

Worksheet

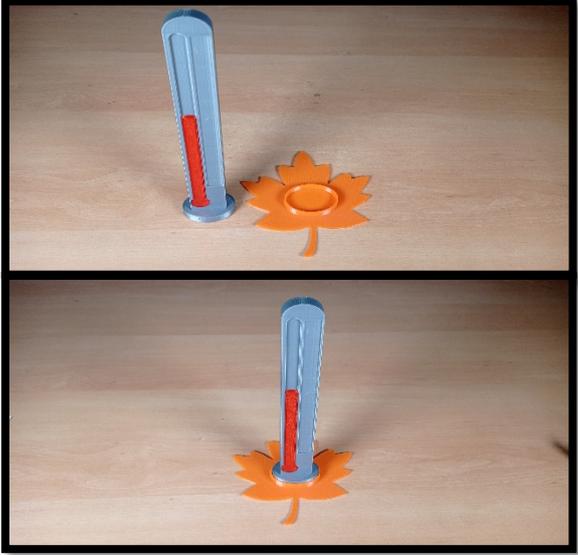
« The Thermo Shapes »

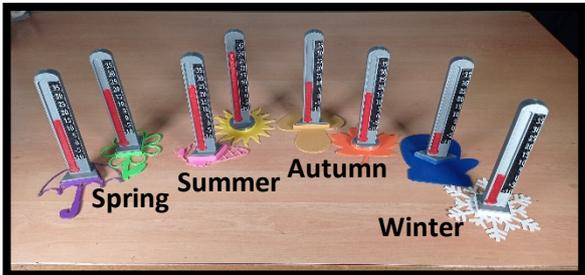
Level of difficulty	Level 1
Duration of the activity	20 to 30 minutes
Number of participants	1/2 class or 16 students maximum
Mathematical concept	Temperature reading on a thermometer
Inventory of the hands-on exhibit	<ul style="list-style-type: none">- 8 thermometers (3D printing)- 8 object bases with different shapes engraved that correspond to each thermometer (3D printing)

Instruction and description of the activity, step by step

Instruction	<ul style="list-style-type: none">- A maximum of 8 thermometers are hidden in the classroom / playground / hall.- In pairs, find one of the hidden thermometers.- Come back to the teacher and place the thermometer on the correct base.- Replace the thermometer in the same place and look for a new thermometer.- Repeat the procedure until you find all the seasons.
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Step by step	Description	Illustration
Step 1	<ul style="list-style-type: none">- In pairs, find a thermometer hidden in the school playgrounds.	 A black and white line drawing of a school playground. In the foreground, a girl is holding a large thermometer. In the background, several children are engaged in various activities: one is playing basketball, another is playing hopscotch, and others are running or playing with a ball. There are trees, a basketball hoop, and a hopscotch grid. A thermometer is also visible on the ground in the bottom right corner.

<p>Step 2</p>	<ul style="list-style-type: none"> - Once you have found the thermometer, go to the teacher. 	
<p>Step 3</p>	<ul style="list-style-type: none"> - On the table in front of the teacher, thermometer bases are made available. <ul style="list-style-type: none"> - Match the thermometer to its base. <p><i>(The objects represented on the bases symbolise a season.)</i></p>	 <p style="text-align: center;">Bases</p> 
<p>Step 4</p>	<ul style="list-style-type: none"> - Take the thermometer back and hide it in the place where you found it 	
<p>Step 5</p>	<p>Repeat 4 times, steps 1 - 2 - 3 - 4.</p>	<p style="text-align: center; font-size: 2em;">X 4</p>

<p>Step 6</p>	<ul style="list-style-type: none"> - Make a temperature assessment with the teacher. (<i>Cold - Hot</i>) 	<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p>low mercury = COLD</p>  </div> <div style="text-align: center;">  <p>high mercury = HOT</p>  </div> </div>
<p>Final Step</p>	<ul style="list-style-type: none"> - Rank thermometers from coldest to warmest 	
<p>Final step bis</p>	<ul style="list-style-type: none"> - Position the thermometers on their bases and classify them according to the seasonal cycle: Spring, Summer, Autumn, Winter. (<i>the drawings of the bases symbolize each season, in Western Europe</i>) 	

To Go Further

Level 2

Use the same thermometers, adding numbers to indicate measurements in degrees Celsius (*3D printed bar from -10° to 35°*)

