

## Class Moms

**Companion Text:** The Jakry Kids: Curiosity Shop, by Lin Jakary & illustrated by Ryan Olson

**Subject Area & Grade Level:** Mathematics, 3<sup>rd</sup> Grade

**Materials:** Graph paper, sticky notes

### Objectives

After this lesson, students will be able to:

- Plot data on a graph
- Define range, average
- Describe the shape of a data set as related to range and average

### Activity

Read the story once through without stopping. Then, return to page 10 and re-read it. Challenge students to figure out how old the Jakry Kids mother is. ( $102/3=34$ ) Pass out sticky notes, and ask students to write the age of their mother on it. Tell them to make their best guess if they aren't sure. Then, have them bring their notes up to you. As you are handed notes, put them in order by age.

Then, pass out a piece of graph paper to each student. Have them draw a horizontal line across the bottom of the paper, a few squares up, and a vertical line a few squares in from the left side. Model this one on the board, and verbally name them the x-axis and the y-axis, respectively. Then, stick the sticky notes one by one on the board, from least to greatest, next to the empty graph. Tell students we are going to make these data into a table, and from there, into a graph.

Define the range as the numbers between the age of the youngest mom, and that of the oldest mom, including the endpoints. Ask students to look over the data, and take a guess at the average age of the moms of the students in our class, and to write their guesses in the top, left corner of their papers. Then, make a T-shaped chart, and fill it in with ages in the left column, and the numbers of moms of each age in the right column, having students copy the chart in the top right corner of their graph paper.

Now, ask students for ideas about how we should label the axes of our graph. If needed, give them the hint that the axes correspond to the columns of the T-chart, the left column to the x-axis, and the right column to the y-axis. Ask, "What is the range of numbers we want to use on each axis?" and guide students through labeling the axes continuously (y-axis should begin at 0, x-axis should begin with the age of the youngest mom), and plotting the data. Model on the board as necessary.

### Reflection

Lead students in reflecting on the shape of the data shown in your graph. Ask, "What is the most common age of our class' moms? Does this mean it is the "average" age?" Explain that you would expect the average age to be somewhere near the "peak" of the "data mountain" you drew, though there can be exceptions if the "mountain" is very slanted to one side or the other. Ask, "How could



we find out the average with a calculator?" Then, compute the average, and lead a discussion with students comparing it to your graph.

