

# The Search for Centimeters

## Purpose

Students will estimate the length of various objects in the classroom.

## Materials

*For each student:* centimeter ruler, copy of Black Line Master (BLM) *The Search for Centimeters*

## Activity

### A. Can You Estimate?

1. Ask students: "Who can show me how long a centimeter is?" Have students come up and try to demonstrate how long a centimeter is.
2. Hold up an object that is one centimeter in length and ask: "How long is this?" Have students give you guesses, or estimates, of its length.
3. Ask the class: "How could we tell for sure how long this object is?" When someone suggests measuring the object, allow a volunteer to come to the front of the class and measure the length with a ruler.
4. Inform students that they now should know what a centimeter looks like. Ask them if they can find other objects in the room that are about one centimeter in length. Tell students that they are going to go on a search for centimeters.
5. Hand out the BLM *The Search for Centimeters* and tell the students they are going to first look for items they think are 1 cm in length and then items that are 15 cm in length.
6. Tell students they are not allowed to use rulers during this search – they will have to estimate how long the items are.
7. Have students explore the entire classroom trying to find items they think are 1 cm in length. Each time a student finds an object, have him/her draw or list the object in the appropriate box on the BLM *The Search for Centimeters*.
8. When students are done looking for 1 cm items, have them return to search for objects they think are about 15 cm long. Each time a student finds an object, have him/her draw or list the object in the appropriate box on the BLM.
9. Allow ample time for students to search the room for objects and record their estimates.

(continued)

MEETING  
INDIVIDUAL



NEEDS

For those students who complete the activity with ease, write questions on the chalkboard such as, "How tall is the trash can?" Have students estimate how tall the item is and then measure it to check their estimate.

INCORPORATING



TECHNOLOGY

Have students use a word processing or drawing program to make their own rulers.

Standards Links  
2.1.2, 2.5.2

**Activity (continued)** 

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**B. The Real Length**


1. When students have completed their search, have each student share his/her estimates with the class. Did any of the students record the same objects?
2. Have students take a ruler and return to each of the items they documented on their BLM. Instruct students to measure the length of each item. Have students record the measured length of each item underneath the object's name or picture on the BLM.
3. Have students compare the actual measurement to the estimated measurement. Ask: "How close were you?" Instruct students to circle the items that were one centimeter or less away from the real length and put an "X" through objects that were more than one centimeter away from the estimated value.


**Questions for Review** 


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**Basic Concepts and Processes**

As students are searching the room for objects of lengths of 1 or 15 centimeters, ask questions such as:

 What item do you think is 1 centimeter long? 15 centimeters?

 How did you estimate the length?

 How long do you think this object is?

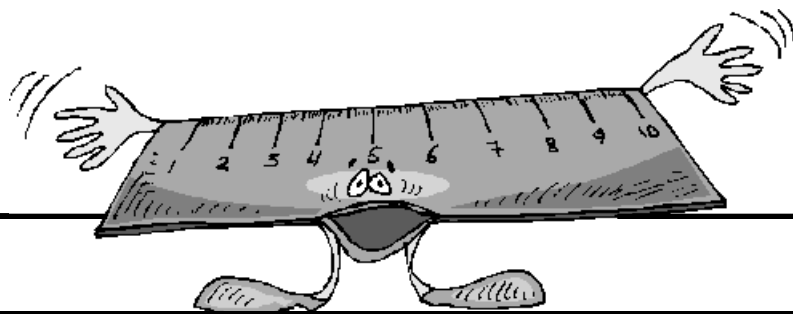
 How would you check your estimate?

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Name: \_\_\_\_\_

## The Search for Centimeters

**I think these things are about one centimeter long:**



**I think these things are about 15 centimeters long:**

# The Search for Centimeters

## Teacher Directions

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Hand out the BLM *The Search for Centimeters* and tell the students they are going to first look for items they think are 1 cm in length and then for items that are 15 cm in length. Tell students they are not allowed to use rulers during this search – they will have to estimate how long the items are.

Have students explore the entire classroom trying to find items they think are 1 cm in length. Each time they find an object, have them draw or list the item in the top box on the BLM. When students are done looking for 1 cm items, have them return to search for objects they think are about 15 cm long. Each time a student finds an object, have him/her draw or list the object in the box at the bottom of the BLM. Allow ample time for students to search the room for objects and record their estimates.

When students have completed their search and shared their estimates with the rest of the class, have them return to each object to measure it with a ruler. Have students record the measured length underneath the object's name or picture on the BLM. Have students compare the actual length to the estimated length. Instruct students to circle all objects that were within a centimeter of the real length and draw an "X" through all objects that were more than 1 cm off of the estimated length.

## Answer Key

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Answers will vary. Check to see that students measured each item. Evaluate how close the students were in making their estimates.