



## Cool School- Teacher's Notes

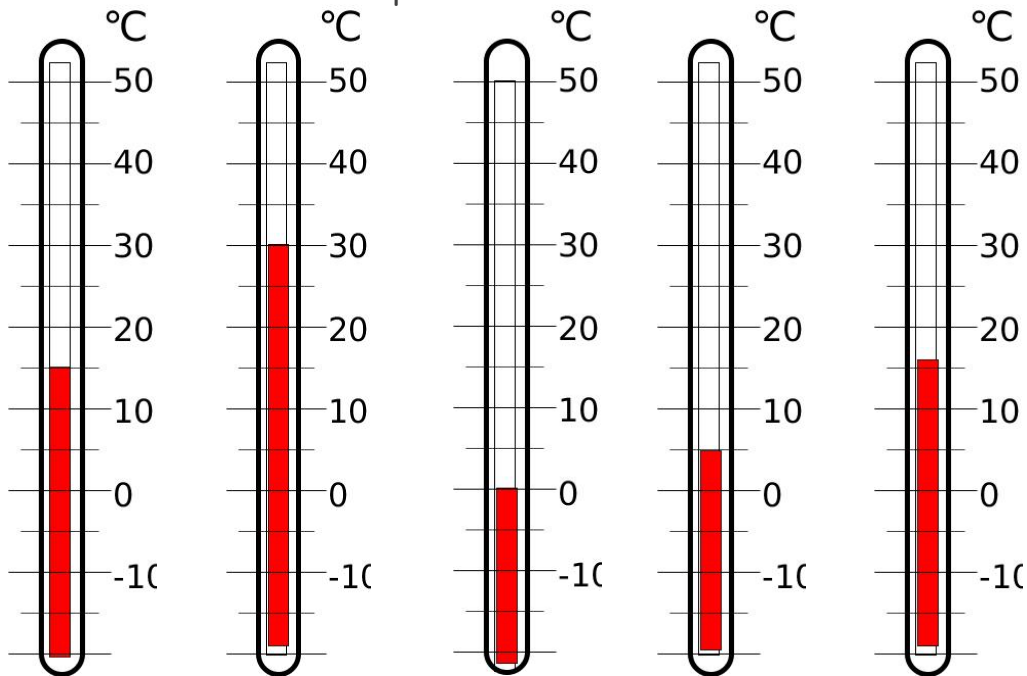
### Cool School

Early scientists looked for something to use as a commonly understood very cold thing to use to be the base level for a thermometer. They used the temperature at which water freezes. To be zero. We now take readings down to  $-273^{\circ}\text{C}$ , which is known as absolute zero.

Before asking students to take temperatures around the classroom or school, they may need practice in reading units and half units on thermometers.

School classroom thermometers often only have temperatures labeled at 10 degrees and multiples thereof. Students may have to be guided on how to estimate the temperature between labeled readings.

Estimate the correct temperature for each thermometer.



$15^{\circ}\text{C}$

$30^{\circ}\text{C}$

$0^{\circ}\text{C}$

$5^{\circ}\text{C}$

$17^{\circ}\text{C}$





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Which is the highest reading possible?  $50^{\circ}\text{C}$  Unless your thermometers are otherwise graded.

Which is the lowest reading possible?  $- 20^{\circ}\text{C}$

What do you estimate the temperature in the classroom is now? Please remind the students to add the unit of degrees Celcius. Celcius was originally known as Centigrade. This was a scale divided into one hundredths.

Measure the temperature using a thermometer and tell the students.

How accurate was your guess? Very accurate (within  $2^{\circ}\text{C}$ ), accurate (spot on) or inaccurate (more than  $2^{\circ}\text{C}$  off).

Why do you think we need to use thermometers rather than guesses to measure the temperature? Guesses can be very inaccurate

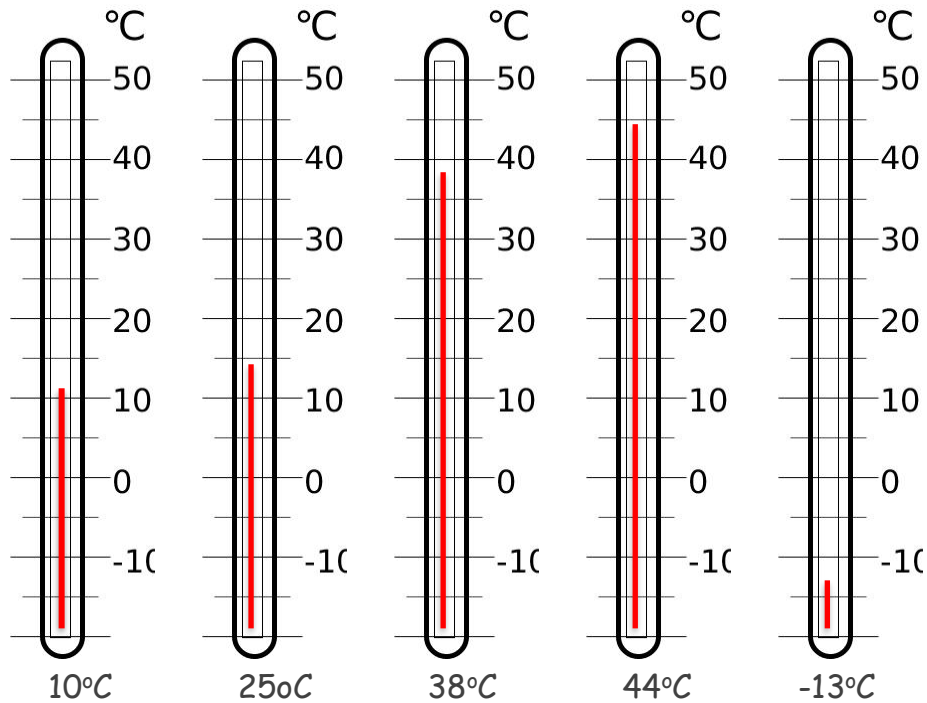
Why do we have thermometers, which can read below the freezing point of water and above the boiling point of water? We need to know these temperatures so we can do things safely. If we fry chips in oil and we heat it too much, first the chips will burn and then the pan will go on fire. If the temperature of the oil is too low the potatoes will absorb oil and not cook. When we are healthy our body temperature is  $37^{\circ}\text{C}$ . If the body temperature is above or below this we can tell that we are ill. Any reasonable answer will do.

What do we use to measure cold? A thermometer. Hot and cold are just positions along the scale.





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Colour in a red line indicating the temperatures given

Television news programs always include information on what the next 24 hours temperature readings will be. Why? **We can wear clothes to keep us warm or cool. We can decide which sports to play or not. We can decide whether to walk, ride our bicycles or use the car. We can decide whether to put new plants in the garden or leave off for a cooler or warmer day.**

If there are 3 days of over 40°C, many schools ask parents to keep their students at home. In some communities however school is the coolest place to be!

