Lakeshore

MEASUREMENT
Hands-On Kit

Designed to meet these objectives:

Math

- Students will use measurement tools.
- Students will compare units of measurement.
- Students will estimate measurements.

With this comprehensive kit, it's easy to demonstrate measurement on your overhead projector—while students follow along at their desks! The kit includes overhead materials designed to help you teach students about measurement, plus individual sets of coordinated student materials that provide interactive, hands-on learning for up to 20 students. Plus, this guide includes reproducible activity mats and detailed instructions for using them, so you have everything you need to create exciting hands-on activities in your classroom!

What's Included

- 1 set of overhead materials, including a 6" ruler and 30 transparent yellow area tiles
- 20 student pouches filled with a measuring tape, 6" ruler, and 30 yellow area tiles
- 4 reproducible activity mats (in this guide)
- Sturdy storage box

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GG878
Ages 6+
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Introducing Measurement

Begin by introducing the basic units of measure that students will be using for the activities in the kit. Explain that there are two different systems of measurement: standard and metric. Demonstrate how to measure objects using both systems.

Show students how each tool included in their pouches is used. Demonstrate that the ruler is used to measure small objects and the measuring tape to measure larger ones. Point out that the measuring tape has inches on one side and centimeters on the other, so it can be used to measure in either system.

Using the Reproducibles

The reproducibles can be used as work mats for many different activities. Try some of the suggestions below! (When you photocopy a reproducible for your students, we suggest you make another photocopy on a sheet of acetate. You can use this to demonstrate the activity on your overhead projector.)

Finding Perimeter and Area

Give each student a copy of the Finding Perimeter and Area reproducible found on pages 4-5 of this guide. Explain that students will be using the tools in their pouches to find the perimeter and area of the rooms shown.

Instruct students to use their rulers to measure each side of the room on the left. Then, have them add each of these measurements together to find the perimeter of the space. When they have found the answer, they write it down in the blank space provided on the page.

To find the area of the room, have students use the yellow tiles in their pouches. Instruct them to place the tiles inside the space until the entire room has been filled. Then, by simply counting the number of tiles they have placed, students can find the area. When they have found the answer, have them write it down in the space provided on the page.

When students have successfully found the perimeter and area of the room on the left, have them repeat the process with the room on the right.

Measuring All Around

Give each student a copy of the Measuring All Around reproducible found on pages 6-7 of this guide. The reproducible features illustrations of common classroom objects, such as a table, chair, and backpack. Explain that students will be using

their measuring tapes to find the height of each object shown on the page.

Demonstrate how to measure an object in the classroom. Remind students that one side of the measuring tape has measurements in inches, while the other side has centimeters. Measure the object you have chosen with the inch side of the tape first, writing down the height on the board. Explain how to write measurements with increments such as ½ or ¼.

Next, measure the same object with the other side of the tape, and then write down its height in centimeters on the board. When students understand how to measure objects in both inches and centimeters, let them complete the activity on their own.

Measure Treasures

Give each student a copy of the Measure Treasures reproducible found on pages 8-9 of this guide. Explain that students will be estimating the heights of various objects in the classroom, and then using their measuring tapes to find the actual heights.

Explain that an estimate is a guess that is based on what they know about measurements. Give students an example by estimating the height of your desk. Write your estimate on the board. Then use the measuring tape to find the actual height of the desk and write the result under your estimate. Was your guess close? Was it more or less than the real height? When students understand how to estimate heights, have them complete the activity on the sheet.

Iggy the Inchworm & Celine the Centipede

Give each student a copy of the reproducible found on pages 10-11 of this guide. Explain that they will be using their measuring tapes to find the lengths of the two cute characters shown on the page.

Have students start by measuring each character with the standard side of their tapes, and then have them write the lengths in inches in the spaces provided. Next, have them measure the characters with the metric side, writing down the results in centimeters.

