

Bar Graph Builders

Choose a scale and show data clearly.

GRADE 3 • 3.PS.1.d

3.PS.1.d "Organize and represent a data set using bar graphs with a title and labeled axes, with and without the use of technology tools. Determine and use an appropriate scale (increments limited to multiples of 1, 2, 5 or 10)."

NAME _____

DATE _____

BUILD A CLEAR GRAPH

A bar graph shows how many are in each group. Give it a title, label both axes, start the number axis at 0, and use equal increments of 1, 2, 5, or 10.

WORKED EXAMPLE

Shells collected: spiral 3, smooth 6, striped 9. Plan a bar graph.

1. Title: Shells Collected.
2. Horizontal axis: Shell Type.
3. Vertical axis: Number of Shells.
4. Use a scale of 1. Draw bars to 3, 6, and 9.

Answer: Title: Shells Collected; horizontal axis: Shell Type; vertical axis: Number of Shells; scale: 1; bars: spiral 3, smooth 6, striped 9.

PRACTICE 5 problems

- 1** Fruit votes: grapes 7, pears 11, peaches 13. What scale is best, 1 or 5?

ANSWER _____

- 2** Use a scale of 2 for a graph that goes to 14. Write the number-axis labels.

ANSWER _____

- 3** Pets chosen: cats 5, dogs 15, fish 20, birds 25. What scale is best?

ANSWER _____

- 4** A graph has number-axis labels 0, 5, 10, 15. What is the scale?

ANSWER _____

- 5** Points earned: Red 10, Blue 20, Green 30. What scale is best?

ANSWER _____

APPLY IT Show your work

- 1** The recess club asked students to choose a game. Jump rope got 5 votes, tag got 10 votes, soccer got 15 votes, and kickball got 25 votes. Make a bar graph.

WORK SPACE

ANSWER _____

- 2** For a reading challenge, mystery books earned 2 points, animal books earned 14 points, fantasy books earned 18 points, and sports books earned 22 points. Make a bar graph.

WORK SPACE

ANSWER _____

CHALLENGE One step up

CHALLENGE

You have 7 equal spaces on a number axis. Your data go up to 34. Choose the best scale from 1, 2, 5, or 10. Explain why.

PART 1 • PRACTICE

#	PROBLEM	ANSWER
1	Fruit votes: grapes 7, pears 11, peaches 13. What scale is best, 1 or 5?	Scale 1.
2	Use a scale of 2 for a graph that goes to 14. Write the number-axis labels.	0, 2, 4, 6, 8, 10, 12, 14
3	Pets chosen: cats 5, dogs 15, fish 20, birds 25. What scale is best?	Scale 5.
4	A graph has number-axis labels 0, 5, 10, 15. What is the scale?	Scale 5.
5	Points earned: Red 10, Blue 20, Green 30. What scale is best?	Scale 10.

PART 2 • APPLY IT

- Title: Favorite Recess Games; horizontal axis: Game; vertical axis: Votes; scale: 5 from 0 to 25; bars: jump rope 5, tag 10, soccer 15, kickball 25.** The greatest number is 25, so a scale of 5 makes a clear graph. Label each game on the horizontal axis and votes on the vertical axis.
- Title: Reading Challenge Points; horizontal axis: Book Type; vertical axis: Points; scale: 2 from 0 to 22; bars: mystery 2, animal 14, fantasy 18, sports 22.** The greatest number is 22, so use increments of 2. The bars end at 2, 14, 18, and 22.

CHALLENGE

Scale 5. Seven spaces of 5 reach 35, so the axis can show 34 clearly.

Accept any clear, accurate graph title that matches the data. Axes may be worded differently if the categories are on the horizontal axis, the counts are on the vertical axis, and the scale is correct.