

# FAMILY VACATION

*Students use math to plan a trip by houseboat down the Mississippi River.*

## TEACHER NOTES FOR DISCUSSION

This lesson gives the students time to research and obtain information on the Mississippi River and its surroundings. Encourage students to use multiple graphs to represent their data (e.g., table, bar and circle graphs for the expenses, line graph for distance traveled). If available, students could use computer software (e.g., MS Excel) to display their data.

To save classtime, divide students into groups and have each group research an aspect of the vacation, which they can share with the whole class.

## Objective

After completing this activity, students should be able to collect, sort, and organize information and data to plan a family excursion.

## Time Considerations

Instructor preparation:  
one hour

Student activity:  
five classes  
(one to present)

You will need to provide students with Figure 1.

LENGTH OF RENTAL	NUMBER OF PEOPLE		
	3	6	10
TWO DAYS	\$60	\$90	\$125
FIVE DAYS	\$120	\$180	\$250
ONE WEEK	\$150	\$200	\$300

Fig. 1.0. Rental Costs for Houseboats

## STANDARDS AND BENCHMARKS

National Council of Teachers of Mathematics. *Curriculum and Evaluation Standards for School Mathematics*. <[http://standards-e.nctm.org/1.0/normal/standards/intr\\_MAIN.html](http://standards-e.nctm.org/1.0/normal/standards/intr_MAIN.html)>, March 16, 2000.

### Standard 1: Number and Operation

- understands the meaning of operations and how they relate to each other

### Standard 2: Patterns, Functions and Algebra

- use symbolic forms to represent and analyze mathematical situations and structures

### Standard 6: Problem Solving

- develop a disposition to formulate, represent, abstract, and generalize in situations within and outside mathematics

### Standard 8: Communication

- use the language of mathematics as a precise means of mathematical expression



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## UNDERSTAND YOUR MISSION

In this activity, you will collect, sort, and organize information for your family's Mississippi River trip.

## CHART A COURSE FOR EXPLORATION

Your family has decided to go on a week-long vacation on the Mississippi River. Your job is to plan the family vacation. Your vacation will last two weeks and your family has chosen to rent a house boat for the time spent on the Mississippi River. You have a budget of \$2,000.\* You will organize the trip and create a graph to represent your budget.

Form groups with two other students who have a similar number of immediate family members.

Your group will present your Mississippi River trip either through a poster presentation or an overhead presentation. Each team member will turn in his/her own written materials; be an active member of the group; and, participate in the group presentation.

Your plans must include the routes you plan to take to, on, and home from the Mississippi River along with the mileage. You should also figure the cost of the boat rental, gas, meals, souvenirs, and miscellaneous expenses. Figure your total cost of the trip. List the amount spent for each expense and how you figured the cost.

You will need to make a presentation about your family's trip. Make a graph to represent the money spent on each category. Which graph is appropriate for your data? Why is this kind of graph the best for your data?

Describe the routes you have chosen and why you chose these routes. Make a map of the routes.

- If your group decides \$2,000 and/or two weeks is not enough for your family to vacation on the Mississippi River, adjust accordingly but be ready to justify the changes to your budget or time.

## Gather Your Supplies

- maps of the Mississippi River and adjacent towns
- markers
- overhead transparencies
- paper
- pencil
- poster paper

## Go Beyond

Find the percent of money spent on each category. Figure taxes on the taxable items.



# FAMILY VACATION

## RUBRIC SCORING SCALE

<b>Organization</b>	
0	Facts and figures are unorganized.
1	Facts and figures are not too well organized.
2	Facts and figures are completely organized and neat.

<b>Participation of Group Members</b>	
0	One person dominated the group.
1	Two of the group members did most of the work.
2	All group members participated equally.

<b>Routes Included (to, on, home)</b>	
0	One route or no route is included.
1	Two of the routes are described and on a map.
2	The routes to, on, and home from the Mississippi are described and on a map.

<b>Complete Graph</b>	
0	Graph is very incomplete.
1	Graph is missing either a title, scale, or labels.
2	Graph includes title, scale, and labels.

<b>Detailed Graph (costs of boat, meals, gas, souvenirs)</b>	
0	Fewer than three costs are on the graph.
1	Most costs are included in the graph.
2	All costs are included in the graph.