

Using a Questionnaire to Gather Data



Quick Review

Here are some guidelines for writing questions for a questionnaire.

- The question should be understood in the same way by all people.

Instead of asking: Do you play video games a lot? Yes No

Ask: How many hours a week do you spend playing video games? _____

- Each person should find an answer he would choose.

Instead of asking: What's your favourite subject? Math Science

Ask: What's your favourite subject?

Math Science Other _____

- The question should be **fair**. It should not influence a person's answer. If it does, it is a **biased question**.

Instead of asking: Do you prefer boring documentaries or hilarious sitcoms?

Ask: What kind of TV shows do you prefer? Documentaries

Sitcoms Dramas Reality Shows Other _____

Try These

1. Write better questions.

- a) Do you get a lot of sleep on school nights? Yes No

- b) What is your favourite reality show? Survivor The Amazing Race

- c) Do you prefer greasy potatoes or healthy carrots?

Practice

1. Which question is unbiased? Explain.

a) Which beverage do you prefer to drink with lunch?

Juice Water Other (please specify) _____

b) Do you prefer drinking refreshing juice or plain water with your lunch?

2. Which question would not be understood in the same way by all people? Explain.

a) Do you get up early on the weekend?

b) What time do you get up on the weekend?

3. Suppose you want to know what winter activity your classmates like best.

a) Write a question you could ask.

b) How do you know if your question is a fair question?

Stretch Your Thinking

A radio station wants to find out what kind of music they should play.

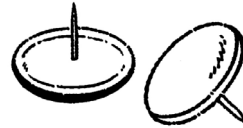
Write a questionnaire the station could use to help them make their decision.

Conducting Experiments to Gather Data



Quick Review

- Solomon wanted to answer this question:
Is a thumbtack more likely to land pointed end up or pointed end sideways?



To find out, Solomon dropped 10 thumbtacks a total of 10 times. He recorded the results in a tally chart.

Pointed End Up	Pointed End Sideways

From the data, Solomon concluded that a thumbtack is more likely to land with the pointed end up than with the pointed end sideways.

Try These

- a) Repeat Solomon's experiment.

Record your results in the tally chart.

Pointed End Up	Pointed End Sideways

- b) How do your results compare with Solomon's?

- Is a penny more likely to come up heads or tails?

Flip a penny 30 times. Record the results in the tally chart.

Heads	Tails

What conclusion can you make?

Practice

1. Rudy and Janet experimented with 3 different wind-up cars to answer this question: Which car travels the greatest distance?

They wound up each car 4 times and measured how far each went.

Car	Trial 1	Trial 2	Trial 3	Trial 4
Car #1	4.2 m	5.1 m	4.8 m	5.0 m
Car #2	6.3 m	6.8 m	7.0 m	6.7 m
Car #3	5.9 m	5.7 m	6.4 m	5.9 m

What answer would you give to the question above? Explain.

2. How long does it take a Grade 6 student to multiply 27×49 : less than 30 s, 30–60 s, or more than 60 s?
- Predict the answer to the question above. Explain.
 - Design an experiment you can use to check your prediction.
 - Conduct the experiment. Record the results in a chart.
 - What conclusions can you make from your data?

Stretch Your Thinking

Write a question you would like answered. Which method would you use to collect data to answer your question?
