

Bike Trip

Planning a multi-day bicycle trip in the northwest region of Illinois

Illinois Geographic Alliance
Illinois Studies: Sharing and
Developing Home State Resources – 2005
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Grade Level:

5th grade, adaptable to 3rd through 12th

Format:

Students will plan a multi-day trip around the northwest region of Illinois. They will be responsible for calculating the daily mileage, determining where to stop for the night, evaluating the necessary supplies to take, and reporting on physical characteristics of the towns and land that they will visit on their trip. (This lesson can be adapted to include a smaller or larger area of Illinois to meet the needs of your lesson or grade level.)

Time Needed:

Six to seven forty minute sessions

Materials Needed:

1. Bicycle Route Maps of the northwest region of Illinois for students to write on. (available from the Illinois Department of Transportation, <http://www.dot.state.il.us/bikemap/STATE.HTM>)
2. Other appropriate maps of Illinois and informational literature from sites around the region.
3. Internet access with bookmarks to various websites pertaining to the lesson (see list attached) or links posted on a website.
4. Worksheet - *“What Supplies does your group need to bring?”*
5. Worksheet – *“Track your Trip”*
6. Hyperlinks to hotel chain websites or travel websites such as Expedia.com
7. Markers, colored pencils
8. paper or notebook

Standards:

Geographic Standards

1. The World in Spatial Terms: How to use maps and other geographic Representations, tools, and technologies to acquire, process, and report information from a spatial perspective.
4. The Physical and Human Characteristics of Places

Illinois State Standards:

Social Science

17.A.2b Use maps and other geographic representations and instruments to gather information about people, places and environments.

Math

7.A.2a Calculate, compare and convert length, perimeter, area, weight/mass and volume within the customary and metric systems.

6.B.2 Solve one- and two-step problems involving whole numbers, fractions and decimals using addition, subtraction, multiplication and division.

Objectives:

1. Students will calculate the distance on a map using a map scale.
2. Students will generate a list of supplies needed for a bicycle trip.
3. Students will evaluate the importance of supplies needed to survive a multi—day trip when space and weight load is limited.
4. Students will create a report on the physical features of the land they will travel and the towns they will visit.

Goals:

Students will be able to use a map scale to calculate distances accurately.

Students will be able to name key geographic features of northwest Illinois.

Students will be able to identify historic sites in Northwest Illinois.

Students will understand the importance of planning and selecting supplies needed for a trip when weight or space is limited.

Prior Knowledge:

Students should be given some prior experience with using maps, finding mileage on maps and measuring distance on a map.

Procedure:*Day One: Set Purpose for learning, Build Background Knowledge, Model Learning*

1. Tell students that they will be planning a multi-day bicycle trip around northwest Illinois during the next week. They will be placed into groups and asked to plan the trip. If possible have a guest speaker visit who has done a multi-day bicycle trip to talk about their experiences or visit an online diary of someone's experience.
2. Tell students they will be expected to:
 - Choose places of interest and explain why they chose them
 - calculate distances between points of interest correctly
 - they will have to determine how far they want to travel each day
 - figure the cost of supplies after they have chosen what to take
 - keep track of money spent, supplies needed, and sites they plan to visit.
3. Explain Evaluation/Assessment
4. Share Rubric for grading written work and oral presentation. (see rubric towards the end of this lesson plan)
5. Give Steps of assignment: 1. become familiar with the map, 2. research places of interest, 3. plan the trip, 4. present to class
6. If time let students explore the map on their own, or play a game, "Who can find?" With various parts of the map, (Teacher asks students to quickly find a feature on the map. Make sure everyone has found it before going on)

Day Three: Map Skills, becoming familiar with the map.

1. Review learning from the day before, especially the requirements of the lesson and the rubric.
2. Pass out maps, go over features of map. Practice going over the legend features with the students; locate north south, find scale, look for different features of the map. Have students measure the distance between two sites and calculate the time to bicycle that distance traveling 10 miles per hour. Discuss the different types of roads and which would be the best to travel on and which they would want to avoid.
3. If Time, groups make a preliminary decision as to where they want to bike. Students must visit at least five sites, but they can visit more.
4. Remind them that they are going to do research the next two days to determine where they want to go.
5. Collect students' maps and itineraries to spot check that they have realistic goals and have at least five sites to visit. Make suggestions if appropriate.

Day Three: Internet Literature Search

Students use the internet and any literature the teacher can find to research what they would expect to see on their trip. In northwest Illinois students should make plans to see at least five of the following:

- John Deere Home in Grand Detour
- Boyhood home of President Ronald Reagan in Dixon
- Birthplace of Ronald Reagan in Tampico
- Travel along the Hennepin Feeder Canal from Rock Falls
- Visit the windmill in Fulton
- Dillon Home in Sterling
- Black Hawk Monument in Oregon
- President Grant's Home in Galena
- Mississippi Palisades State Park in Savanna
- White Pines State Park
- Nachusa Grasslands
- Charles Mound
- Mendota Hills Windmills.

Day Four: Plan the Trip

Students measure the mileage of the trip they have planned and break trip up into days. Students must account for time spent site-seeing or overnight layovers at Parks. Students should base their mileage on traveling about 10 mph, traveling six to eight hours a day. They may stay at campgrounds, friends or relatives, or hotels. Students use markers or colored pencils to mark on the map their route, layovers, and places of interest.

Day Five and Six: Finish Planning/Packing it up

Students should have their trip divided up into days; they now need to plan where they are going to stay each night and what supplies are needed. If they are going to stay in a hotel they must look up the cost of that expense. Pass out the handout of

supplies, this is a mock grocery/dry goods sheet that list supplies they might need and their costs. Students must decide what they are going to take with them and how much it costs. You as teacher can decide if funds are limited or not, however weight is limited. Students should at least keep track of money that is spent to connect to math.

