

Rivers of Riches



SUGGESTED GRADE LEVEL: 4

SUBJECTS: Mathematics, Social Science

SKILLS: computation, organizing information, analyzing, small group work, writing, mapping, inferring

CORRELATION TO COMMON CORE STANDARDS:
mathematics 4.MD

Objectives

Students will: 1) realize the economic impact of travel on the local community; 2) perform mapping skills; 3) understand how the Great Rivers are related to travel; and 4) determine how the Great Rivers influence the surrounding communities.

Method

Students will map Great Rivers region features and attractions. Students will categorize the types of attractions in the Great Rivers region. Students will participate in an activity to understand how money circulates in a community. Students will calculate the economic impact of travel on the Great Rivers region in Illinois.

Background

“Travel” and “tourism” are usually used synonymously, but there are notable differences between the terms. “Tourism” can be a confusing term because it often refers to a personal or pleasurable trip, not business. “Tourism” is generally defined as the “business of providing services to tourists” (Miller 2010). For most of the information that is used in this activity, “travel” will be used because it can describe both business and pleasure trips. “Travel” is defined as an overnight trip with accommodations or a day trip that

is taken further than 50 miles away from home (one way). “Travel” is important to the surrounding communities because it provides jobs and economic support from personal travel expenditures.

The Great Rivers are the Mississippi, Missouri and Illinois rivers. The Great Rivers region in Illinois includes the counties that interact with the Great Rivers: Calhoun; Greene; Jersey; Madison; and St. Clair. Some major cities in these counties include: Alton; Edwardsville; Granite City; Collinsville; Jerseyville; Belleville; East St. Louis; and Fairview Heights. Each of the counties in the Great Rivers region includes sites that visitors flock to every year. The main attractions in Illinois include: small wineries; historic/educational sites; entertainment attractions; and nature/park attractions.

Data regarding the actual economic impact of travel on the Great Rivers region is collected by the organizations in control of the attractions. To collect the data, they keep track of where visitors stay, where they visit and where their money is spent in the region. This information must be accurate so a value can be placed on the attractions and tourist sites in order to promote further funding and increase awareness of community and state support provided by the attraction.

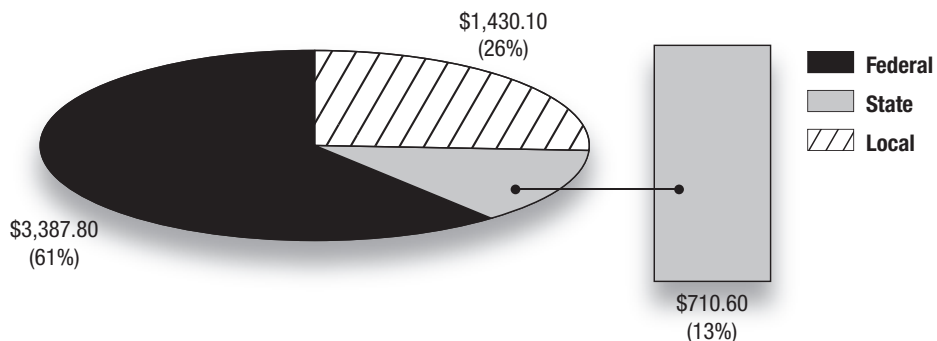
County	County Seat	Total Area (square miles)	Population	Population Density (persons per square mile)
Madison	Edwardsville	725.02	268,457	357.2
St. Clair	Belleville	663.81	263,617	385.7
Greene	Carrollton	543.09	13,567	27.2
Jersey	Jerseyville	369.16	22,549	58.7
Calhoun	Hardin	253.82	5,019	20.0

Some Great Rivers Region Attractions		
Springers Creek Winery (Edwardsville)	Lewis and Clark Interpretive Center (Hartford)	Gateway Fun Park (Collinsville)
Mary Michelle Winery (Grafton)	Bosshard Monument (Highland)	World's Largest Catsup Bottle (Collinsville)
Piasa Winery (Grafton)	The Gardens at SIU-E (Edwardsville)	Alton Belle Casino (Alton)
National Great Rivers Museum (Alton)	Underground Railroad Sites (White Hall)	The Children's Museum (Edwardsville)
Robert Wadlow Statue (Alton)	Armed Forces Museum (Alton)	Bluffdale Vacation Farm (Eldred)
Cahokia Mounds State Historic Site (Collinsville)	Mineral Springs Haunted Tours (Alton)	Monkey Joe's Bounce House (Fairview Heights)
Lock and Dam #27 (Granite City)	Lazer Force Laser Tag Zone (Caseyville)	McMaster Woods Nature Preserve (Fieldon)
Pere Marquette State Park (Grafton)	Center for American Archaeology (Kampsville)	Eckert's Fun Farm (Millstadt)
Centerfield Park (O'Fallon)	Horseshoe Lake State Park (Pontoon Beach)	Grizzlies' Academy (Sauget)
Upper Limits Rock Climbing Gym (East St. Louis)	Melvin Price Park (Swansea)	National Shrine of Our Lady of the Snows (Belleville)
Fairmount Park (Collinsville)	Casino Queen (East St. Louis)	Frank Holten State Park (East St. Louis)