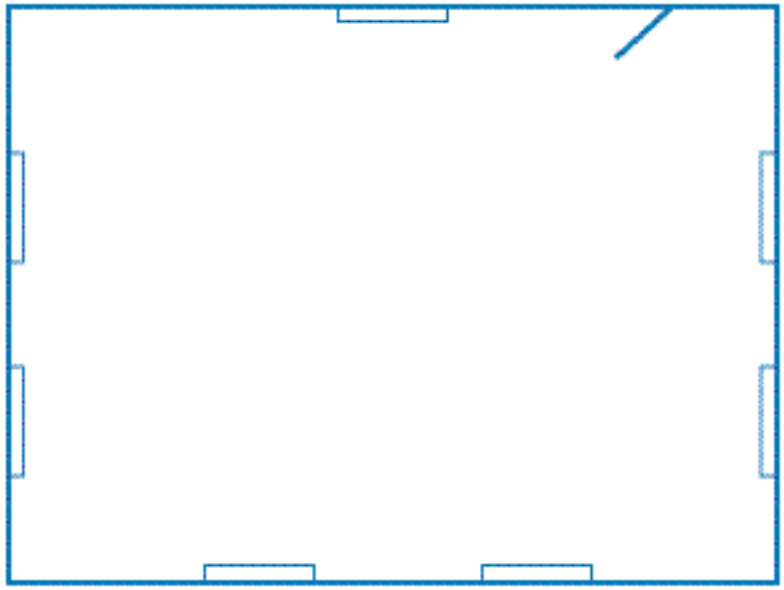
When students have measured both characters, ask which type of measurements end up with larger numbers, standard or metric? Lead a discussion about how centimeters are smaller than inches, so a measurement in centimeters will always have a larger number.

Finding Perimeter and Area

Starting with room #1, use your ruler to measure each side of the room. Add up all of your measurements. This number is the perimeter of the room. Write this number down in the space marked "Perimeter."

Next, use your yellow tiles to figure out the area of room #1. Place the tiles inside the outline of the room. When the room is filled, count up the number of tiles that fit inside. This is the area of the room. Write this number down in the space marked "Area."

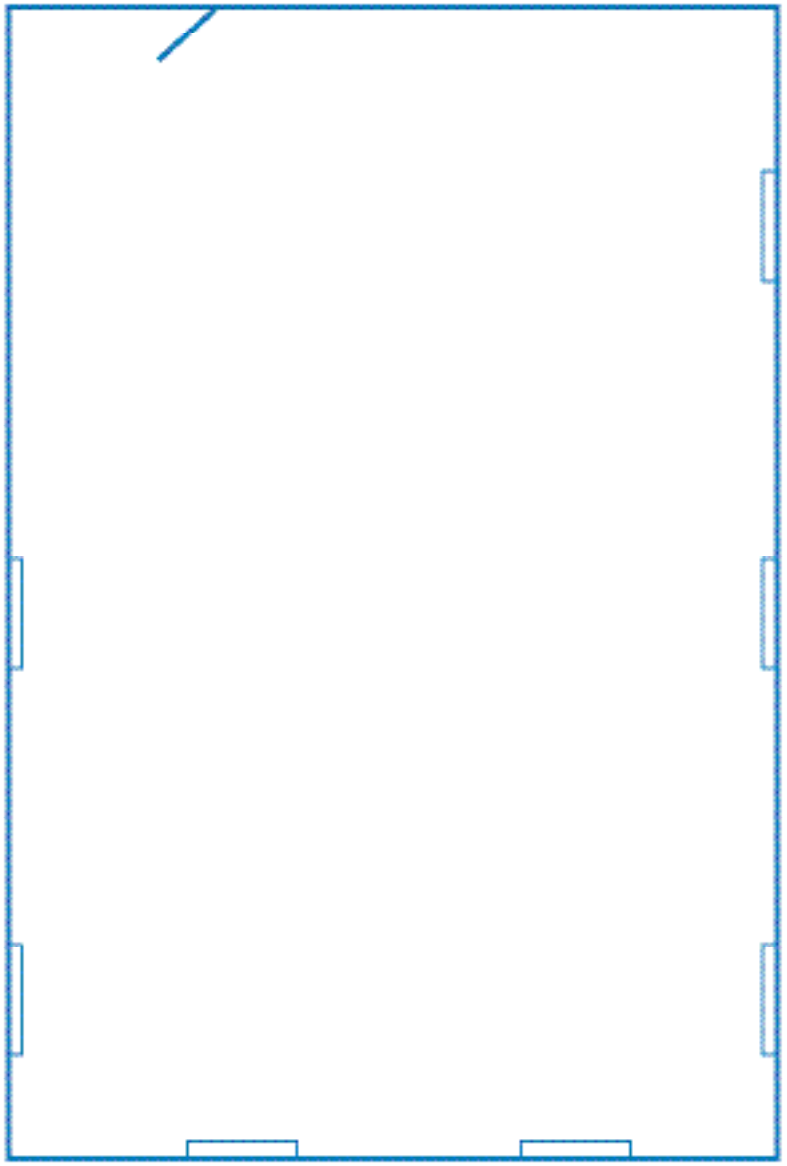
Repeat these steps to find the perimeter and area of room #2.



