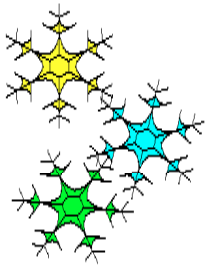
Using IT in... changing materials

Why do they put salt and sand on the roads in winter?

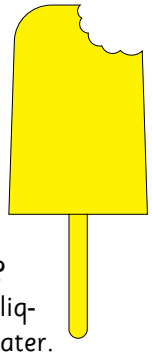
The children can investigate the effect of salt and sand on the melting of ice. You might pose the questions: what makes the ice melt? Does salt melt the ice or does sand melt the ice? One way to find out is to get two cups of crushed ice, sprinkle one with salt and the other with sand. You then place a **temperature sensor** in each cup to see how the temperature changes over time. Does the ice melt faster in one than the other? Is there any difference in temperature between the two cups?



IT: Measuring

Do some ice lollies freeze faster than others?

Some liquids freeze sooner than others so you can test different liquids - oil, milk, fruit juice, salty water and plain water to see how fast they freeze. You can pour some of the liquid in an ice cube tray, place this in the freezer and use a **temperature sensor** to track how fast they cool. Ask the children if they can see how the temperature graph shows that the liquid has frozen. Do the graphs help them to compare different liquids? You should find that sugary and salty liquids take longer to freeze than plain water.



IT: Measuring

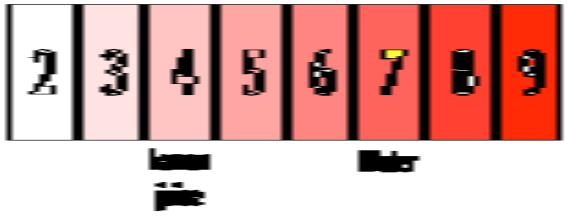
What happens when we heat things?

To show how things change with heat, and practise children's observation skills, ask then to heat various items. They can put butter, an ice lolly, clay, pastry and chocolate in polythene bags and lower them into warm water. They can write about their observations and pool their ideas by using a **word processor**. Some pupils will appreciate the help of a **'Clicker' grid** which has been set up with a word bank of useful descriptors.

IT: Communicating

Which jar lets the candle burn for longer?

Large jars hold more air such that a candle will burn for longer. The children can test different size jars and record how long a candle burns for in each. They can put their results in a **spreadsheet**

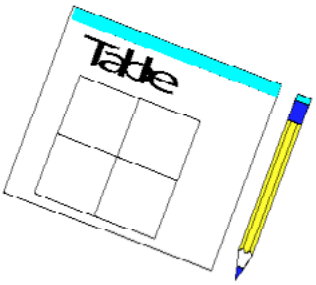


and use it to draw a bar graph. What does the graph tell them about the different size jars? Why could this be?

IT: Handling information

How does food change when we cook it?

When we cook food we change the chemicals inside it to make it more pleasant to eat or more easy to digest. Get the children to think about the foods we eat and list them in a **word processor**. Next to each food, ask them to record whether we eat the food raw and whether we eat it cooked. What does cooking do to food? Does it make it taste better? Go softer? Go runny? Smell different? Get them to add their ideas to the list.



IT: Communicating