



Core Focus

- Reading, writing, and representing three-digit numbers
- Measuring length in inches, feet, and yards

Numbers in Base-10

- Our system for reading, writing, and working with numbers is based on two ideas that are equally important: grouping by tens, and place value. In Module 3, students apply this understanding to three-digit numbers.
- Students read 463 as “four hundred sixty-three”. The word “hundred” is said after reading the number in the hundreds place but the tens and ones are said together as “sixty-three”.

3.2 Writing Three-Digit Numbers

What number is shown by these blocks?
How do you know?

How could you show the same number on these expanders?
How do you know where to write the digits?

Look at the picture of blocks above.
Look at these expanders.

What blocks must be added to those above to create this number?

In this lesson, students represent three-digit numbers with base-10 blocks and record the numbers of hundreds, tens, and ones on a numeral expander.

- Students use their understanding of hundreds, tens, and ones to accurately place numbers on a number line and explain their thinking.

3.6 Identifying Three-Digit Numbers on a Number Line

Look at this number line. What do you notice?

What numeral would you write in the position shown by the arrow? How do you know?
What other numerals could you label on the number line?
How could you draw marks to show steps of 50 from 0?
What numerals would you label at these marks?
Where would you draw more marks to find 10?

You could split the part between 0 and 100 into 10 smaller parts that are the same length. The first part would be 10.

Could you draw more marks to find the number 1? Explain your thinking.

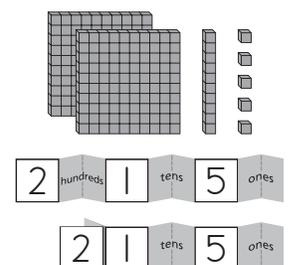
In this lesson, students locate three-digit numbers on a number line.

Ideas for Home

- Build numbers using small objects (e.g. toothpicks). Each toothpick represents “one”, ten toothpicks wrapped with a rubber band represent “ten”, and a collection of ten sets of ten in a paper cup represents “100”.
- Using the small objects, alternate between building various numbers, writing their names in words and numerals, and comparing their sizes. Remember to ask your child how they know.
- Take turns with your child to locate three-digit numbers on a number line. Say, “Find 275 on the number line.” Ask your child how they know where to locate the numbers.

Glossary

- ▶ **Base-10 blocks** (models for hundreds, tens, and ones) and numeral expanders are used to support place-value understanding.



Customary Length

- Students have experience with using nonstandard tools such as paper clips to compare lengths of objects. In Grade 2, they transition to using units that are one inch long. This leads to using a ruler to find the length of objects.
- Students estimate and measure the length of classroom objects. They also decide which unit of measure is most appropriate, feet or inches.

3.8 Introducing the Inch

What do you know about one inch?

My dad said his shoe is about 10 inches long.

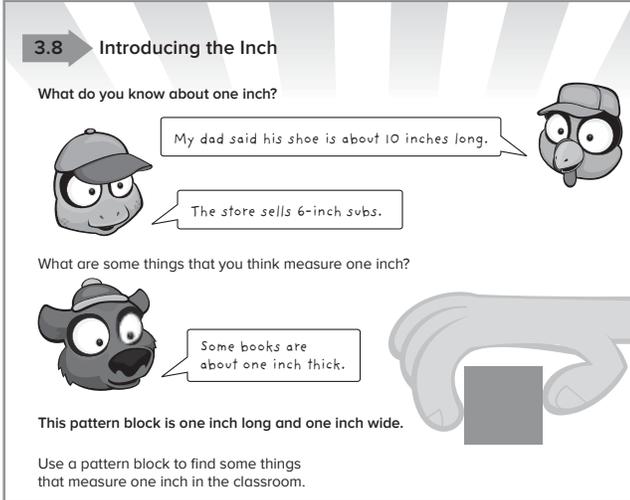
The store sells 6-inch subs.

What are some things that you think measure one inch?

Some books are about one inch thick.

This pattern block is one inch long and one inch wide.

Use a pattern block to find some things that measure one inch in the classroom.



In this lesson, students convert lengths that are greater than 12 inches to feet and inches, and vice versa.

- Students are introduced to the use of “foot” as a unit of length, and learn that 12 inches is the same as the standard foot.
- Lengths longer than 12 inches are expressed in terms of feet and inches. Students measure different classroom items and share their findings by reporting “the table is about two and half feet long”, or “the chair is 17 inches across or 1 foot 5 inches”.

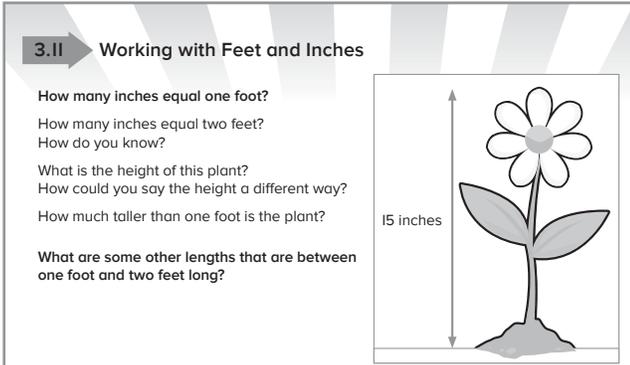
3.11 Working with Feet and Inches

How many inches equal one foot?
How many inches equal two feet?
How do you know?

What is the height of this plant?
How could you say the height a different way?
How much taller than one foot is the plant?

What are some other lengths that are between one foot and two feet long?

15 inches



In this lesson, students convert lengths that are greater than 12 inches to feet and inches and vice versa.

Ideas for Home

- Compare the height of the people in your family. Talk about measuring height using feet and inches and describing height in two ways: e.g. “62 inches” is the same as “five feet, two inches”.
- Ask your child to estimate the length of everyday items. E.g. ask, “About how many inches long is the fork?” “About how many feet across is your bed?” Remember to follow up with, “How do you know?”
- Ask your child what unit would be best for measuring different items in your home or neighborhood. E.g. inches might be best to measure the length of a crayon, feet might be best to measure the length of a table, and yards might be best for measuring the distance from home to the bus stop. Ask your child to explain their thinking.

Glossary

- ▶ 12 inches = 1 foot
- ▶ 3 feet = 1 yard