

## Vacation Budget Activity

### Introduction:

Students are given \$3,500 to plan a vacation of their dreams. They are given four destinations to choose from and given all the essential information needed to plan a vacation. This vacation is what they make of it. They can stay wherever they want and do whatever they please as long as they have enough money. Once they decide on a destination(s), entertainment, lodging and food, they will create a spreadsheet to keep track of their costs.

### Mathematics Content/Connection to Previous Lesson:

Students will use what they know about estimating, fractions, decimals, and percents. They will also gain experience budgeting money. Students must have prior knowledge of spreadsheets. This CANNOT be a first time spreadsheet activity.

### Connected Mathematics: Bits and Pieces II

### Materials:

- Student Activity Sheets
- Computers or I-books
- Student Handout
- Blank grid sheets

### Time Table: (Based on 40 minute periods)

Day 1: Launch and Explore - Complete Activity Sheet 1

Day 2: Continue to Explore - Complete Activity Sheet 2 (Using Spreadsheets) and Summarize

### General Outline of the Activity:

#### Launch:

Introduce students to the activity by describing their task. Make sure that students understand that their only options are those listed on the activity sheet. Also, make sure they understand that every group has to have at least one adult. In addition, they are planning for a group vacation; therefore, they can put more than one person in each hotel room if they choose. Also, if students want to travel to more than one destination that is perfectly fine as long as they have enough money.

#### Explore:

Have students work in groups of four to plan their vacation on Activity #1. Then have students work in pairs on I-books to create their spreadsheets. However, each student should complete his or her own activity sheet. Make sure that students are writing the rules into their spreadsheets. Many students like to find the answers on a calculator and then type them in. This defeats the whole purpose of using a spreadsheet. Make sure students' rules are correct, also.

Make sure that students decide as a group how many days their vacation will last, keeping in mind that two of those days will be spent traveling. Some students may

get creative and decide to bring bag lunches for the trip to and from their destinations. It is up to you to decide if they can.

Since each group will have different expenses, there is no one spreadsheet template that they can fill in. Therefore, students must use what they know about spreadsheets to create their own template. Some students may need help with this, especially those who have a hard time getting organized. Another option is to create a spreadsheet template as a class. You can show them your own mock vacation and ask them how you can put it into a spreadsheet. Once you all agree on a template, have the students use that one for their data. Attached are examples of spreadsheets that have been created to complete this activity.

Some students may take less than a day to fill out Activity Sheet #1. Some may take longer because they will have to negotiate within their group.

If students choose to take a trip to Florida, it will take them 19 hours to drive there. Remind students that one adult can drive 600 - 800 miles a day. This means that those traveling days of their trip they cannot spend in a theme park. Make sure that students multiply all traveling costs by 2 because they need meals and gas for both the trip there and back.

Have students save the different budgets as they go so that they can see what changes they have made to each one.

Teachers may want to create more destinations for students to choose from. One could also make use of the Internet.

### **Summarize:**

After students have completed the activity, come back together as a class to share their findings. Students can make posters to present their vacation plan.

Some questions to consider asking:

What are the advantages and disadvantages to the destination that you chose?

Now that you have heard your classmates' presentations, would you change anything in your vacation?

What if you could fly, how would that change your vacation?

Why is it important that you find your exact costs using the spreadsheet instead of estimating? What happens if you underestimate? What happens if you overestimate?

### **Teacher's Notes**

Answers to the following questions will all vary. The teacher may want to try the activity on their own before giving it to their class. Sample spreadsheets and charts are enclosed.

Name: \_\_\_\_\_

Date: \_\_\_\_\_

**Vacation Plan  
Activity Sheet #1**

**Congratulations!** You and your group members won a vacation of your choice worth \$3,500. You also have to take at least one adult with you. Work together as a group to design the vacation of your choice.

**1) Destination**

Pick your destination from one of the choices on the table.

**REMEMBER YOU MUST DRIVE THERE!**

Also, remember to allow enough travel time to get to and from your destination(s).

It is reasonable for an adult to drive 600 - 800 miles in one day.

a) Destination choice(s): \_\_\_\_\_

b) How did your group decide on this destination?

Write a short itinerary below describing each day of your vacation.

