



## Which solids dissolve in water?

### Equipment

- Water (hot and cold)
- Transparent containers
- Substances to try and dissolve; sand, salt, coffee etc

\*Please an adult's permission before using hot (not boiling) water.

### Method

Add a teaspoon of whichever solid you are testing to a glass of cold water and a glass of hot water, stir and observe the differences.

Look to see if the solid dissolves in the different temperature waters. Does one work better than the other?

How could you record your results? Can you design a chart to record your observations?

### What is happening?

Everything is made of **particles** which are always moving. When a **soluble solid (solute)** is mixed with the right **liquid (solvent)**, it forms a **solution**. This process is called **dissolving**.

Two things that affect the speed at which the solid **dissolves** are temperature and the size of the grains of the solid. Caster sugar, which is made of fine

particles, will dissolve quickly, whereas granulated sugar would take longer as its particles are larger.

Solids dissolve faster in hot water because the molecules in hot water are moving faster so bump into the solid more often which increases the rate of reaction.

Now try these activities...



Which of these drinks would be the odd one out? Why? Does your family agree with you?

We use dissolving all the time in our everyday lives, not just in drinks. Can you think of 5 more examples?

- 1
- 2
- 3
- 4
- 5

For more information on dissolving and changes in materials, take a look at this useful website!

<https://www.bbc.co.uk/bitesize/topics/zcqv4wx>