Day Seven: Present to Class:

Groups present to the class their trip itinerary and their supplies list. Students should explain to the class their trip, the sites they plan to visit and why they chose those sites, the mileage that they took, and the supplies they plan to take with them.

Adaptations:

Special Needs Students: Students with special needs would benefit from being placed in a group that will work well together. Large print maps or a map that has been enlarged on the photocopier might be appropriate. A classroom aide should be available if necessary to sit with students.

Gifted/ Accelerated Learners: Gifted students or students who finish early could be asked to extend the project according to their interests. They might look for pictures on the internet of sites they want to visit, write a fictional log of their trip, or research animals or plants they might find on the trip.

ESL students: ESL students would need maps and literature in their language if possible, as well as having the handouts translated into their language.

Extensions:

Using topographical maps from the State Geological Survey, Urbana, IL, students could find the highest and lowest elevation on their trip, find the steepest grade they will climb or descend on their trip. This could be modeled by finding the highest and lowest point in the neighborhood around the school and then walking outside to explore the elevations.

Potential problems and Successes:

Students may have trouble calculating the mileage and determining how far it is realistic to travel in a day. They may also have trouble understanding the limits of what they could take with them on the trip. Successes might have students extending the problem to visiting relatives and friends they have in the area, planning long trips to encompass a long period of time, or incorporating many cities in their trip.

Evaluation/Assessment:

Use the rubric to assess students work and presentation:

	A	B	C	F
Quality of Work (30 Points)	Work is done carefully, spelling and Grammar are correct, Care was taking in create project	Work was done well; there are some (more than three, less than 6) grammar and spelling mistakes. Some parts of work needed more time spent on them.	There are many spelling and grammar mistakes, but the meaning was clear. The work needed more time to complete, or work is incomplete.	There are many spelling and grammar mistakes and the meaning is unclear. The work is not completed or down with out care.
Accuracy of Work (60 Points)	Measurements and computations are done correctly.	There is one mistake in measurements and/or one mistake in computation.	There are two to four mistakes in measurements and computation.	There are more than four mistakes in Measurements and computation.
Group Accountability (5 points)	Group worked together without problems. All students worked.	All students worked, there was one incident were the teacher needed to aid group.	The group had trouble working together but after teacher help was able to complete the project.	The teacher had to help the group numerous times or keep group on task.
Group Presentation (5 points)	Presentation was clearly understood.	Group presentation was understood, one part was not clear.	Two parts of the presentation were not clear. Presenters were not acting professional.	The presentation was not presented well. The Group was not prepared.

What Supplies Does Your Group Need to Bring?

Name: _____

Use the chart below to select what you will want to take with you on your trip. Each of you may only carry 20 lbs on your bicycle rack. You must bring food, equipment to camp with if you are planning on camping, emergencies supplies, personal items, and items to help you with your trip.

Calculate the amount of weight your group can take.

Number of Bikers X 20 lbs = total weight you may take

_____ X 20 lbs = _____

Item	Weight	Number needed	Total Weight
Tent to sleep two (must take if you are camping)	10 lbs		
Sleeping Bag (must take if you are camping)	3 lbs		
One Days supply of food for one person	2 lbs		
2 Changes of clothes	3 lbs		
First Aid kit	1 lb		
Water bottle filled	2 lbs		
Maps	½ lbs		
Compass	1/5 lbs		
Flashlight	½ lbs		
Personal Items	1 lb		
Rain Gear	2 lbs		
Emergency Bicycle Supplies for one bicycle	1 lb		
Change of Shoes	1 ½ lbs		
Book to read	2/5 lbs		
Bicycle Helmet	1 lb		
Total Weight =			

Name: _____

Track Your Trip

Record your plans for your trip on this worksheet. Make sure to include full names, correct spelling, and correct units for any numbers.

Traveling or Site Visit	Name of Site or Route Taken	Distance Traveled	Time Estimate Spent at Site or Traveling
<i>Example: Site Visit</i>	<i>John Deere Historic Site</i>	<i>Starting Point- N/A</i>	<i>3 Hours</i>
<i>Example: Traveling</i>	<i>Route 2</i>	<i>6 miles</i>	<i>1 Hour</i>

Websites for Resources

Galena, Illinois

<http://www.galena.org/>

Fulton, Illinois

<http://www.cityoffulton.us/>

John Deere Historic Site

http://www.deere.com/en_US/attractions/historicsite/index.html

Lowden State Park

<http://www.oregonil.com/parks-lowden.html>

Illinois Department of Natural Resources, a list of state parks and information on each.

<http://dnr.state.il.us/lands/Landmgt/PARKS/R1/region1.htm>

State Bicycle Trail Maps online

<http://www.dot.state.il.us/bikemap/STATE.HTM>

Bicycle Safety

<http://www.greatriverroad.com/Footpower/bikeSafety.htm>

Nachusa Grasslands

<http://nature.org/wherewework/northamerica/states/illinois/preserves/art1116.html>

White Pines State Park

http://www.searchchicago.com/hike/hiking/pages/regions/northwest.html#whitepines_sp

Charles Mound Illinois

<http://www.americasroof.com/il.shtml>

History of the Hennepin Canal

<http://www.lib.niu.edu/ipo/oi000308.html>

Mendota Wind Farm -An article on the site

http://www.mendotareporter.com/main.php?story_id=2965&page=23

Article from the Quad Cities Online

<http://www.qconline.com/progress98/places/164.htm>