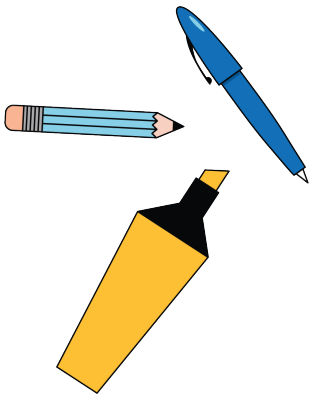
Unit 6 Family Support Materials

Length Measurements within 120 Units

In this unit, students measure length and count measurement units up to 120. They also solve addition and subtraction story problems, with unknowns in all positions.

Section A: From Direct to Indirect Measurements

In this section, students use indirect comparison to order three objects by length. For example, if the highlighter is longer than the pen and the pencil is shorter than the pen, then we know that the highlighter is longer than the pencil.



Section B: Measure to 120 by Iterating Units

In this section, students learn the conventions of length measurement and represent length measurements with a number and a unit. They understand that the length measurement of an object is the number of same-size length units that span it, without gaps or overlaps.



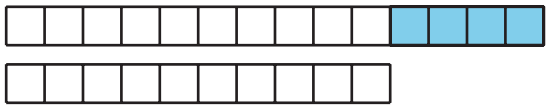
Students use manipulatives (connecting cubes, paper clips, and base-ten cubes) as length units. They use base-ten cubes to measure lengths that are longer than 99 units as they expand their counting and number-writing skills to 120. In the example, the shoe is 15 connecting cubes long.

Section C: All Kinds of Story Problems

In this section, students solve all types of story problems, with unknowns in all positions. Students use the context of measurement, which invites them to build and compare concrete objects as they solve problems. They interpret diagrams that represent these problems. Students will be asked to solve a problem such as:

Kiran's bracelet is 14 cubes long.
His sister's bracelet is 10 cubes long.
How much longer is Kiran's bracelet than his sister's?

Students also will be asked to make sense of this representation of the problem:



Students solve take-away problems when the start is unknown. These problems can be tricky because the action is "take away," but students need to add to solve the problem.

For example:

Elena has some beads in a box. *She uses 5 of them to make a bracelet.* *She has 10 beads left.* *How many beads were in Elena's box?*	An equation that represents the situation is $? - 5 = 10$. However, students might write $10 + 5 = ?$ to find the answer to the question.

It is important for students to explain how the equation they wrote matches the story problem.

Try it at home!

Near the end of the unit, ask your first grader to measure different objects around the home, using paper clips, and to write the measurements down.

Questions that may be helpful as they work:

- What is the longest object you measured? The shortest object?
- How much longer is the _____ than the _____?
- What is the length of _____ and _____ combined?

Solution:
Answers may vary.

Sample response:

- The longest object I measured was the length of the table. The shortest object I measured was the length of an eraser.
- The picture frame is 3 paper clips longer than the spoon.
- The length of the paper and the pencil combined is 13 paper clips.

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