

MAKING SENSE OF THE DATA

In order to better understand data, we often illustrate it graphically. As you have learned, we can do this in several different ways. Use graph paper to complete two of the activities listed below. All four of these methods can be found in your Student Reference Book, on pages 111-117, if needed.

- ☐ Create a frequency table, also called a tally chart, for each brand. Be sure to use a title and labels for each frequency table.
- ☐ Create a stem-and-leaf plot for each brand. Be sure to use a title and labels for each stem-and-leaf plot.
- ☐ Create a line plot for each brand. Be sure to use a title and labels for each line plot.
- ☐ Create a bar graph for each brand. Be sure to use a title and labels for bar graph.
- ☐ Use a piece of graph paper, notebook paper, or construction paper to create a chart that reports the mean, median, mode, and range of for each brand. Show your work on the NOTES pages of your packet!

DRAWING CONCLUSIONS FROM YOUR DATA

Answer each of the following questions:

- ☐ Which brand has the most variation in the number of raisins per box? Which brand has the least variation in the number of raisins per box? Explain and support your answer.
- ☐ Which brand usually has the most raisins in each box? Which brand usually has the least number of raisins in each box? Explain and support your answer.
- ☐ If you wanted to be sure that you would not get less than 25 raisins, which brand would be the best to buy? Explain.
- ☐ Use your data to determine your final opinion. In order to get the most raisins per box, which brand of raisins are you going to buy? Explain and defend your opinion.

Your Challenge

How could you use a statistical study like this one to make a purchasing decision? Design and plan your own product comparison investigation. Use a large piece of construction paper to share your work with others. Your plan can include illustrations, pictures, words, or charts. Be sure that your plan includes all of the information shown below. For this project, you do not need to do the investigation, just plan it.

- ☐ What product would you study?
- ☐ What different brands would you compare?
- ☐ What data would you collect?
- ☐ How would you organize and analyze your data?
- ☐ How would you draw a conclusion about which product to purchase?

REFLECTION

Answer the following questions:

- Is it reasonable to think that someone would conduct a statistical investigation before purchasing raisins? Why or why not? Are there products that you really would study in this way before purchasing them? Why or why not?
- Why is it important to base opinions and decisions on factual data? Give examples to support your ideas.
- What did you enjoy most about this project? Why? What did you enjoy least about this project? Why?
- In what types of careers might someone need to gather and analyze data, as you did during this project? Are these careers that you might enjoy? Explain.
- SUPER CHALLENGE: Create two different data sets that have the same mean, the same median, and the same mode – but that are not identical!

GOING BEYOND

U.S. Census Bureau: Fun State Facts

<http://factfinder.census.gov/home/en/kids/funfacts/funfacts.html>

Click on Pennsylvania and find the median age of everyone living in Pennsylvania. Click on other states and compare median ages. What does the median age really mean? How does the median age of Pennsylvanians compare to the median age in other states?

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:				