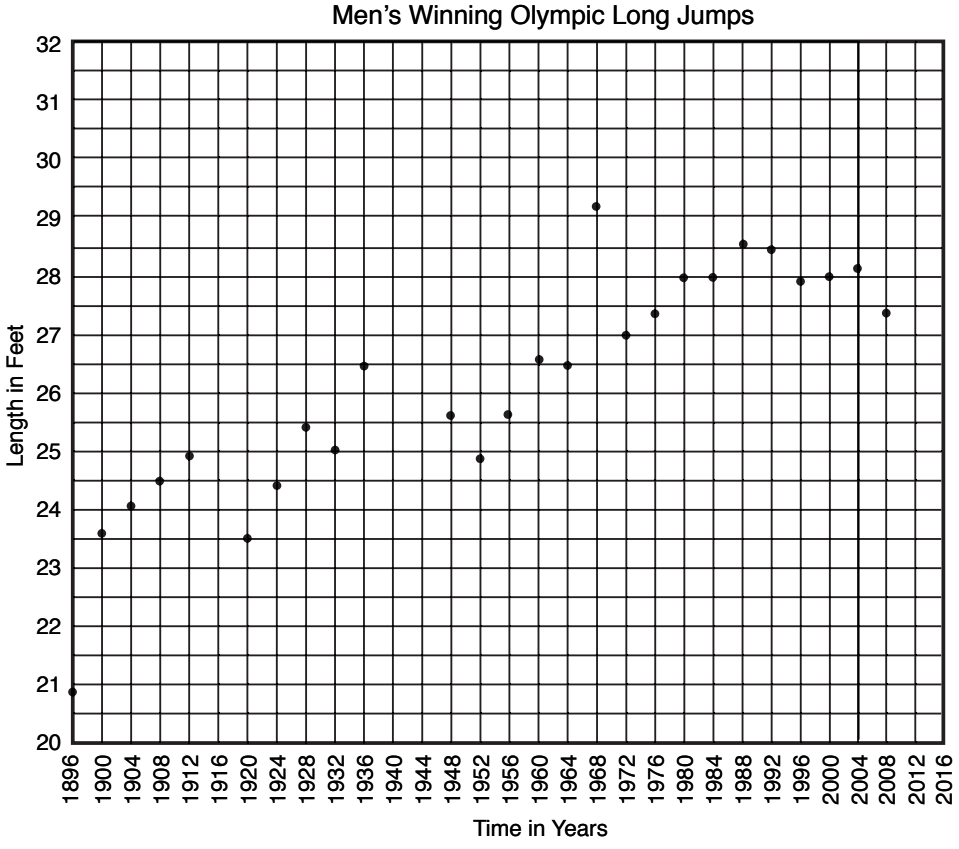
LETTER HOME

Using Data to Predict

Dear Family Member:

In this unit, your child's class will make predictions using graphs and patterns in data. We will also conduct an experiment called *Bouncing Ball.* Patterns in the *Bouncing Ball* data will allow us to make predictions about how high a ball will bounce when dropped from a given height. While making these predictions, students will solve problems and use math in much the same way it is used in science, technology, and the business world. This work will prepare them for algebra and improve their reasoning with multiplication and division.



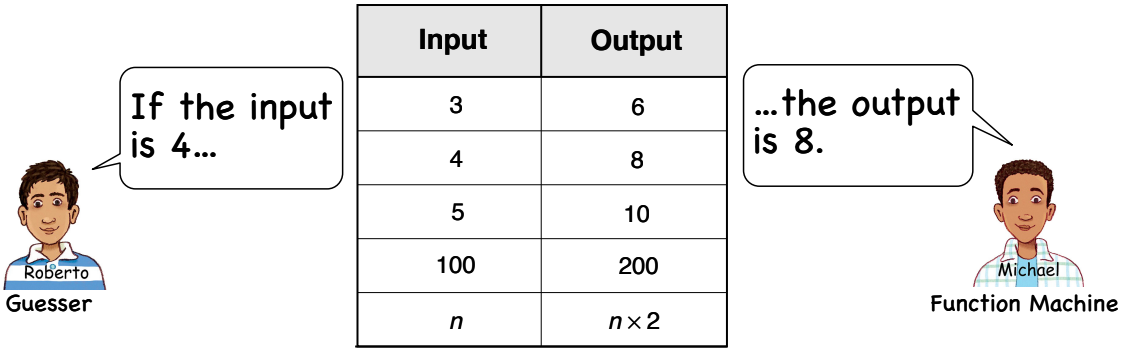
You can help your child with using data to make predictions using the following ideas:

Tell the Story in the Graph. Ask your child to tell you the story of the graph shown here. Predict the length of the winning long jump for the next Summer Olympic Games.

What is the Mean? Ask your child to describe the two models they used to find the mean of a set of data.The class measured and found the average head circumference of the students in the class.

Explore Bouncing Ball. Encourage your child to tell you about the Bouncing Ball lab. What data did the group collect? What predictions did the group make?

Play Guess My Rule. One player is the Function Machine and chooses a rule but does not share the rule with the other players. The other players, the Guessers, try to guess the rule by giving an input and the Function Machine player responds with a corresponding output. This is repeated until the Guessers figure out the rule for the Function Machine. Directions are in Lesson 6 in the *Student Guide.*



Input	Output
3	6
4	8
5	10
100	200
n	$n \times 2$

What is the rule? (Multiply the input number by 2.)

Math Facts and Mental Math

This unit continues the systematic review and assessment of the multiplication facts.

Multiplication Facts. Students review the last six facts to maintain and increase fluency and to learn to apply multiplication strategies to larger numbers.

You can help your child review these facts using the flash cards that are sent home or by making a set of flash cards from index cards or scrap paper. Study facts in small groups each night. As your child goes through the flash cards, put the cards in three stacks: Facts I Know Quickly, Facts I Can Figure Out, and Facts I Need to Learn.

For Facts I Need to Learn, work on strategies for figuring them out. Good strategies include:

Doubling. To solve 4×6, think $2 \times 6 + 2 \times 6 = 12 + 12$, so $4 \times 6 = 24$

Reasoning from known facts. To solve 6×7, I used 6×6. $6 \times 6 = 36$ and 6×7 is 6 more. $36 + 7 = 42$, and $6 \times 7 = 42$.

For Facts I Can Figure Out, use the flash cards to practice the facts for fluency.

For Facts I Know Quickly, help your child use mental math strategies to multiply 10s and 100s: $40 \times 8 = 3200$, $700 \times 8 = 5600$, $6 \times 7000 = 42{,}000$.

Thank you for taking the time to talk with your child about what he or she is doing in math.

Sincerely,