

# FACTivity

**Time Needed:**

One class period.

**Materials Needed:**

- Copies of the Kids' Time Outdoors Survey.
- A bucket or bowl.
- Paper.
- Pencils.



In this FACTivity, you will act as social scientists and conduct a survey with other students in your class to determine information about each other's time spent outdoors. Determine the students to be surveyed using random sampling, much like the scientists did in the National Kids Survey. The question you will answer is: How do the results of this class survey compare with the results of the National Kids Survey? The objective of this FACTivity is to become familiar with the process of surveying and to learn how random samples can be used to represent a larger population.

Distribute a copy of the survey (following page) to all students in the class. Explain to students that instead of writing their name, they will write only their initials and date of birth. Using initials and dates of birth will help the survey results be confidential. Although using initials and date of birth within your small classroom community may not keep the answers very confidential, when you are using a larger group of students this method will help keep students answers confidential. Confidentiality is important because it helps protect people's privacy. All students will take the survey, responses will be counted, and then a sample (50 percent of the class) will be chosen. Having all students complete the survey in the beginning ensures that you will have survey answers from all students before the sample is taken.

Initials: \_\_\_\_\_ Date of birth (DD/MM/YYYY): \_\_\_\_\_

## Kids' Time Outdoors Survey

Please check the answer that describes you best.

**Select your gender.**

- \_\_\_\_\_ Male  
\_\_\_\_\_ Female

**Select your age range.**

- \_\_\_\_\_ 6-9  
\_\_\_\_\_ 10-12  
\_\_\_\_\_ 13-15  
\_\_\_\_\_ 16-19

**How much time did you spend outdoors on a typical week day this past week?**

- \_\_\_\_\_ None  
\_\_\_\_\_ 2 hours or less  
\_\_\_\_\_ More than 2 hours

**During the past week, which of the following types of outdoor activities did you participate in?  
Check all that apply.**

- \_\_\_\_\_ Playing or hanging out  
\_\_\_\_\_ Biking, jogging, walking, skate boarding  
\_\_\_\_\_ Listening to music, watching movies, or using electronic devices  
\_\_\_\_\_ Playing or practicing team sports  
\_\_\_\_\_ Other outdoor activities

**Which of the following are reasons you don't spend more time outdoors than you already do?  
Check all that apply.**

- \_\_\_\_\_ Interested in listening to music, art, reading indoors  
\_\_\_\_\_ Interested in video games, DVDs, and TV indoors  
\_\_\_\_\_ Interested in Internet, text messaging indoors  
\_\_\_\_\_ Other reasons

After all students have completed the survey, count the number of responses for each question. Calculate the percentage that each represents. For example, if 22 students are in your class and 10 of them selected “Playing or hanging out” as a recent outdoor activity, divide 10 by 22 to get 0.45. This answer means that 45 percent of the students in the class played or hung out in the last week. Calculate this percentage for every possible response on the survey.

Next, select a sample of students in class. All students will need to have an equal chance of being selected to avoid biasing the results. Write the initials of each student on a piece of paper. Put all of the pieces of paper into a bowl and mix them up. The sample selected for this survey will be 50 percent of the class size. Calculate how many pieces of paper will be pulled from the bowl by taking the total number of students and multiplying it by .50.

Next, pull pieces of paper from the bowl. Once again, calculate the responses to each question. This time, however, only use the responses of students whose names were pulled. For each response to each question, calculate the percentage. Do not divide the number of responses by the total class size, but by one-half of the class size (the number of pieces of paper pulled from the bowl). After you have calculated the results, compare the percentages calculated for each question in the sample with the percentages calculated for the whole class. Are the results similar or are they different?

Compare the results from the class sample with the results from the National Kids Survey. How do the outdoor time and activities of this class compare with those of the kids surveyed by the scientists? Are the results what you expected? Discuss the results. Why did the results come out the way they did? If time allows, you can put all of the names back into the bowl and draw another 50-percent sample. Repeating the activity multiple times with random samples will help show how repeated samples can help confirm results and create more accurate results. Repeated sampling can also help students gain a sense of how social scientists conduct random sample surveys.

### **Extension:**

Conduct this survey with a larger group of people, such as all students in the grade level. Compare the results with the results from the class and from the National Kids Survey. The students could gain more experience with random sampling by taking a random sample of all kids in the grade level.

