

Topics: Measurement, Estimation, Metric system

Materials List

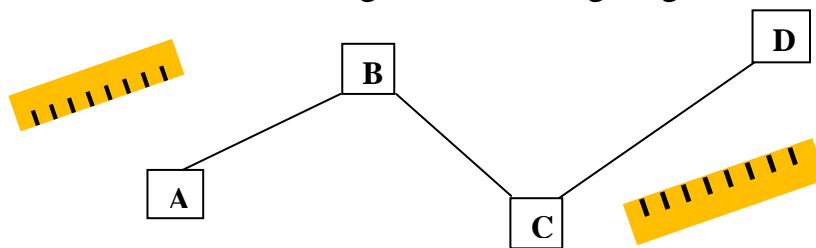
- ✓ Centimeter Sam Game Board or equivalent
- ✓ Game pieces
- ✓ Metric Rulers
- ✓ Blank playing cards
- ✓ Permanent marker

This activity can be used to support the teaching of:

- Measurement and units (Common Core Math Standards: Measurement and Data, Grade 1, 2; Grade 2, 1; Grade 4, 1)

Centimeter Sam

Practice Measuring and estimating length in centimeters



This game gives students practice measuring in centimeters. This game can also be used for estimating length.

Assembly

1. **If using a RAFT board:** Because of adjustment during the printing process, the yellow lines are no longer EXACTLY unit centimeters. To correct this, use a permanent marker to adjust the lengths of the line segments so that the yellow part measures exactly in whole centimeters. Make a black mark at one or both ends of each line segment so that the remaining yellow lines give exact measures.

To create a board from scratch:

- On a large cardstock sheet, draw a series of connected line segments which have lengths that are in (exactly) whole centimeter units (e.g., 5 cm, 7 cm, 10 cm). Clearly mark the starting and ending point of each segment, to facilitate measuring. Label the beginning for the first segment, the points where the segments meet, and the end of the last segment with the letters of the alphabet (“A”, “B”, “C” ...).
 - Create a path of spaces (squares, circles, etc) using labels, stamps, or stickers that players will follow as they play the game.
2. Prepare blank cards by writing the names of the line segments using the letters at the beginning and end of each segment (e.g., line AB, BC, CD, DE ...).

Playing the Game (for 2-4 players)

1. Each player takes a ruler and chooses a game piece, which he/she places on the “start” space. The players will move along the line, looping at the middle and then head back to “start”.
2. The cards are shuffled and placed in a pile on the board. Taking turns, each player picks a card. The player then measures the appropriate line on the board and moves forward that many spaces along the path. For example, if the player takes card “AB” and line AB measures 12 cm, the player moves 12 spaces along the path.
3. The first player back to start wins.

Taking it Further

- After the students have played the game several times and are comfortable with their measurement skill, try this alternative way of playing: Players take turns taking a card from the top of the pile. The player then estimates the length of the line without measuring it. Then the line is measured. If the player’s guess is correct, he/she moves forward that many spaces. If the guess is incorrect, the player moves back one space.
- Have students create their own measurement games and boards.

Web Resources (Visit www.raft.net/raft-idea?isid=30 for more resources!)