BRIDGES IN MATHEMATICS 1

GRADE 1 SUPPLEMENT

Set E1 Data Analysis: Bar Graphs

Includes

Skills & Concepts

★ pose questions and gather data

★ represent data using bar graphs

★ describe the data and draw conclusions

Bridges in Mathematics Grade 1 Supplement
Set E1 Data Analysis: Bar Graphs

Bridges in Mathematics is a standards-based K–5 curriculum that provides a unique blend of concept development and skills practice in the context of problem solving. It incorporates the Number Corner, a collection of daily skill-building activities for students.

The Math Learning Center is a nonprofit organization serving the education community. Our mission is to inspire and enable individuals to discover and develop their mathematical confidence and ability. We offer innovative and standards-based professional development, curriculum, materials, and resources to support learning and teaching. To find out more, visit us at www.mathlearningcenter.org.

Set E1 ★ Activity 1

ACTIVITY

Which Book Shall We Read Tomorrow?

Overview
Students create and discuss a bar graph to choose the book they'd most like to hear at story time the following day.

Skills & Concepts
★ pose questions and gather data
★ represent data using bar graphs
★ describe the data and draw conclusions

You'll need
★ 3 books (see Advance Preparation)
★ 3" × 3" sticky notes

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Advance Preparation Choose 3 picture books that are likely to appeal to your students.

....

**Instructions for Which Book Shall We Read Tomorrow?**

1. Gather children to your discussion circle. Show them the three books you've selected and explain that you need their help in deciding which to read at story time tomorrow. Take a few minutes to examine the books with the class, looking at the covers and some of the illustrations. Perhaps you've selected books written by authors already known to the children or books that feature well-loved characters or topics.

2. Now explain that they're going to work together to create a graph that will tell you which book to read. List the titles of the books along the bottom of the whiteboard. Work with input from the class to generate a symbol for each book, similar to the example below.
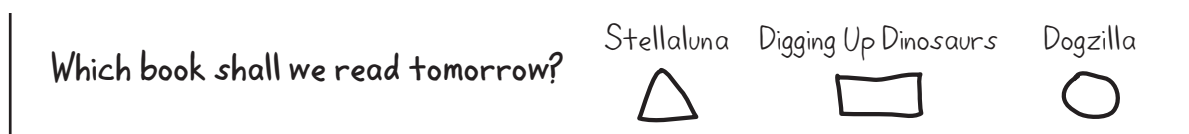
3. Show students the sticky notes and explain that they'll each get one in a minute. When they do, they'll need to write their name on the note and draw the symbol that matches the book they'd like most to hear. In order to allow each person to make his or her own decision, ask them to do this without talking to one another. As soon as they get their note, have them take it to their table, write their name and symbol, bring the note back to the circle, and sit down quietly.

4. When they've all returned to the circle, call them up to the board a few at a time to post their notes above the book they chose. Stop periodically to discuss the results. How many children have voted for each book? How many votes are already up on the board? How many votes still need to be posted? Which book has received the most votes so far? Which one has received the fewest? How many more (or fewer) children have voted for one book than another?

Activity 1 Which Book Shall We Read Tomorrow? (cont.)

