

## What this is about

Hot things cool because they lose heat to their surroundings. We can help them to cool by making the surroundings cooler (by blowing) or by conducting heat away with a spoon. The greater the difference in temperature between an object and its surroundings, the faster it will cool. A spoon left in a drink will help cool it by conducting the heat into the surroundings. If we pour a drink between two cups we provide a bigger area for the drink to lose heat from.

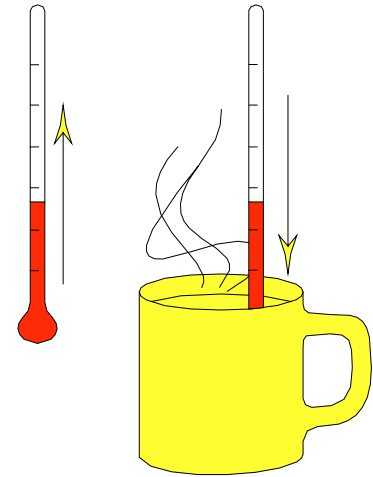
In this activity the children make measurements using sensors. They draw a conclusion from their results.

## You will need

A plastic cup of hand hot water in a tray, temperature sensor, interface, computer cable, software.

## Starting points

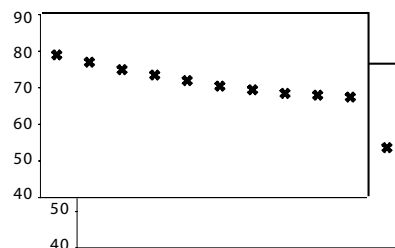
How long would a very hot drink take to cool?  
How could they make the drink cool down faster?



## Investigate

Your hot water should be at a safe temperature. The children should measure the temperature of a cup of water as it cools. They can compare this with a second cup where they try to speed up the cooling. The children might try one idea at a time: blowing on the surface, placing the cup in the draught of a fan, pouring the drink between two cups, leaving a spoon in the drink, placing it near a window or placing it in a dish of cold water. Record for about 15 minutes.

If you have one temperature sensor they can do



two separate runs, one for each container. To help compare the graphs, see that the starting temperatures are similar.

