



Bar Graph Bridge

Grade 3

Scale and Measurement in Graphing

7 levels

Probing Questions

- How do you know how far to extend the bar?
- How do you know where this number is when it's not labeled on the axis?

What's Important Here?

Students build graphs to match the data given in the chart. They have to interpret different scales on the axis as well as different ways that the data can be represented. Be sure to extend the work in the games to other graphs that students create.

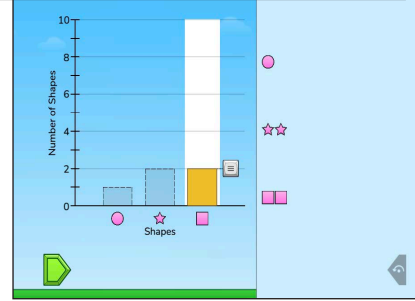
Classroom Connection

Project a graph and have students write statements describing the data shown. Be sure to include statements like, "There are _____ more _____ than _____."

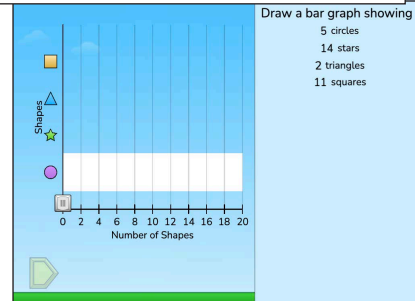
STMath.

Copyright © 2017 MIND Research Institute. All rights reserved.

There are vertical and horizontal bars with axes marked in different increments.



The levels move from visual to numeric data.



Scale and Measurement in Graphing1



Bar Graph Bridge 2

Grade 3

Scale and Measurement in Graphing

3 levels

Probing Questions

- How do you know how many there are of this shape?
- This bar is between the numbers. How do you figure out how many there are?

Something to Think About

In the previous game students created graphs. Here they are representing the information in the graph on a chart using numbers and tally marks.

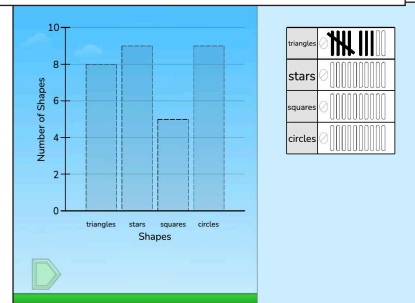
Classroom Connection

Project a graph and have students write statements describing the data shown. Be sure to include statements like, "There are _____ more _____ than _____."

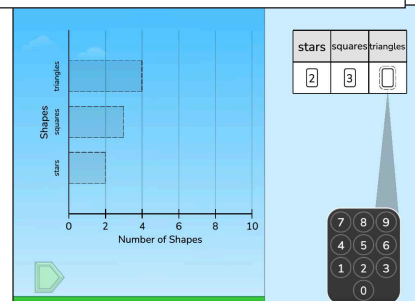
STMath.

Copyright © 2017 MIND Research Institute. All rights reserved.

In Level 2, students interpret tally marks and translate them to a graph.



Level 3 transitions to words instead of the shapes used in Level 1.



Scale and Measurement in Graphing2



Scaled Bar Graph Bridge

Grade 3

Scale and Measurement in Graphing

7 levels

Probing Questions

- How do you decide how high to make the bar?
- What does this key show you?
- How are you calculating how many circles/squares/triangles there will be on the bar graph?
- (Levels 5-7) What do the yellow half-boxes mean?

What's Important Here?

In Levels 1-6, students translate from a picture graph to a bar graph using a scale. In Level 7 students translate from a bar graph to a picture graph. Connect students' strategies using the scale on the picture graph to multiplication.

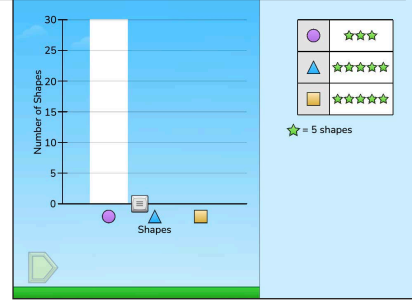
Using the Scrub Bar Stop the Animation

In Levels 5-7, use the scrub bar to stop the animation to show how the scale is illustrated. Ask students to explain what is being shown.

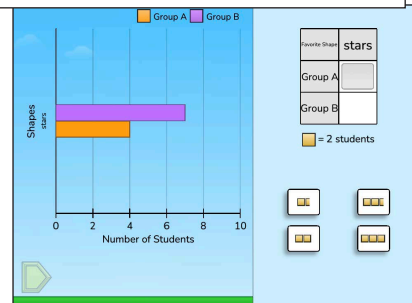
STMath.

Copyright © 2017 MIND Research Institute. All rights reserved.

The graph scale and orientation varies.



In Levels 5-7, the picture graph uses fractional parts.



Scale and Measurement in Graphing3