

Graph Clue Detectives

Use evidence to make a sensible inference.

GRADE 3 • 3.PS.1.e.iii

3.PS.1.e.iii "Excerpt: Analyze data represented in pictographs and bar graphs, and communicate results orally and in writing: make inferences about data represented in pictographs and bar graphs"

NAME _____

DATE _____

Read the graph carefully

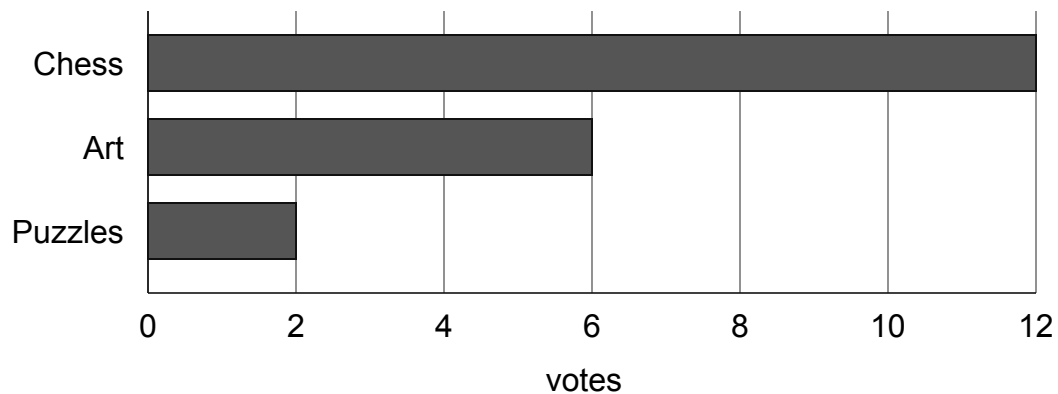
An inference is an idea supported by evidence. Say which graph facts support it. More than one explanation may fit the same data, so use words such as may or suggests. A graph does not tell every detail.

Try it together

The teacher is planning supplies for these students. What does the survey suggest she should prepare more of?

Game Survey

Game



Chess has 12 votes, more than Art 6 or Puzzles 2. This suggests preparing more chess places for this group. More chess places is a reasonable plan, but the graph does not say every student wants chess.

Write each answer. Then explain it aloud to a partner, pointing to the graph evidence. Use the named graph again when a task refers back to it.

1. Use art-club evidence

The club will repeat these choices with the same students. Which activity should the teacher prepare the most supplies for? Support your inference with two counts.

Art Club Choices

Activity / Pictures

Painting ● ● ● ● ●

Clay ● ● ●

Collage ● ●

● Key: 1 circle = 2 votes

2. Avoid an unsupported claim

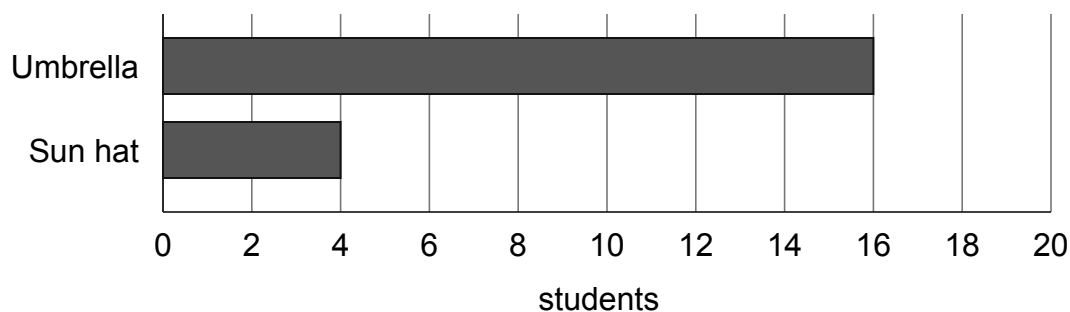
Use Art Club Choices. A student says everyone dislikes clay. Does the graph support that? Explain.

3. Infer from arrival items

Each student was counted once. What might the weather have been like? Give a graph clue, and say whether the graph proves your idea.

Items Seen at Arrival

Item



4. Consider another explanation

Use Items Seen at Arrival. Suggest another reason for carrying umbrellas. Does the graph prove either reason?

5. Plan from class choices

Plan fruit baskets for this class. Which fruit would you include most often? Give graph evidence.

Class Fruit Choices

Fruit / Pictures

Apples ● ● ● ●

Bananas ● ● ●

Pears ●

● Key: 1 circle = 2 votes

6. Know the data limit

Use Class Fruit Choices. Does choosing another fruit prove a student dislikes pears? Explain.

7. Check your inference

Use Items Seen at Arrival. What could you check to learn whether it rained? Explain.

TEACHER NOTES

Accept other plausible inferences with matching graph evidence. Distinguish observed counts from explanations. Do not accept claims about every student, causes, weather certainty or another population unless the data actually support them. Both graph types must be used in oral and written reasoning.

TASK 1

Painting is a reasonable choice: 10 votes is more than Clay 6 or Collage 4.

TASK 2

No. Clay received 6 votes. A choice survey also does not tell everything students like or dislike.

TASK 3

It may have been rainy because 16 students had umbrellas and only 4 had sun hats. The graph does not prove the weather.

TASK 4

They might have expected rain later or used umbrellas for shade. The graph does not prove either reason.

TASK 5

Apples: 8 students chose them, compared with Bananas 6 and Pears 2. The inference applies to this surveyed class, not automatically to other classes.

TASK 6

No. It shows each student's chosen fruit, not every fruit they like or dislike. A favorite choice does not identify all dislikes.

TASK 7

Check the weather report, a dated photograph, or ask whether it rained that morning. That evidence could confirm or challenge the umbrella-based inference.