



Science work for Year 6s

(ideally to be carried out in the kitchen)

Does the temperature of water affect how quickly salt dissolves in it?

We would like you to investigate whether salt dissolves faster in very cold water, water at room temperature or warm water.

Equipment

For this investigation you will need:

- A glass (one used for drinking)
- Table salt
- A teaspoon
- A stopwatch - you need to be able to measure time in seconds
- A couple of ice cubes

Optional equipment - it would also be great if you have:

- A measuring jug – to measure the volume of water as accurately as possible
- A thermometer – to measure the temperature of the water

Method

- 1) Pour in fixed volume of tap water from the cold tap into your glass. (If you have a measuring jug, then about 200ml is about right). Wait about 5 minutes until the water reaches room temperature.
- 2) Pour table salt into your teaspoon.
- 3) Add the salt to your glass of water and start your stopwatch.
- 4) Stir the salt in the water with your spoon. When you think all the salt has dissolved and you can't see any more, stop the stopwatch, and write down the time to the nearest second.
- 5) Now repeat steps 1) to 4), but this time use ice cold water made using ice cubes and water. Remember to use the same volume of water and the same mass (amount) of salt.
- 6) Now repeat steps 1) to 4), but this time use water from the hot tap. Remember to use the same volume of water and the same mass (amount) of salt.



Table of results

Temperature of water (descriptive)	Temperature of water (°C)	Time taken for all the salt to dissolve (seconds)
Ice cold		
Room temperature		
Very warm		

Now answer these questions:

- 1) Which piece of equipment measures time?
- 2) Which piece of equipment measures volume of a liquid?
- 3) Which piece of equipment measures temperature?
- 4) Which piece of equipment could you have used to measure the mass of the salt?
- 5) Which variables did you try to keep the same each time you did the experiment?
(These are known as controlled variables).
- 6) Which variable did you change each time you did the experiment?
(This is your independent variable).
- 7) Write one or two sentences describing your results. What do they tell you?