State of Illinois Facts (2009)				
State	Capital	Total Area (square miles)	Population	Population Density (persons per square mile)
Illinois	Springfield	55,583.58	12,910,409	223.4

2008 Domestic Travel Impact on Illinois						
County	County Rank by Expenditure Level	Expenditures (\$ millions)	Employment (thousands)	Local Tax (\$ millions)	State Tax (\$ millions)	Percent Change in Expenditures Over 2007
Calhoun	56th	21.61	0.08	1.93	1.17	+12.1%
Greene	73rd	12.38	0.06	0.41	0.78	+7.2%
Jersey	31st	55.22	0.37	2.76	3.10	+12.3%
Madison	8th	312.61	2.93	5.84	14.78	-1.6%
St. Clair	6th	396.81	3.68	7.40	15.30	+1.1%

Total Tax Revenue from Illinois Tourism



The history of this area is important in understanding the vitality of this region. Native Americans along the Great Rivers used the rivers as sources of food and other resources and as a means of transportation. They used the hilly terrain for shelter. The largest civilization in the western hemisphere north of Mexico made their central city in Cahokia at a place now preserved as the Cahokia Mounds State Historic Site in Collinsville. At its pinnacle, this Native American culture, called the “Mississippian,” reached a population of about 20,000 people. This civilization existed for more than five centuries from 800 A.D. to 1300 A.D., but then disappeared for unknown reasons. When settlers of European origin arrived along the Mississippi, they discovered the positive aspects of living along the river, but they also learned that the river is fickle. It can be a source of life one day and a source of problems the next.

This longstanding history between people and the river has continued into today’s age of trade and technology. The rivers are no longer used solely for survival but are sources of pleasure and relaxation as well. Cities have formed around this natural empire.

Literature Cited

- Hamline University. 2001. "Rivers of Life: River Profiles - The Mississippi." http://cgee.hamline.edu/rivers/Resources/river_profiles/mississippi.html.
- Illinois Department of Commerce and Economic Opportunity. 2008. *2008 Economic Impact of Illinois Tourism*. Illinois Department of Commerce and Economic Opportunity, Springfield.
- Miller, George A., Christiane Fellbaum, Randee Tengi, Helen Langone, Adam Ernst, and Lavanya Jose. 2010. "WordNet Search Princeton University - Tourism." <http://wordnetweb.princeton.edu/perl/webwn?s=tourism&o2=&o0=1&o7=&o5=&o1=1&o6=&o4=&o3=&h=>.
- Mink, Claudia G., William Iseminger, ed. 1999. *Cahokia: City of the Sun*. Vol. 3. Cahokia Mounds Museum Society, Collinsville. 76 pp.
- Research Department. 2009. *The Economic Impact of Travel on Illinois Counties 2008*. U.S. Travel Association, Washington, D.C. 57 pp.
- U.S. Census Bureau. 2010. "Illinois QuickFacts from the U.S. Census Bureau." *State and County QuickFacts*. http://quickfacts.census.gov/qfd/maps/illinois_map.html.

Materials

Illinois road map (available from Secretary of State’s offices or Illinois Department of Transportation District Offices, downloadable from <http://www.idot.illinois.gov/Assets/uploads/files/Travel-Information/Maps-&-Charts/2015ILMap.pdf> or available from the Communications Department of the Secretary of State’s offices at 217-785-8234); U.S. highway maps/atlas; one copy of “Illinois” map per student; drawing materials; “Money Movement Activity Strips” for each station; one copy of “Money Movement Activity Tracking Chart” per student; rulers

For each group: one copy of “List of Attractions;” one copy of “Attractions Sorting Chart;” and one copy of “Math Worksheet: Economic Impact of Travel in the Great Rivers Region;” writing materials; calculator; tape/glue; paper; research materials/Internet access

