



Keeping an ice cube alive

A good insulator is something that restricts the flow of energy – it keeps warm things warm or cold things cold – depending on the circumstances. This activity explores insulation by asking pupils to keep an ice cube ‘alive’ for as long as possible.

You will need

- Boxes, all of the same size, for the class to work individually or in small groups
- A variety of possible insulating materials, such as tissue, cotton wool, plastic beads, feathers, bubble wrap, sand, polystyrene chips, plastic bags, wet and dry Jay cloths

- Sensitive weighing scales
- Lots of ice cubes

Steps

1

Ask pupils to decide which materials they would like to use – and why – to insulate their boxes so that the ice cube doesn’t melt away.

2

Get the children to insulate their boxes before you hand out ice cubes of equal size and weight.

3

Once the ice cubes have been kept at classroom temperature for 30 minutes ask your pupils to weigh whatever is left of their ice cubes.

4

Construct a chart based on the results of the test, showing which were the best and worst insulating materials.

Analysis/ discussion

Why do some materials insulate better than others? (Remember: a good insulator is one that restricts the flow of energy.)