Grade 3 Important Information

Linear Measurement and Data

Dear Family,

Our class is beginning the last unit of study in mathematics before we circle back to review 3rd grade content. The unit is called *Linear Measurement and Data*. In this unit of study, students work on representing data and solving problems using scaled bar graphs and scaled pictographs. Students then generate measurement data to the nearest half inch and quarter inch and represent the data on a line plot. The specific learning goals your student will be working toward are listed below with examples of student work showing understanding of each learning goal.

Learning Goal: Draw scaled picture graphs and draw and analyze scaled bar graphs	
Example Problems	**Example Student Solutions**
Esther conducted a survey and collected data from her 3rd grade classmates. How can Esther represent her data in a bar graph? What intervals, other than 1, could she use to represent the data?	When I started making the scale, I realized that intervals of 1 or 2 would make the bar graph too large. If I used an interval of 10, it would be hard to know how many people voted, so I used an interval of 5. **Student's Favorite Color**
Use the information in the chart below to create a scaled picture graph that represents the data. **Touchdowns Scored This Season in the Junior Football League** Bears — 20 Cardinals — 8 Hawks — 24 Lions — 12 Tigers — 16	Touchdowns Scored This Season in the Junior Football League Each football stands for 4 touchdowns. I can use a picture graph to represent the data! All the scores are a multiple of 4, so each football can represent 4 touchdowns. The picture graph helps me to easily see that the Hawks scored 4 more touchdowns that the bears and that the Cardinals scored 8 fewer touchdowns than the Tigers.

Learning Goal: Measure objects to the nearest half inch and quarter inch and make a line plot to show the data.

| Example Problem	Example Student Solutions

It's Field Day at Sunshine Elementary School! When participating in the standing long jump, the class has to measure each jump to the nearest quarter inch. They are to record the five longest jumps from their class on the table and mark them on the line plot.

Top 5 Student Jumpers in Mrs. Tandy's Class	Jump Length in Inches
Micah	$18\frac{1}{2}$
Nori	$17\frac{1}{4}$
Thomas	$18\frac{1}{2}$
Bertan	$16\frac{3}{4}$
Kimber	$18\frac{1}{4}$

Top 5 Student Jumpers

Jump Length in Inches
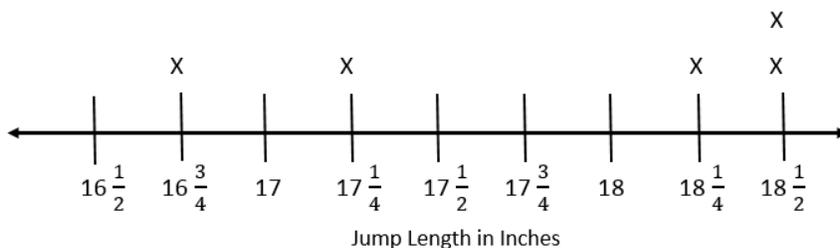
Learning Goal: Justify his/her thinking and explain why he or she agrees or disagree with others.

Things you can do at home to support your student throughout this unit of study:

Investigate a Topic
Think of a question you want to answer about something in your house or your neighborhood. Collect data that will give you some information about your question. One investigation might be "How many times a day does our family use water?" Together with your child, plan your data collection method. Make predictions about what you will find out. After you have collected your data, take some time to look closely at it. Does anything surprise you about the data you have collected? Do the data communicate any useful or interesting information about water use in your family? Your child may want to create some sort of representation of the data. Other questions you might investigate include "How much do we watch television?" or "Do cars stop at the stop sign at the end of our block?"

Data in the Media
Look for examples of graphs in newspapers and magazines. Talk with your child about what these graphs represent. What do these graphs communicate? Discuss what choices the graph maker made and why the graph maker might have made these choices. What other choices might you make if you were creating a graph that represented these data?