Which book shall we read tomorrow?
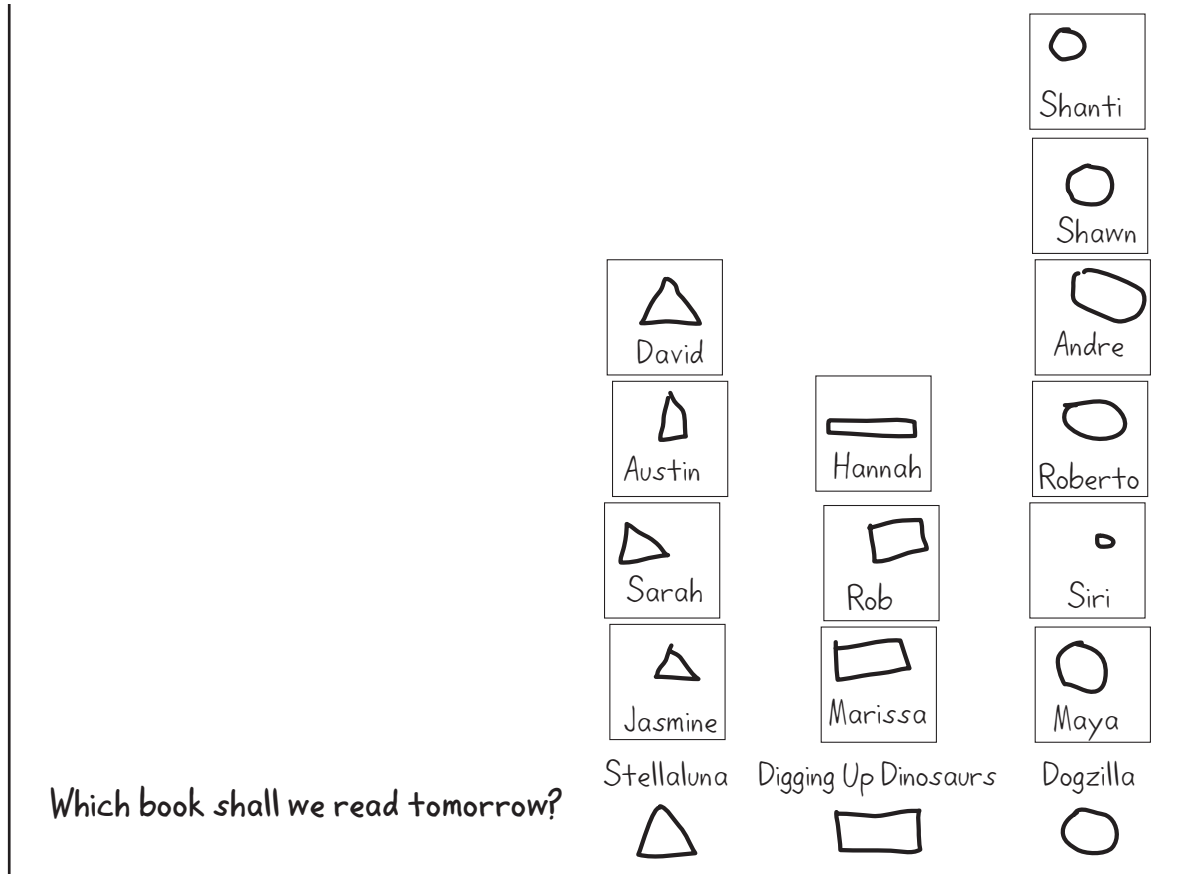
Students *It's 4, 3, and 6 so far.*
There's 13 up there—I counted!
Dogzilla *has the most so far. I hope it wins!*
Digging Up Dinosaurs *doesn't have very many yet—only 3.*

Teacher *How many more people have voted for* Dogzilla *than* Stellaluna *so far?*

Dante *2 more! You can see 2 extras sticking up on top.*

Teacher *How many fewer votes are there for* Digging Up Dinosaurs *than* Dogzilla?

Marissa *3 because 3 and 3 is 6.*

 5. When all the votes have been posted, record the number of votes each book received at the top of the columns. Then ask students to draw some conclusions. What does this graph tell them?

Students *More people want* Dogzilla *than the other books.*
That's the book we're going to read tomorrow.
Stellaluna *got the next most votes. We should read that one the next day.*
Digging Up Dinosaurs *didn't get many votes, but some kids want to hear it.*
Maybe we could read it the next day.

Set E1 ★ Activity 2

ACTIVITY

What's Your Favorite Vegetable?

Overview
Students create and discuss a graph about the raw vegetables they like to eat for lunch.

Skills & Concepts
★ pose questions and gather data

★ represent data using bar graphs

★ describe the data and draw conclusions

You'll need
★ a piece of chart paper (see Advance Preparation)

★ a felt pen

★ a yardstick

Advance Preparation Rule off columns and rows on a piece of chart paper to create a blank 3-column graph similar to the one shown below.

Our Favorite Raw Vegetable		

Instructions for What's Your Favorite Vegetable?

1. Gather children to your discussion circle. Ask them to discuss some of the raw vegetables people usually eat for lunch. Record the three that seem to come up most often at the bottom of the chart paper graph you've prepared.

Carrots	Celery	Tomatoes

2. Over the course of the day, have students each write their name in the column that shows their favorite of the three. Remind them to work from the bottom of the graph up.

Activity 2 What's Your Favorite Vegetable? (cont.)

3. Later in the day or the following day, when everyone's had a chance to enter his or her name, take some time to discuss the results. Ask students to share any observations they have about the data, and pose questions such as the ones listed below:

• How many votes did each vegetable get?
• Which vegetable is most popular in our class? How do you know?
• Which vegetable is least popular? How do you know?
• How many more votes did carrots get than celery?
• How many fewer votes did tomatoes get?
• How many votes are there in all? How did you count them?
• Do you think the graph would turn out the same way in a different first grade? Why or why not?

4. Finally, ask students to draw some conclusions. What does this graph tell them? Who else might find the information useful?

> **Teacher** *What does this graph tell us?*
>
> **Students** *Kids like carrots more than celery or tomatoes.*
> *Not many kids like tomatoes. I think it's 'cause they're squishy.*
> *Yeah! I think kids like crunchy stuff better.*
>
> **Teacher** *Can you think of anyone who might be interested in seeing our graph?*
>
> **Students** *Mrs. Gonzalez!*
> *Yeah, let's take it down to the office to show her.*
> *No, I know! Let's take it to the cafeteria ladies so they can see which vegetables we like best.*
> *I want to show it to my mom. She always puts tomatoes in my lunch.*