.pdf>). Students can find the answers in the *Montana Place Names* book or website.
- Download and distribute the Montana Town Name Riddles worksheet, created by Plentywood teacher Denise Heppner: <http://svcalt.mt.gov/education/textbook/Chapter1/MTRIDDLES.pdf>. Send it home for students to work on with their parents—or place one copy on your bulletin board next to a Montana map and encourage everyone to work together to fill in answers. When a student answers a riddle, have him or her put a push pin and the riddle number next to the town on the map as well as writing the town name on the riddle worksheet.

Note: Answer keys for both the crossword puzzle and the riddles are available through the password-protected *Montana: Stories of the Land* website: <http://svcalt.mt.gov/education/textbook/Chapter1/Ch1TestAnswerKeys.asp>. (Educators can request a password by completing the Username and Password Request form: <http://svcalt.mt.gov/education/textbook/passwordrequest.asp>.)

Mapping Montana, A to Z

Map a route across Montana, stopping in towns from A to Z! Use the state map's "City Index" to find a town whose name starts with the letter "A." Highlight that town on the map. Then highlight a town whose name starts with the letter "B." Use a different colored highlighter to trace a route between the two towns. Make sure to stay on the road! On the worksheet, record the name of your town and how far you traveled to get there. Keep going until you reach your final destination, a town whose name starts with the letter Z. If you have to travel on a road you have already taken, use a different color of highlighter to draw your second route. After you have completed your route, find a fun fact about every town you visited. Then answer the questions below.

Hint: It will be easier to answer the questions on the worksheet if you review them *before* you start to map your route.

1. How many counties did you visit? Name one county seat to which you traveled.

2. Did you travel on any gravel roads? If so, between which towns?

Name _____

3. Which Indian reservations did you visit?

4. List two mountain ranges you crossed.

5. List three rivers you crossed.

6. List a town you visited that has fewer than 1,000 people.

Name _____

Montana Travel Log

Town name	Miles traveled between towns	Fun fact
A.	<i>Start</i>	
B.		
C.		
D.		
E.		
F.		
G.		
H.		
I.		
J.		
K.		
L.		
M.		

Name _____

Town name	Miles traveled between towns	Fun fact
N.		
O.		
P.		
Q.		
R.		
S.		
T.		
U.		
V.		
W.		
<i>X. Free space. No Montana town names begin with the letter X.</i>		
Y.		
Z.		
Total number of miles traveled:	<input type="text"/>	