Room #1

Perimeter

Area



Room #2

Perimeter

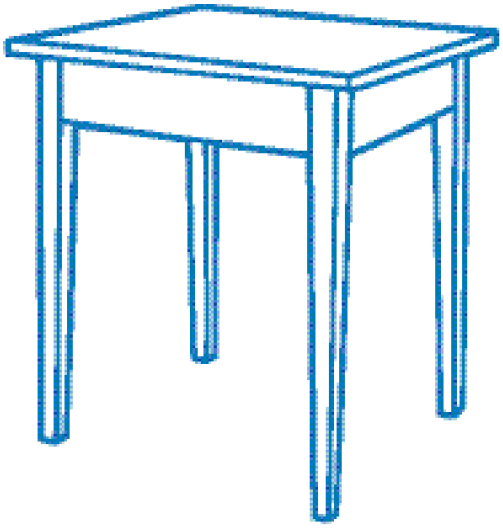
Area

Measuring All Around

Each of the things shown on this page can be found in your classroom. Use your measuring tape to measure the height of each object in your classroom. Make sure to find the height in both inches and centimeters! Write down the heights on the lines provided.

Inches _____

Centimeters _____

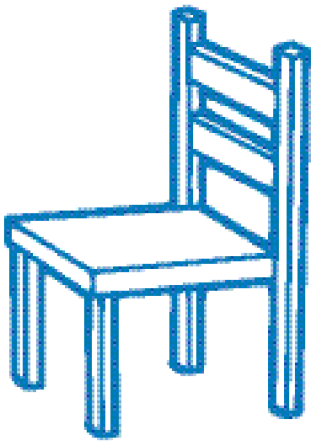


Inches _____

Centimeters _____

Inches _____

Centimeters _____



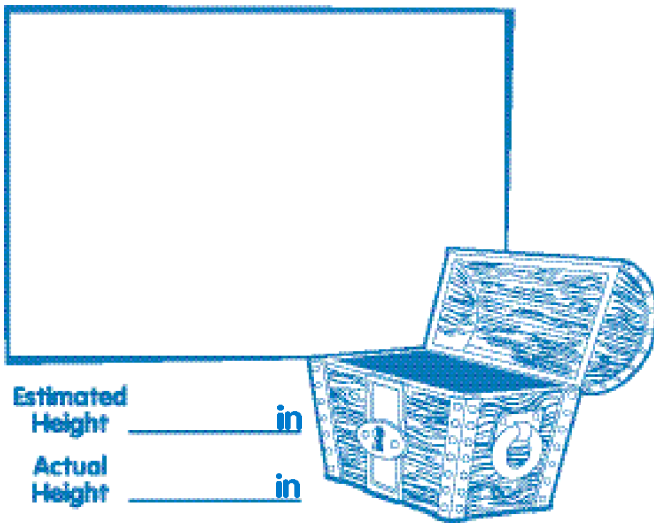
Inches _____

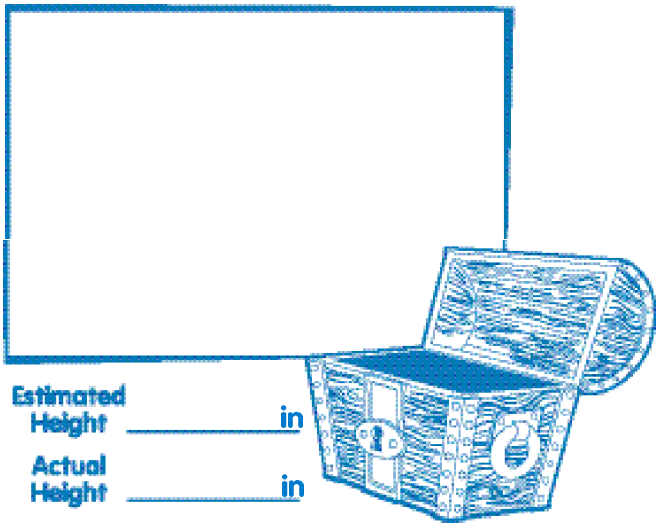
Centimeters _____

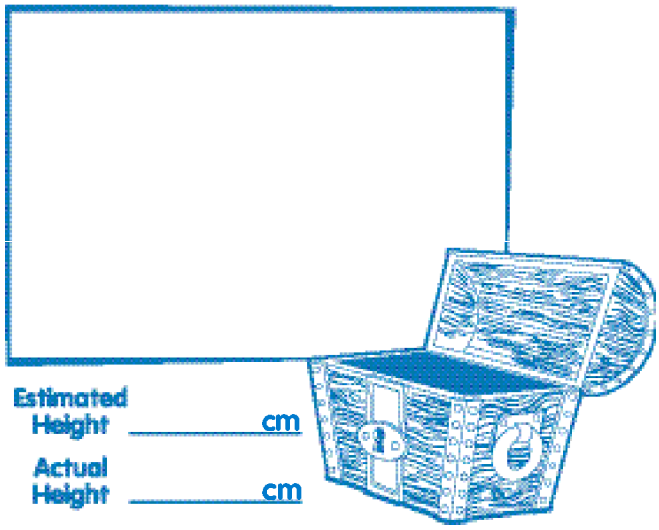
Measure Treasures