Procedure

1. On an Illinois road map show the students where the Mississippi, Illinois and Missouri rivers are located. Ask them to name the counties in the Great Rivers region of Illinois.
2. Explain that these rivers and their confluence attract a lot of visitors to the area. Name some attractions in the area. Ask them if they have visited the area, and if so, ask them what they went to see. If they have not visited the area, ask them why they would want to go there.
3. Ask students what they do when they go on a vacation or trip. Make a list. How do these factors affect the local economy?
4. Give each student a copy of the Illinois map with counties. Let them become familiar with the Great Rivers region by drawing and labeling the rivers, the surrounding counties and each county seat.
5. Have the students get in groups and give them the list of attractions in the area. Have the students cut out the attraction names and group them according to what type of travel they are. Have them add any attractions in the area that they have visited or heard about. Then, have the students map the attractions on their own map (used in step #4). Have the students explain the relationships between tourist attractions and the Great Rivers.
6. Have a discussion about the money that they spend when they travel. Where do they spend it? Where does it go?
7. Explain that the money spent when traveling impacts the economics of the community. Explain how the economic information about area tourism is collected and why it must be accurate. Use the Math Worksheet to calculate the economic impact of travel in the Great Rivers region.
8. Set up different parts of the room to be four stations: the Traveler; the Government; Attractions; and Circulation to other parts of the United States (government, organizations, etc.). Start the “Money Movement” activity. Inform the students that they are a \$100 bill. Divide the class into four groups, with one group at each station. Have each student draw a slip of paper at the station and follow the directions on it. Continue in this manner until all 10 blanks on the sheet are completed, or all the money is gone for that student. Have them chart their movements, complete the required math and write a paragraph about their entire journey.
9. Have the students suggest factors that could economically affect the areas.

Extensions

1. Take the students to visit a tourist attraction listed in the activity or another attraction in your area and ask them why it is considered a tourist attraction. Also, ask them how they think that it affects the surrounding communities.
2. Call the tourism director in your area and have him/her talk to your class about how travel in the region affects the community.
3. Have the students research what a community was like before and after a certain tourist attraction was built.
4. Have the class explore ways that increased trade and technology have changed the surrounding area and its economy.
5. Examine how the great floods of 1927 and 1993 changed travel to the area. Discuss the effects that are still appearing today.
6. Have the class explore how encouragement for more local travel after the events of September 11, 2001, changed the tourism industry and economy in the Great Rivers region.
7. Examine how the Internet has changed the tourism industry.

Evaluations

1. Students should turn in their map, math worksheet and the "Money Movement" worksheet.
2. Student groups should be evaluated for their categorization of the different types of attractions and explanations, as well as how well they worked together.
3. Students could create an advertisement (commercial, television or newspaper advertisement, etc.) as a group to try to increase travel to the area and explain why this issue is important to the surrounding community. Have them research the different sites, choose one to advertise and formally recommend a site to the teacher in writing before starting on the advertisement.

4. Students could write a short paper that summarizes why tourist attractions are important to the Great Rivers region and its surrounding economies as well as the economy of Illinois.

