## GRADE FOCUS

## Second Grade mathematics is about (1) extending students' understanding of base-ten notation; (2) building fluency with addition and subtraction; (3) using standard units of measure; and (4) describing and analyzing shapes.

- Module 1: Sums and Differences to 20
- Module 2: Addition and Subtraction of Length Units
- Module 3: Place Value, Counting, and Comparison of Numbers to 1000
- Module 4: Addition and Subtraction Within 200 with Word Problems to 100
- Module 5: Addition and Subtraction Within 1000 with Word Problems to 100
- Module 6: Foundations of Multiplication and Division
" Module 7: Problem Solving with Length, Money, and Data
- Module 8: Time, Shapes, and Fractions as Equal Parts of Shapes


## LETS CHECK IT OUT!

## MODULE 7 FOCUS

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.

## MORE SPECIFICALLY, CHILDREN WILL LEARNHOW TO:

- 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


Bar Graph

## TOPIC OVERVIEW

Topics are the lessons within a module that help children master the skills above. Here are the lessons that will guide your child through Module 7:

- Topic A: Problem Solving with Categorical Data
- Topic B: Problem Solving with Coins and Bills
- Topic C: Creating an Inch Ruler
- Topic D: Measuring and Estimating Length Using Customary and Metric Units
- Topic E: Problem Solving with Customary and Metric Units
- Topic F: Displaying Measurement Data


## WORDS TO KNOW

- 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



## SAMPLE PROBLEMS

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 1ڭ 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.

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?


## 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.