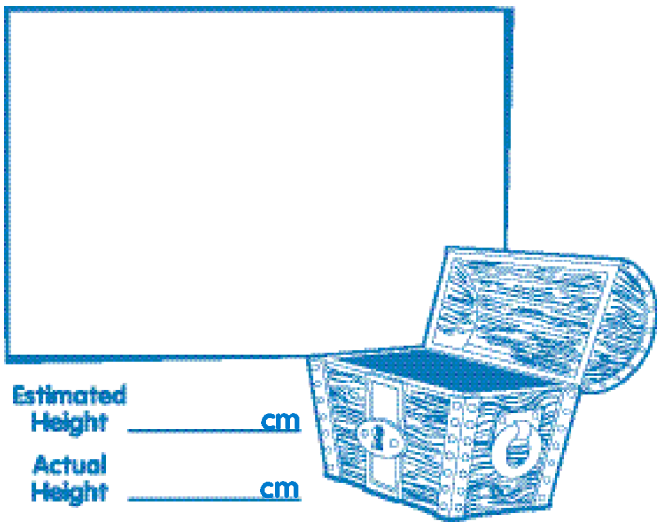
For each treasure chest, choose an object that you can see in your classroom. Draw a picture of the object in the space at the top of the treasure chest. Next, estimate the height of the object you have chosen. In other words, guess how tall it is! Write your guess on the line labeled "Estimated Height." Make sure that your guess is in the right units of measure. If the blank line says "cm," use centimeters, or use inches if the line says "in."

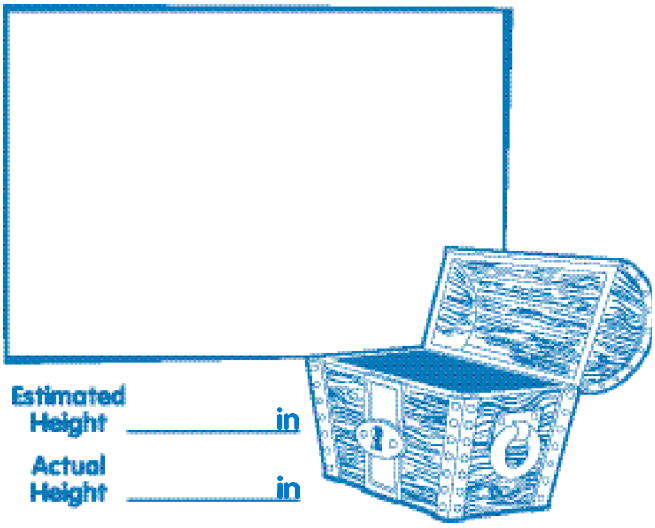
Now use your measuring tape to find out how tall your object really is. Write this number down on the line marked with inches or centimeters. Again, make sure that you use the right units of measure.