Answers: Procedure #7

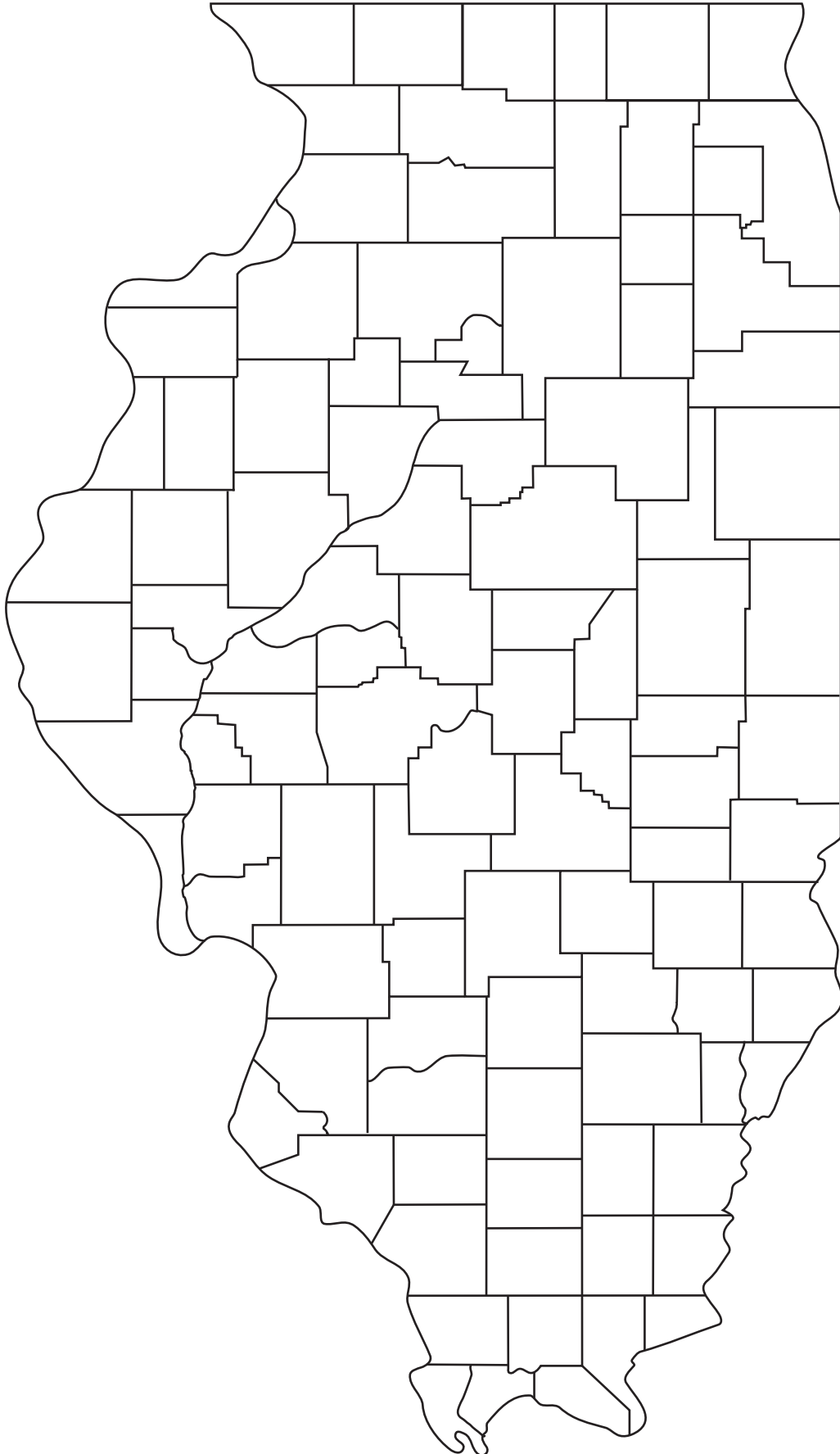
1. \$109, \$763 ($\$109 \times 7$ days), 4 days ($\$500/\$109 = 4.587$ days)
2. \$18 ($\$127 - \109)
3. 1,350,000 stays total (3 hotels x 450,000 stays/night)
4. \$147,150,000 total spent for overnight trips in 2009 (1,350,000 stays x \$109)
5. \$149,650,000 total amount for day and overnight trips in 2009 ($\$147,150,000 + \$2,500,000$)

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STUDENT ACTIVITY PAGE | Procedure #5 – List of Attractions

Piasa Winery (Grafton)	National Great Rivers Museum (Alton)
Eckert's Fun Farm (Millstadt)	World's Largest Catsup Bottle (Collinsville)
Underground Railroad Sites (White Hall)	Alton Belle Casino (Alton)
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Casino Queen (East St. Louis)	Frank Holten State Park (East St. Louis)
Fairmount Park (Collinsville)	

STUDENT ACTIVITY PAGE | Procedure #5 – Sorting Chart

Historic/Educational Attractions	Natural/Park Attractions
Entertainment Attractions	Wineries/Farm Attractions

Math Worksheet: Economic Impact of Travel in the Great Rivers Region

1. A traveler in Indiana just finished packing his bags and is trying to decide how much money he needs to bring on his trip to the Great Rivers region. He estimates that he will need to spend the following amount every day.

\$69 – to stay at a hotel (breakfast included)

\$10 – to eat lunch

\$15 – to eat dinner

\$15 – miscellaneous expenses (tickets, attractions, souvenirs, gas, etc.)

What is that total amount of money that he will spend per day? _____

How much will he spend if he stays seven days on vacation? _____

If he only set aside \$500 dollars for this vacation, how many days can he visit the Great Rivers region? _____

2. If the average amount spent per day by travelers in Illinois (outside of Chicago) is \$109, what is the difference between this amount and the average amount spent per day in Chicago (\$127)? _____
3. In the Great Rivers region, there were approximately 450,000 overnight hotel stays per hotel in 2009. If there are three hotels in this area, and they all had 450,000 stays in 2009, how many total stays were there? _____
4. Multiply the average amount spent per day for an overnight trip in Illinois (outside of Chicago) by the total number of stays for 2009 for all three hotels (answer #3). _____

This number is the total amount of money spent in the area for overnight stays in 2009.

