

The Vacation of Your Dreams



If you could travel anywhere in the world – for the vacation of your dreams – where would you want to go? A relaxing stay on a tropical island in the Caribbean? A jungle adventure to a steaming volcano in South America? A trip by dogsled to the farthest reaches of Antarctica? Let your imagination run wild! As a part of this project you will plan a 7-day journey to whatever destination you choose!

APPLYING MATHEMATICS

First, brainstorm a list of all the ways that mathematics would play a role in planning a vacation. After you've listed your first few ideas, s-t-r-e-c-h your brain! There are many, many answers you might include here. How many can you come up with?

A SAMPLE VACATION: NEW YORK CITY

For this project, you will use fractions to analyze and compare the amount of your vacation that will be spent on various activities. Let's try an example: Julie went on a three-day vacation to New York City to visit her friend Jane. On the following page, you will find a schedule that describes all of Julie's activities during her three days in New York. Use this schedule to answer the questions below.

- ☐ Study the first row of the chart, which includes Friday's schedule. Notice in the last column that the total amount of time spent on certain categories of activities has been calculated.
- ☐ Complete the third column of the chart by calculating the total amount of time spent on each category for Saturday and Sunday. Express your answer in whole or half hours.
- ☐ Use the vacation schedule to answer the following questions on the NOTES pages in your packet.

How long was the entire vacation – from start to finish – in hours?

Find the total number of hours spent on each category of activity for the entire weekend. There are 8 categories in all.

If you take the number of hours spent eating, over the total number of hours in the entire vacation, and then simplify the fraction, you find that **Error! Objects cannot be created from editing field codes.** of the entire vacation was spent eating. What fraction of the entire vacation was spent sleeping?

Find the fraction of the total trip spent on each of the remaining categories! IMPORTANT HINT: In order to find fractions for a time in half hours, convert times from hours to minutes. Write the fraction as number of minutes spent on a certain category out of the total number of minutes for the entire trip. Then reduce the fraction.

A Vacation in the Big Apple

Day	Schedule of Events	Amount of Time Spent on Each Activity
Friday	4:00 pm – 5:00 pm Pack car 5:00 pm Depart, by car, for New York City 6:30 pm Stop for Dinner at Denny's 7:00 pm Get back on the road 9:30 pm Arrive in New York City, Visit with Jane 10:30 pm Go to Bed	Packing: 1 hour Travel: 4 hours Eating: ½ hour Visiting: 1 hours
Saturday	8:00 am Wake Up, Eat Breakfast 8:30 am Travel Downtown, by subway 9:00 am Go Sightseeing : Empire States Building, Statue of Liberty 1:00 pm Lunch at a Deli 2:00 pm Go Ice Skating in Central Park 5:30 pm Travel Back to Jane's Apartment, by subway 6:00 pm Eat Dinner, Chinese Take-Out 7:30 pm Travel Downtown, by subway 8:00 pm Go to a theatre to see a Broadway Musical 11:00 pm Travel Back to Jane's Apartment, by subway 11:30 pm Go to Bed	Sleeping: 9 ½ hours Eating: This would include all meals for the day. Travel: This would include all subway travel on this day. Sightseeing: This would include the trip to the Empire State's Building and the Statue of Liberty. Athletic Activities: This would include ice skating. Artistic Activities: This would include seeing the musical.
Sunday	9:00 am Wake Up, Eat Breakfast 10:00 am Travel by Subway 10:30 am Visit the Metropolitan Museum of Art 11:30 am Go Sightseeing : Times Square, Wall Street 12:30 pm Eat Lunch, Hot Dog Vendor 1:00 pm Travel Back to Jane's Apartment, by subway 1:30 pm Jog in Central Park 2:00 pm Begin Drive Home 6:00 pm Return Home	Sleeping: Eating: This would include all meals for this day. Travel: This would include all subway travel and driving for this day! Sightseeing: This would include Times Square and Wall Street. Athletic Activities: This would include jogging. Artistic Activities: This would include visiting the art museum.

Your Challenge

Plan your own vacation to any destination in the world! Follow each of the steps below to create and analyze the vacation of your dreams!

Think about the many places in the world you might like to visit someday!

The website below is an online travel guide. It includes detailed information about what it will be like to travel anywhere in the world. Visit this website.

First, click on a continent you would like to visit. Then, click on a country. Then, choose a city.

Then, READ! On the left-hand side of each page is a menu of selections, which includes: Facts for the Traveler, When to Go, Events, Money and Costs, Attractions, Off the Beaten Track, Activities, History, Culture, and more. Be sure to click on many of these to read about each possible destination.

Explore and experiment. Read about several possible destinations before you make your decision. You can hit the BACK button repeatedly to return to the map pages and make a new choice.

