

## Looking for Units

### Purpose

Students will select and apply standard units and tools to measure area, length, volume, weight, time, temperature, and size of angles.

### Materials

*For the teacher:* 8 copies of Black Line Master *Scavenger Hunt* cut on the double lines; hiding places for scavenger clues: scale, right angle or corner of a book, thermometer or thermostat, clock, ruler, cup or pint, box

*For each group of students (7 per class):* clue cut from copy of BLM *Scavenger Hunt*, pencil, paper, protractor, yard stick, meter stick

### Activity

#### A Pre-Activity Preparation

1. Determine the location for the scavenger hunt.
2. Before the activity, gather the seven different objects to act as hiding places for the clues (a box to hide the area clue, a cup or pint to hide the volume clue, a ruler to hide the length clue, a clock to hide the time clue, a thermostat or thermometer to hide the temperature clue, corner of book or room to hide the angle clue, and a scale to hide the weight clue). Put seven copies of the same clue in each place.

#### B. Review

1. Tell students that the class is going to complete a scavenger hunt in order to practice applying the correct units of measure to different situations.
2. Review area with students by finding the area of a bulletin board or chalkboard. Ask students to help with measuring and computing, and label the solution in square units.
3. Review volume with students by computing the volume of the classroom. Remind students that volume is the measure of the space inside a solid figure. Measure the length, width, and height of the classroom and substitute these values into the formula for volume of a rectangular prism ( $V = l \times w \times h$ ). Write the solution labeled in cubed units on the chalkboard.

(continued)



#### MEETING INDIVIDUAL NEEDS

For students having difficulty with this activity, make a conversion chart available. Either refer students to a chart in the text or post a chart in an accessible area of the classroom.



#### EXTENDING THE ACTIVITY

Ask students to write sentences in their math journals using the words from the first column of the clue strips. Tell students that all sentences should be math related.

**Standards Links**  
**6.4.1, 6.5.9, 6.7.4**

**Activity (continued)**

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**C. Scavenger hunt**

1. Take the remaining copy of each clue strip and distribute one to each group of students. No two groups should have the same clue.
2. Explain to students that each clue strip is divided into three sections:
  - First section: set of scrambled word problems. Direct each group to unscramble each word and write the solution in the blank.
  - Second section: problem to be solved by group members. Instruct groups to write the solution under the problem on the clue strip.
  - Third section: clue to help students locate the next clue strip. Have students read the clue and decide, as a group, possible locations where the next clue could be hidden.
3. Tell students to repeat the procedure in step 2 until they have found all seven clue strips.

**D. Discussion**


Regroup the class and discuss the problems and the solutions together.


**Classroom Assessment**


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**Basic Concepts and Processes**

During the activity, discuss the following questions with your students to gauge their understanding of the Standard Indicator:

 How many grams are in a kilogram?

 If you know how many grams an object weighs, what procedure would you use to figure out how many milligrams that same object weighs?

 What do you use to measure an angle?

 How many minutes are in an hour?

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# SCAVENGER HUNT

<p>Weight</p> <p>_____ not            _____ garm            _____ dnupo            _____ euonc</p>	<p>An elevator can carry 1,000 kilograms. Four people got on who weigh about 75,000 grams each. Is it safe?</p>	<p>This shape can be right but not left.</p> <p>CLUE</p>
<p>Angles</p> <p>_____ hgrit            _____ tuace            _____ quatelalier</p>	<p>Draw a picture of adjacent angles, measure each angle, and write the two measures.</p>	<p>Your helpers are Celsius and Fahrenheit.</p> <p>CLUE</p>
<p>Temperature</p> <p>_____ eezfrngi            _____ libogni            _____ esegdr</p>	<p>If the temperature at noon is 33 degrees and at 10:00 at night it is 4 degrees below 0, what is the temperature change?</p>	<p>The seconds will tick away as you search for the next clue.</p> <p>CLUE</p>
<p>Time</p> <p>_____ eyra            _____ nhmot            _____ rohu            _____ kccol</p>	<p>How many hours will you work in a week if you work from 4:30 p.m. to 6:15 p.m. for four days each week?</p>	<p>Foot and feet will help you find this clue.</p> <p>CLUE</p>
<p>Length</p> <p>_____ nich            _____ elmi</p>	<p>Measure a long hallway or walk according to your teacher's instruction. Give the measure in two different units.</p>	<p>Find something that measures liquid.</p> <p>CLUE</p>
<p>Volume</p> <p>_____ puc            _____ rqatu            _____ tpin            _____ teirl</p>	<p>Your group is to prepare punch for a party of 100 people. Each person is expected to drink <math>\frac{1}{2}</math> a cup. Fruit juice for the punch is only sold in gallons. How many will have to be bought?</p>	<p>It sits on its <math>l \times w</math>.</p> <p>CLUE</p>
<p>Area</p> <p>_____ tuni            _____ remet</p>	<p>The school board needs a cost estimate on new carpet for your classroom. Provide an estimate if the desired carpet costs \$9.25 per square yard.</p>	<p>Find something that measures weight.</p> <p>CLUE</p>

# SCAVENGER HUNT

## Teacher Directions

Give one clue strip to each group. No two groups should have the same clue strip.

Advise students of the general area to look for objects that hide the other clue strips, and explain the contents of the three columns. (See part C, step 2 in the activity for explanation.)

Allow enough time for students to complete activity and regroup class to discuss answers together.

## Answer Key

Weight ton _____ not gram _____ garm pound _____ dnupe ounce _____ euonc	An elevator can carry 1,000 kilograms. Four people got on who weigh about 75,000 grams each. Is it safe?  Yes – it's safe because $4 \times 75,000$ grams is equal to 300,000 grams or 300 kilograms	This shape can be right but not left.  corner of a book or a room. CLUE
Angles right _____ hgrit acute _____ tuace equilateral _____ quatelalier	Draw a picture of adjacent angles and measure each angle and write the two measures.  Answers will vary	Your helpers are Celsius and Fahrenheit.  thermometer CLUE
Temperature freezing _____ eezfrngi boiling _____ libogni degrees _____ esegdr	If the temperature at noon is 33 degrees and at 10:00 at night it is 4 degrees below 0, what is the temperature change?  $33 - (-4) = 33 + 4 = 37$ degrees	The seconds will tick away as you search for the next clue.  clock CLUE
Time year _____ eyra month _____ nhmot hour _____ rohu clock _____ kccol	How many hours will you work in a week if you work from 4:30 p.m. to 6:15 p.m. for four days a week?  $1 \text{ hour } 45 \text{ minutes} \times 4 \text{ days} = 7 \text{ hours}$	Foot and feet will help you find this clue.  ruler CLUE
Length inch _____ nich mile _____ elmi	Measure a long hallway or walk according to your teacher's instruction. Give the measure in two different units.  Answers will vary.	Find something that measures liquid.  cup or pint CLUE
Volume cup _____ puc quart _____ rqatu pint _____ tpin liter _____ teirl	Your group is to prepare punch for a party of 100 people. Each person is expected to drink $\frac{1}{2}$ a cup. Fruit juice for the punch is only sold in gallons. How many will have to be bought?  $50 \text{ cups} = 25 \text{ pints} = 12 \frac{1}{2} \text{ quarts} = 3 \frac{1}{8} \text{ gallons}$ , buy 4 gallons	It sits on its $l \times w$ .  box CLUE
Area unit _____ tuni meter _____ remet	The school board needs a cost estimate on new carpet for your classroom. Provide an estimate if the desired carpet costs \$9.25 per square yard.  Answers will vary.	Find something that measures weight.  scale CLUE