5. When day trips are added for 2009, the total amount of money spent on day trips in the Great Rivers region is \$2.5 million. What is the total amount of money spent in the area for tourism in 2009? _____



Station 1 TRAVELER



You are used to buy a ticket to learn about barges. Go to “Station 2-Attractions” and pay \$1.



You are used to pay taxes to the federal government. Go to “Station 4-Circulation” and subtract \$20.



You are used to pay for food at a local restaurant. Go to “Station 3-Government” and pay \$5.



You are used to buy a ticket to a water park. Go to “Station 2-Attractions” and subtract \$2.



You are used to pay state taxes. Go to “Station 4-Circulation” and pay \$15.



You are used to make a donation to Pere Marquette State Park. Go to “Station 3-Government” and subtract \$2.



You are used to tour attractions within the area. Go to “Station 2-Attractions” and pay \$2.



Stay here for a turn because a flood has stopped travel, and you pay nothing.



You are used to pay for a tour because the Internet increased local travel awareness. Go to “Station 2-Attractions” and pay \$2.



Station 2 ATTRACTIONS



You are used to pay taxes to the federal government. Go to “Station 4-Circulation” and subtract \$20.



You are used as change. Go to “Station 1-Traveler” and receive \$1.



You are used as a refund for a rainy day. Go to “Station 1-Traveler” and receive \$5.



You are used to pay taxes to the local government. Go to “Station 3-Government” and pay \$5.



You are used to pay fees assessed by the town. Go to “Station 3-Government” and pay \$3.



You are used to pay state taxes. Go to “Station 4-Circulation” and subtract \$15.



Travelers leave because of a flood. Go to “Station 1-Traveler” and pay nothing.



Stay here for another turn because September 11, 2001, increased continental U.S. travel. You pay \$0.



Patrons got sick and went home. Go to “Station 1-Traveler” and do not pay anything.



Patrons have allergies and go home. Go to “Station 1-Traveler” and subtract \$0.



**Station 3
GOVERNMENT**



You are used as a tax refund. Go to “Station 1-Traveler” and receive \$25.



You are used to pay for advertisements for travel in the area. Go to “Station 2-Attractions” and pay \$15.



You are used to pay federal taxes. Go to “Station 4-Circulation” and pay \$20.



You are used to pay taxes to the state. Go to “Station 4-Circulation” and subtract \$15.



You are used to improve local park and recreation sites. Go to “Station 2-Attractions” and subtract \$15.



You are used to improve local playgrounds and tourist attractions. Go to “Station 1-Traveler” and pay \$15.



Travelers leave because of a flood. Go to “Station 1-Traveler” and pay \$0.



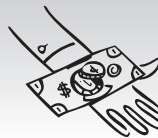
You stay for another turn because September 11, 2001, encouraged continental U.S. travel. You pay nothing.



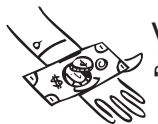
The weather is decreasing tourism in the area. Go to “Station 1-Traveler” and pay \$0.



There has been a recent scare with bird flu. You go home to “Station 1-Traveler” and pay nothing.



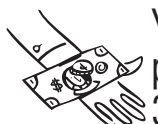
**Station 4
CIRCULATION**



You are used as a tax refund. Go to “Station 1-Traveler” and receive \$25.



You are used to pay for advertisements for travel in the area. Go to “Station 3-Government” and pay \$15.



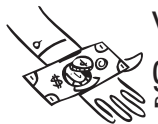
You are used to improve local programs and parks. Go to “Station 3-Government” and subtract \$15.



You are used as a grant to encourage travel. Go to “Station 2-Attractions” and receive \$50.



You are used to improve local park and recreation sites. Go to “Station 2-Attractions” and pay \$15.



You are used to improve local playgrounds and tourist attractions. Go to “Station 1-Traveler” and subtract \$15.

STUDENT ACTIVITY PAGE | Procedure #8 – Money Movement Activity Tracking Chart

Example:

Description of Transaction	(-)	(+)	Balance
Starting Amount		100.00	100.00
1. Station 2: Used as change for a traveler	15.00		85.00
2.			
3.			
4.			

Name: _____

Description of Transaction	(-)	(+)	Balance
Starting Amount		100.00	100.00
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			

Write a paragraph describing your entire trip as a dollar bill.