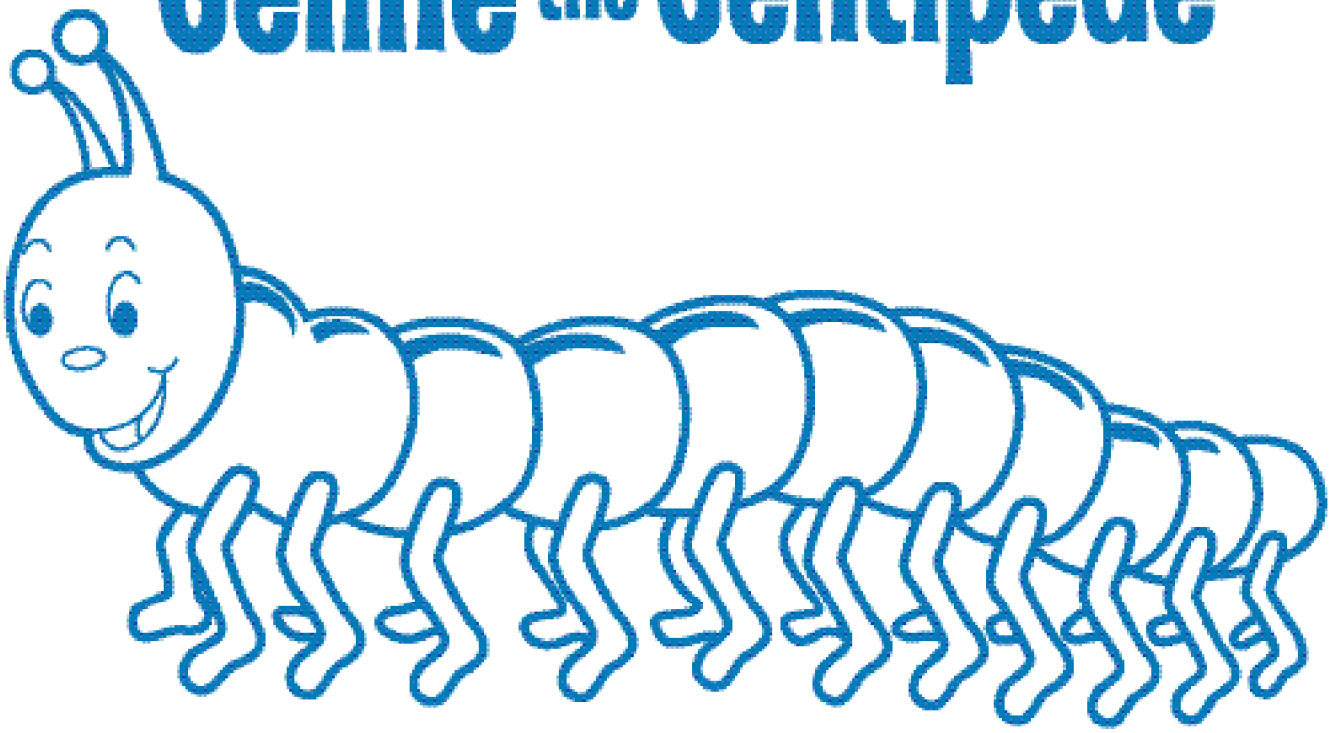




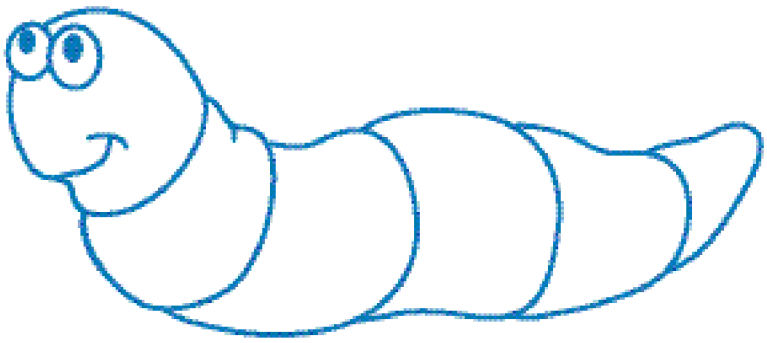




Iggy the Inchworm and Celine the Centipede



Measure Celine! _____ inches _____ centimeters



Measure Iggy! _____ inches _____ centimeters