

## What Is Your Opinion?

Have you ever wondered how polls are done? How do they calculate that 70 percent of Americans like a certain food or type of car? Do they ask every single person in America? No, they use a polling percentage or a sample (part of the population). Groups of students in your class will create their own poll, ask students around your classroom about their opinion on a specific school issue, and then predict the percentage of student opinions about that issue at your school.

### Project Tasks

Decide on a school issue to gather data about.

1. I (your teacher) will divide the class into small groups of two to four students.
2. Your group will discuss issues around your school for which you would like to get opinions from your classmates. Possible school issues could include a new club for your school, a new enrichment class, new playground equipment, what new technology you would like, or new classroom materials your classmates would like.
3. Your group will create a survey in Google Forms ([www.google.com/forms](http://www.google.com/forms)). You will have ten students in your class answer your survey. Record the issue that your group decided to poll on the following line.

- 
4. Discuss this issue in your group. Decide on a question and possible choices for this issue, and record them. You should record four to seven choices. Consider the following example about the purchase of iPad apps. The sample group has a \$25 iTunes card that was donated to it.

Question: What iPad apps do you think we should purchase with our \$25? Select your top three choices.

- a. Explain Everything—\$4.99
  - b. Docs to Go—\$14.95
  - c. Explore Hawaii Volcanoes—\$2.99
  - d. iBiology4Kids—\$4.99
  - e. World Atlas HD—\$1.99
  - f. Quick Graph+—\$1.99
  - g. GarageBand—\$4.99
5. Fill in the “Student Issue Worksheet” (page 220) to create your own question.
  6. Show these questions and choice options to me for approval or possible revision.

Now use Google Forms to create your survey.

1. View one of the following tutorials to learn more about Google Forms.
  - ♦ Google Forms tutorial (Gilbert, 2009): [www.youtube.com/watch?v=WMXgutYKMgk](http://www.youtube.com/watch?v=WMXgutYKMgk)
  - ♦ Google Forms for the classroom (O’Byrne, 2011): [www.youtube.com/watch?v=AeiDxeLVvuQ](http://www.youtube.com/watch?v=AeiDxeLVvuQ)
2. I can log in to Google Drive ([www.google.com/drive](http://www.google.com/drive)) for you. Your group will create a new form for your survey.
3. Now you can look at your trial results.
4. Decide how you will have classmates take the survey.
  - ♦ The easiest way would be to open the survey on an iPad, an iPod Touch, or any other tablet device that is connected to the Internet. Your group will only need one device. It will only take a few seconds for each of ten of your classmates to answer your survey question. Click “Submit another response” before you give the device to another student.
  - ♦ You could print ten copies of your survey question to give to ten other students. But if you do this, your group will have to type all ten responses into Google Forms.

Now you are ready to launch your survey! In other words, have classmates complete your survey.

1. Go give the survey to ten of your classmates. Have fun with it!
2. Check your responses in the Google spreadsheet.

Print the results from your survey spreadsheet and the summary graphs. Each group will meet and write its responses to the following questions.

1. How accurate do you think your survey results are? In other words, do you think the survey results really represent or explain what students in your class think about your school issue? Explain.
2. Calculate the mean, median, and mode for your question.
3. How could your group have improved your survey question? Explain.
4. What conclusions can you draw from your survey results?
5. To represent the data in fractions, put your answers in the “Survey Results Chart” (page 220).
  - ♦ Take the result for each option of your survey question and write it as a fraction. For example, if 5 people selected option 1 and 10 classmates took your survey, then your fraction is  $\frac{5}{10}$ .
  - ♦ Now, create an equivalent fraction with a denominator of 100. For example,  $\frac{5}{10}$  is equivalent to  $\frac{50}{100}$ .
6. Put your answers in the “Survey Results Chart” (page 220) to represent the data as decimals. Take each fraction that has the denominator of 100 and convert it to a decimal. For example,  $\frac{50}{100}$  equals 0.50.

## Student Issue Worksheet

Names of group members: \_\_\_\_\_

School or class issue: \_\_\_\_\_

1. List the survey question you will ask: \_\_\_\_\_

2. Record six answers the survey takers will choose from.

a. \_\_\_\_\_

b. \_\_\_\_\_

c. \_\_\_\_\_

d. \_\_\_\_\_

e. \_\_\_\_\_

f. \_\_\_\_\_

## Survey Results Chart

SURVEY QUESTION OPTIONS	RESULTS	FRACTION WITH 10 AS DENOMINATOR	FRACTION WITH 100 AS DENOMINATOR	DECIMAL

## Scoring Rubric

	<b>1 SIGNIFICANT REVISION NEEDED</b>	<b>2 SOME REVISION NEEDED</b>	<b>3 PROFICIENT</b>	<b>4 EXCEEDS EXPECTATIONS</b>
<b>Objective 1: Students will analyze opinions about a school issue.</b>	Analysis of student opinions was incomplete. Responses are not connected to survey results.	Analysis of student opinions was incomplete or illogical. There is a weak connection between conclusions and results.	Analysis of student opinions was adequate and logical. There is a connection between conclusions and results.	Analysis of student opinions was comprehensive and logical. There is a clear connection between conclusions and results.
<b>Objective 2: Students will use digital tools to create and administer a survey, incorporating fraction concepts.</b>	Survey questions and options are missing or unrelated to the assigned school issue. Very few students took the survey. Students accurately used fraction concepts to analyze survey data with several mistakes.	Survey questions and options are missing some important elements. Surveys were given to a few other students. Students used fraction concepts to analyze survey data with some minor mistakes.	Students put thought and insight into deciding on the school issue with some assistance from the teacher. Survey questions and options are adequate. All students in the group gave surveys to other students. Students accurately used fraction concepts to analyze survey data.	Students put considerable thought and insight into deciding on the school issue with no assistance from the teacher. Survey questions and options are comprehensive and perceptive. All students in the group gave surveys to other students. Students accurately used fraction concepts to analyze survey data.

Sources: Gilbert, R. (2009, August 9). Google Form tutorial [Video file]. Accessed at [www.youtube.com/watch?v=WMXgutYKMgk](http://www.youtube.com/watch?v=WMXgutYKMgk) on June 29, 2016; O'Byrne, I. (Ian O'Byrne). (2011, August 13). Google Forms tutorial [Video file]. Accessed at [www.youtube.com/watch?v=AeiDxeLVvuQ](http://www.youtube.com/watch?v=AeiDxeLVvuQ) on June 29, 2016.