<http://www.lonelyplanet.com/destinations/>

Make a final decision. What destination will you travel to for your dream vacation? Your destination can be a city (EX: New York City, London), a state (EX: California), or a country (EX: Australia).

- ☐ Carefully read the Activities and Attractions pages for the destination you have selected. As you read, think about which activities and which attractions you would like to try during your vacation.
- ☐ Carefully read the Getting There & Away and Getting Around pages for your destination. As you read, think about how you will travel during your vacation.
- ☐ Create a detailed schedule for your vacation! You may use lined paper, large construction paper, chart paper, graph paper, or type your schedule – whichever you choose.

Remember that your trip will be 7 days long.

Be sure that your schedule includes all travel, sleeping, eating, and any activities!

Use Julie's New York vacation schedule as a model.

You must mention the specific names of activities, attractions, and locations you will visit – to show that you have researched your destination thoroughly. (EX: Central Park, Statue of Liberty)

Determine which categories of activities you can use to analyze your vacation. For her New York trip, Julie divided her vacation into eight main categories. You may use the eight categories from that vacation and/or create your own!

Calculate the total number of hours spent on each of the categories.

Determine the fraction of the entire vacation that would be spent on each category.

Communicate your findings in some way. Create a chart, poster, report, and/or graph that clearly shows the fraction of your vacation that would be spent on each category.

REFLECTION

Answer the following questions. Express your ideas in thoughtful, complete sentences. Try to avoid using answers that are only one sentence long; stretch your thinking!

- ☐ Was the New York vacation schedule truly a complete schedule? Were there any activities that would be part of a vacation, but were not included on Julie's schedule? Was your schedule truly a complete schedule? Does it make sense to eliminate some activities from a schedule – or does this make your schedule highly inaccurate? Explain.
- ☐ Return to the Lonely Planet Online Travel Guide and find your destination. Read the When to Go page for your destination. Would the fraction of your vacation spent on each activity change if you took your vacation at a different time of year? How would you expect the results of your calculations to be different at a different time of year? Explain why these changes could be expected.
- ☐ Did your results surprise you? Which category took up the largest fraction of your vacation time? Is this what you expected? Which category took up the smallest fraction of your vacation time? Is this what you expected? Was there anything else surprising about your results? Explain.
- ☐ Do most people plan their vacations using fractions – as you did in this project? Why or why not? Do you think this is useful? Would you recommend that someone follow these procedures when planning a real vacation? Explain.
- ☐ What was the most challenging aspect of this project? Why? Did it lead you to learn anything new about mathematics, about learning, or about yourself? Explain.

GOING BEYOND

Make Your Own Circle Graph – In Seconds!

<http://www.shodor.org/interactivate/activities/piecharttool/>

This online tool allows you to make a circle graph of your data in a just a few seconds. Go to the website. Click on the small gray down-arrow button beside Select a Data Set. Choose My Data. Under Describe Your Data type a title for your graph. (Example: My Vacation to New York City) Study the example data in the box that says Enter Your Data. Then, erase the sample data and type in your own. First, type in the total number of hours for one of your categories – then a common and a space – then the name of the category. Then hit ENTER to start a new line. Continue entering your data in this way until all of your categories have been entered. Then, hit the button that says Update Chart.

Why is Sleep Important?

http://pa.essortment.com/whyissleepimp_rhgq.htm

Estimate what fraction of your entire life you will spend asleep. Show your work on the NOTES pages of your packet. Then, check your answer in the first sentence of this web page. Do you agree with their estimate? Why or why not?

Student and Teacher Evaluation

	4	3	2	1
My final project is accurate, and shows that I have applied mathematical ideas or learned new mathematical ideas.	I did a great job! This is a good example of my best work.	I did a good job, with just a few areas to improve.	If I could do this again, there are several things I would change.	There are many ways that I could have done better on this.
COMMENT:				
I followed each step in the directions carefully.	I did a great job! This is a good example of my best work.	I did a good job, with just a few areas to improve.	If I could do this again, there are several things I would change.	There are many ways that I could have done better on this.
COMMENT:				
I used my creativity and imagination to create a final project that is unique and represents my own thoughts and ideas.	I did a great job! This is a good example of my best work.	I did a good job, with just a few areas to improve.	If I could do this again, there are several things I would change.	There are many ways that I could have done better on this.
COMMENT:				
I made effective use of class time. I was able to get myself started quickly, answer questions for myself, and stay on task.	I did a great job! This is a good example of my best work.	I did a good job, with just a few areas to improve.	If I could do this again, there are several things I would change.	There are many ways that I could have done better on this.
COMMENT:				
My presentation was clear and detailed. The students in the class learned new information about my topic.	My presentation was well done. Students learned about the topic.	My presentation was good, but there are one or two things I would improve.	Students learned a few new facts, but I could have been louder or more organized.	I needed to be more prepared for my presentation.
COMMENT:				