**2) Travel costs**

a) *Car Type*:

Choose a car type from the table. \_\_\_\_\_

Explain in a sentence why you chose this car type.

**Estimate** your total cost of gasoline by calculating:

(total miles/mpg) x price of gas

**\*\* Remember that you have to drive there and back. \*\***

**\*\*Estimate the price of gas to be \$2.\*\***

c) *Lodging While Traveling* **\*\*if needed\*\***:

Choose a type of lodging while traveling: \_\_\_\_\_

Determine how many rooms your group will need: \_\_\_\_\_

Explain why your group chose this type of motel and this number of rooms.

Estimate the cost of your group's lodging while traveling.

**3) Costs at the resort**

a) *Lodging at the resort*:

Choose the type of resort that your group would like to stay in while at your destination: \_\_\_\_\_

Determine how many rooms your group will need: \_\_\_\_\_

Explain in a sentence why your group chose this resort and this number of rooms.

Estimate the cost of your group's lodging at the resort.

*b) Admission to attractions:*

From the list, choose the attractions that you would like to visit, and how many days that you would like to spend at each attraction.

Estimate the total cost of everyone in your group visiting these attractions for the entire trip.

**4) Meals during your vacation:**

Create an itinerary for the meals that you will eat each day.

Estimate the total cost of meals for everyone in your group.

**5)** Estimate the cost of your entire trip.

**6)** Are you over or under your \$3,500 budget?

**7)** Brainstorm ideas of how you might make your budget closer to \$3,500.

**8)** How do you think you would set up your spreadsheet? Use the attached blank spreadsheet to plan your spreadsheet.







Name: \_\_\_\_\_

Date: \_\_\_\_\_

### **Vacation Plan Activity Extension**

**Ooops!** You forgot to include taxes and tips in your vacation budget! You can do this right on your spreadsheet.

- 1) For any meal that you have bought, add the corresponding percentage of money to your total.

In New York – tax on food is 8%

In Virginia – tax on food is 3%

In Florida – tax on food is 6%

- 2) For any meal that you ate that was not fast food, add a 15% tip.

- 3) Add a 12% tax on your hotel room.

- 4) Add \$5 per day parking for each day spent at an amusement park.

- 5) Are you over or under your budget now?

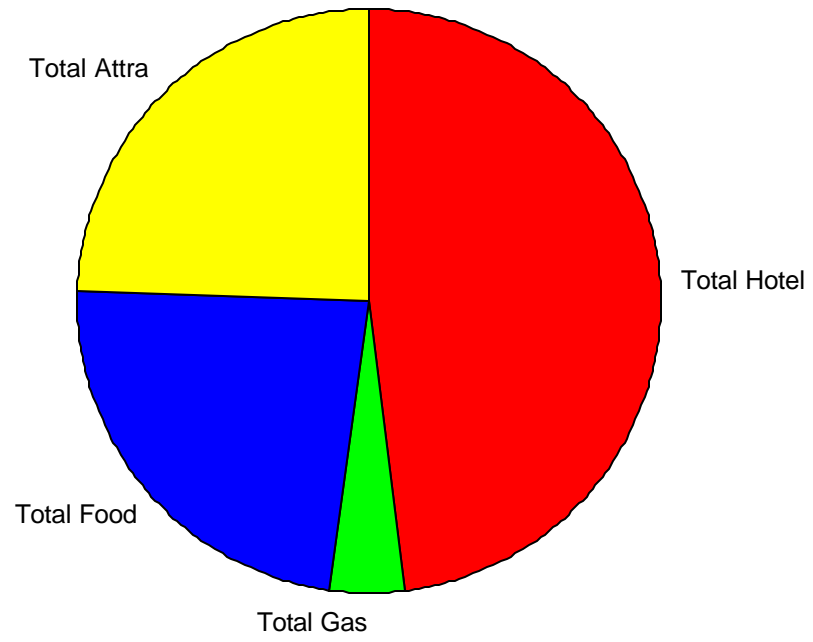
- 6) Adjust your budget so that you will be as close to \$3,500 as possible without going over \$3,500, because any money not spent will be lost.

- 7) Create a new pie chart showing the amount of money spent on gasoline, lodging, meals while traveling, hotel, admission to attractions, meal plans, and tips and taxes.

