

2 Develop the Concept: Interactive



10–15 min

Interactive Learning

Overview Students measure lengths to the nearest $\frac{1}{2}$ inch and $\frac{1}{4}$ inch.



Essential Question How do you measure to a fraction of an inch?

Materials Interactive Learning Recording Sheet 21 (1 per student); Inch ruler or Teaching Tool 33 (1 per student)



Set the Purpose *You have learned how to measure objects to the nearest inch. Today, you will use a ruler to measure the length of an object to the nearest fraction of an inch.*

Connect *How would you label a number line from 0 to 1 in fourths?*
 $[0, \frac{1}{4}, \frac{2}{4}, \frac{3}{4}, 1]$ or $[0, \frac{1}{4}, \frac{2}{4}, \frac{3}{4}, 1]$

Pose the Problem

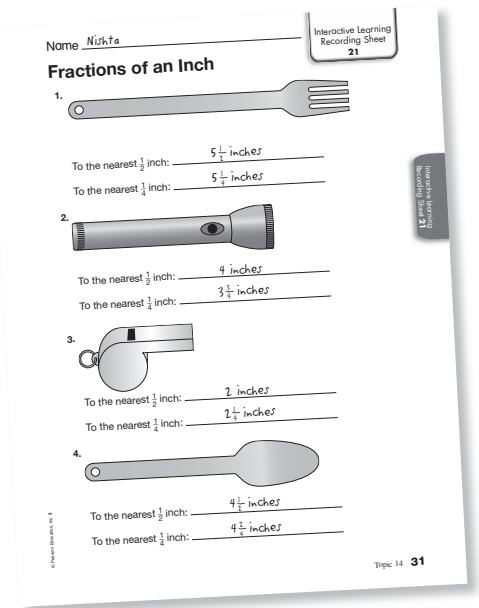
Distribute the recording sheets and rulers. *Use the inch ruler to measure each object on your recording sheet to the nearest $\frac{1}{2}$ inch and $\frac{1}{4}$ inch. Record each measurement in inches.* Have students use the rulers to measure each object. Have them share their work and measurements.

Model/Demonstrate

Reinforce proper measurement by showing students where the $\frac{1}{2}$ -inch and $\frac{1}{4}$ -inch marks are on a ruler. Demonstrate how to measure the length of one of the objects on the recording sheet.

Instruct in Small Steps

Discuss how students made each measurement and review how to measure. *How did you decide where to place the ruler to measure?* [I lined up the 0 on my ruler with the left edge of the object.] *How did you know where to make the measurement?* [At the farthest point on the right end of the object.] *How did you find the length to the nearest $\frac{1}{2}$ inch?* [I looked for the closest $\frac{1}{2}$ -inch mark on the ruler that lined up with the right end of my object.] *How did you find the length to the nearest $\frac{1}{4}$ inch?* [I looked for the closest $\frac{1}{4}$ -inch mark on the ruler that lined up with the right end of my object.] *How did these measurements compare?* [Possible answer: Sometimes they were the same and sometimes they were different.] *How is measuring to the nearest $\frac{1}{2}$ inch similar to measuring to the nearest inch? How is it different?* [Sample response: You line up the ruler with the length of the object the same way, but you read the length using a different mark on the ruler.]



Have students measure and compare the length and width of several books to the nearest $\frac{1}{2}$ -inch and $\frac{1}{4}$ -inch.



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Link to Investigations, Second Edition
Joint-Usage Master Plan
 Blended Instruction (Plan 1):
 Topic 14 and Units 2 and 4