

Lesson 50

Lesson Objective

Students will measure lengths using non-standard units.

Preparation

For the entire class: Pencils and paper clips.

Lesson Plan

Divide the class into two groups. Give one group a handful of paper clips, and the other group a handful of pencils.

Label two desks or tables A and B. Ask each group to measure the length of a desk or table top, using only the paper clips or pencils.

Ask them to write their findings on the board, giving both the value and the type of units (clips or pencils).

Have the groups swap tables and measure again, then write their new findings on the board.

Discuss the results with the class.

Why do they get different values with the two different measuring approaches?

Can other people get the same numbers using rocks and sticks of gum?

Show your students a pencil. Ask if they could use the pencil to measure their shoe (or pen). Have a student measure the item using the pencil. How many pencils long is it?

Now have the student measure a paper clip using the pencil. How many pencils long is the paper clip? (Less than one pencil long.)

From the pencil measurements, which item is longer?

Explain that we can measure length in many different ways. Sometimes we can compare the lengths of two objects (such as the shoe and paper clip) using a completely different object (a pencil).

Discuss the results with the class.

Could you measure with paper clips or pencils turned sideways?

Show the class two pencils of differing lengths and one paper clip. Have a student place the three objects in order from shortest to longest. Ask another student to pick up the longest item, then the shortest.

Hand a student a pencil, a paper clip, and a pen (or ruler). Ask the student to place the three objects in order from longest to shortest. Ask another student to pick up the shortest item, then pick up the longest.