- 8) How has the addition of tips and taxes changed your budget? Explain this in a paragraph.

### Sample Spreadsheet and Pie Chart

Day	Hotel	Milage	Travel Cost	Food	Attractions	Total
Day 1	\$250.00	247	\$27.44	\$100.00	\$0.00	\$377.44
Day 2	\$250.00	0	\$0.00	\$100.00	\$425.00	\$775.00
Day 3	\$250.00	387	\$43.00	\$100.00	\$0.00	\$393.00
Day 4	\$250.00	0	\$0.00	\$100.00	\$235.00	\$585.00
Day 5	\$250.00	0	\$0.00	\$125.00	\$75.00	\$450.00
Day 6	\$250.00	0	\$0.00	\$100.00	\$27.00	\$377.00
Day 7	\$0.00	530	\$58.89	\$100.00	\$0.00	\$158.89
Total Hotel	\$1,500.00					
Total Gas	\$129.33					
Total Food	\$725.00					
Total Attra	\$762.00					
Total Cost of Trip	\$3,116.33					



**Vacation from Syracuse, NY to Williamsburg, VA**

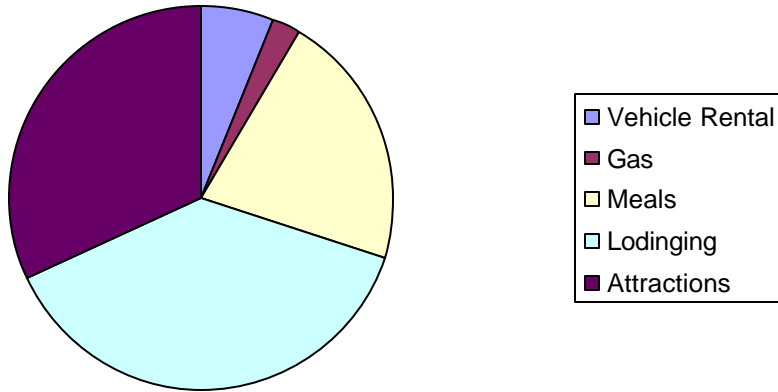
	<b># of Days</b>	<b>Cost Per Day</b>	<b>Number of People</b>	<b>Relative Cost</b>	<b>Total Cost</b>
<b>Vehicle Rental</b>	7	\$30.71			\$215.00
<b>Gas</b>	2	\$41.76			\$83.53
<b>Meals</b>					\$750.00
Fast Food	1	\$10.00	5	\$50.00	
Sit Down	5	\$20.00	5	\$500.00	
Fancy	1	\$40.00	5	\$200.00	
<b>Lodging</b>	7	\$190.00			\$1,330.00
<b>Attractions</b>					\$1,112.00
Busch Gardens	2	\$47.00	5	\$470.00	
Water Country	1	\$35.00	5	\$175.00	
Jet Skiing	1	\$75.00	5	\$375.00	
Chesapeake Bridge	1			\$17.00	
Colonial Williamsburg	1	\$15.00	5	\$75.00	
				<b>Total Cost</b>	\$3,490.53

Formulas

	<b># of Days</b>	<b>Cost Per Day</b>	<b>Number of People</b>	<b>Relative Cost</b>	<b>Total Cost</b>
<b>Vehicle Rental</b>	7	=215/7			=B3*C3
<b>Gas</b>	2	=(530/25)*1.97			=B4*C4
<b>Meals</b>					=SUM(E6:E8)
Fast Food	1	10	5	=B6*C6*D6	
Sit Down	5	20	5	=B7*C7*D7	
Fancy	1	40	5	=B8*C8*D8	
<b>Lodging</b>	7	190			=B9*C9
<b>Attractions</b>					=SUM(E11:E15)
Busch Gardens	2	47	5	=B11*C11*D11	
Water Country	1	35	5	=B12*C12*D12	
Jet Skiing	1	75	5	=B13*C13*D13	

Chesapeake Bridge	1			17
Colonial				
Williamsburg	1	15	5	=D15*C15*B15
<b>Total Cost</b>				=SUM(F3:F14)

**Williamsburg Vacation with Gas at \$1.97**



### Williamsburg Vacation with Gas at \$1.10

