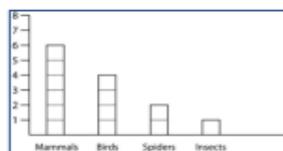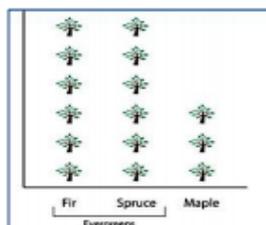# Eureka Math™ Tips for Parents

Problem Solving with Length, Money, and Data

Module 7 presents an opportunity for students to practice addition and subtraction strategies within 100. They also use problem-solving skills as they learn to work with various types of units within the contexts of length, money, and data. Students will represent categorical and measurement data using picture graphs, bar graphs, and line plots.

Bar Graph

Picture Graph

Line Plot

Number of teeth lost

Scale

What Came Before this Module:
In Module 6, we laid the conceptual foundation for multiplication and division in Grade 3. Students made equal groups and learned about even and odd numbers.

What Comes After this Module:
In Module 8, students extend their understanding of part–whole relationships through the lens of geometry. They compose and decompose shapes and begin to see unit fractions as equal parts of a whole.

New Terms in this Module:

Bar graph—diagram showing data using lines or rectangles of equal width

Data—facts assembled for analysis or information

Degree—unit of temperature measure

Foot—ft, unit of length measure equal to 12 inches

Inch—in, unit of length measure

Legend—notation on a graph explaining what symbols **represent**

Line plot—graph representing data with an X above each instance of value on a number line

Picture graph—representation of data like a bar graph, using pictures instead of bars

Scale—system of ordered marks at fixed intervals used as a reference standard in measurement

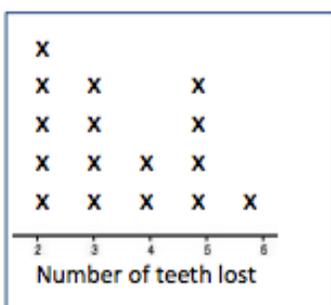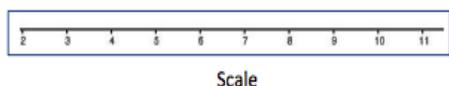**Table**—representation of data using rows and columns

Yard—yd, unit of length measure equal to 36 inches or 3 feet

+ How You Can Help at Home:

- Ask your student to count the coins received in change when shopping or to count a handful of coins at home.

- Once students have learned a few ways of representing data, find something around the house you can make a line or bar graph about, e.g., types of stuffed animals, colors of LEGO pieces, etc.

Key Common Core Standards:

- *Use place value understanding and properties of operations to add and subtract.*

- *Measure and estimate lengths in standard units.*

- *Relate addition and subtraction to length.*

- *Work with time and money.*

- *Represent and interpret data.*

Prepared by Erin Schweng, Math Coach

A number bond and tape diagram both showing how students will work on addition and subtraction with money as the context

$1

| ? | 66¢ |

$$100 - \square = 66$$

$$66 \xrightarrow{+4} 70 \xrightarrow{+30} 100$$

$1

19¢
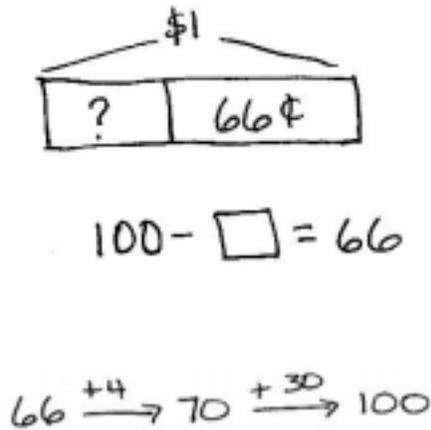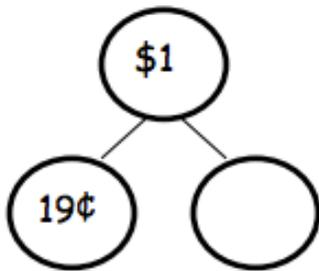
Spotlight on Math Models:

Money

Students will use this model in Module 7 of *A Story of Units* as they work with measurement.

A *Story of Units* has several key mathematical "models" that will be used throughout a student's elementary years.

In Module 7, students work with various units of measurement, one of which the most exciting is money. Students see how 100¢ can be decomposed various ways, and they use the familiar number bond and tape models to demonstrate addition and subtraction problems. Place value concepts are reinforced as we review that one hundred 1¢ coins and ten 10¢ coins both make $1.

We also work with bills, which is very similar to our work with whole number addition and subtraction. A typical problem is as follows:

Ryan went shopping with 3 twenty-dollar bills, 3 ten-dollar bills, 1 five-dollar bill, and 9 one-dollar bills. He spent 59 dollars on a video game. How much money did he have left?

This problem showcases the accumulated skills needed to both compute the mathematics, as well as handle the multi-step nature of the work. These Grade 2 math students have learned so much!

Sample Problem from Module 7, Lesson 4:
After a trip to the zoo, Ms. Anderson's students voted on their favorite animals. Use the bar graph to answer the following questions.

a. Which animal got the fewest votes?
b. Which animal got the most votes?
c. How many more students liked komodo dragons than koala bears?
d. Later, two students changed their votes from koala bear to snow leopard. What was the difference between koala bears and snow leopards then?

Favorite Animals

Flamingo
Snow Leopard
Komodo Dragon
Koala Bear

1 2 3 4 5 6 7 8 9 10 11 12