

Scoop Test Data

Read a bar graph to decide whether a tool works as intended.

3.1.c “interpreting, analyzing, and evaluating data organize and represent data in pictographs or bar graphs read, interpret, and analyze data represented in pictographs and bar graphs analyze data from tests of an object or tool to determine if...”

NAME _____

DATE _____

1 READ AND MARK _____ Read it twice

YOUR JOB Underline the words “hand scoop” and “carry 8 cups of sand without sand falling out,” then circle only the four data values 8, 7, 8, and 6 in the bar graph. These marks show the tool, its purpose, and its test results.

Testing a Sand Scoop

- Engineers often test a tool more than once. Ms. Lee’s class tested a hand scoop made to move sand from one bin to another. The scoop was meant to carry 8 cups of sand without sand falling out. For each trial, students filled the scoop with 8 cups, carried it over a tub, and counted the cups that arrived.
- The class made a bar graph to organize the results. Each bar stands for one trial. The height of a bar shows how many cups of sand arrived in the tub. The class used the same amount of sand each time, so they could compare the trials fairly.

SAND CUPS THAT ARRIVED



- Two trials carried all 8 cups. In trial 2, one cup fell out. In trial 4, two cups fell out. Since the scoop did not carry all 8 cups every time, the class decided it did not work as intended yet. They suggested making the scoop’s sides taller, then testing it again.

2 ANSWER WITH EVIDENCE _____ Use the passage

1 What does each bar in the graph represent?

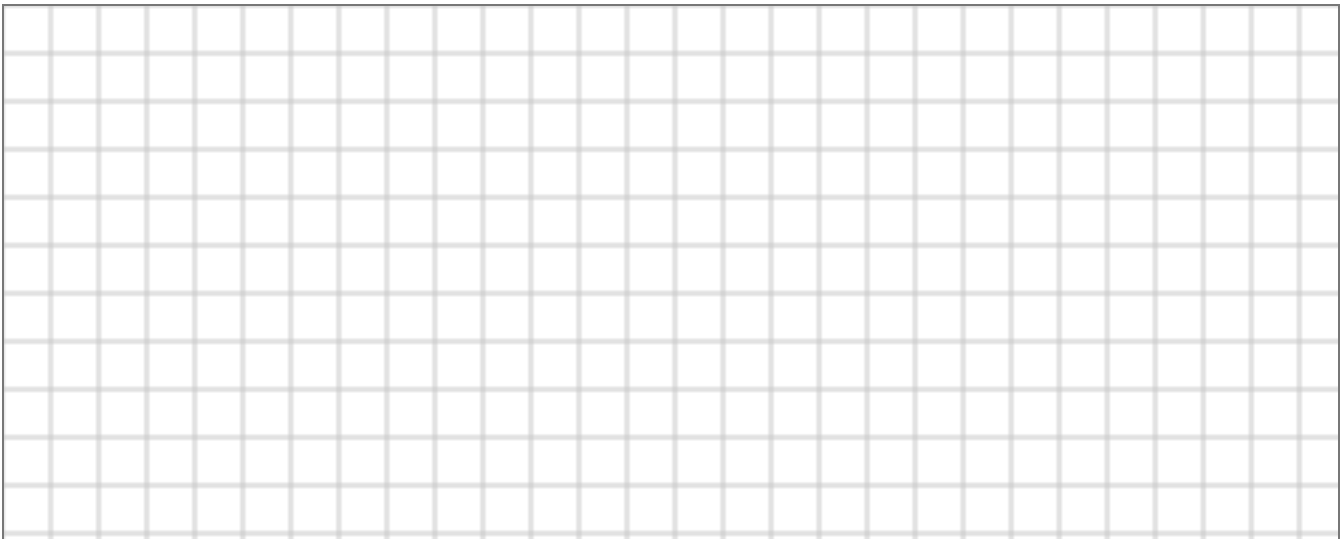
2 Which trials had the highest result, and how many cups arrived?

3 How many more cups arrived in trial 2 than in trial 4?

4 Why did the class decide that the scoop did not work as intended yet? Use data from the graph in your answer.

3 YOUR TURN _____ Your own words

A leaf rake is meant to gather 5 leaves each time. Its test results were 5 leaves in trial 1, 5 leaves in trial 2, and 4 leaves in trial 3. Use the grid to make a bar graph of the results. Then write one sentence telling whether the rake worked as intended every time.



PART 1 • READ AND MARK

Underline the words “hand scoop” and “carry 8 cups of sand without sand falling out,” then circle only the four data values 8, 7, 8, and 6 in the bar graph. These marks show the tool, its purpose, and its test results. Accept any marking that follows this job and points at the right text.

PART 2 • ANSWERS

#	QUESTION	ANSWER
1	What does each bar in the graph represent?	One test trial of the hand scoop.
2	Which trials had the highest result, and how many cups arrived?	Trials 1 and 3 had the highest result, with 8 cups each.
3	How many more cups arrived in trial 2 than in trial 4?	1 more cup arrived in trial 2.
4	Why did the class decide that the scoop did not work as intended yet? Use data from the graph in your answer.	The scoop was meant to carry 8 cups each time, but trial 2 carried 7 cups and trial 4 carried 6 cups.

PART 3 • YOUR TURN (SAMPLE ANSWER)

Bar graph title: Leaf Rake Test Results. The bars for trials 1, 2, and 3 have heights of 5, 5, and 4 leaves. The rake did not work as intended every time because it gathered only 4 leaves in trial 3.

Accept equivalent answers that accurately read the bar values and compare them to the scoop’s intended 8-cup purpose. For Your Turn, accept a correctly labeled bar graph with values 5, 5, and 4 and a conclusion that the rake did not work as intended every time.