

# Cool and not-so-cool materials



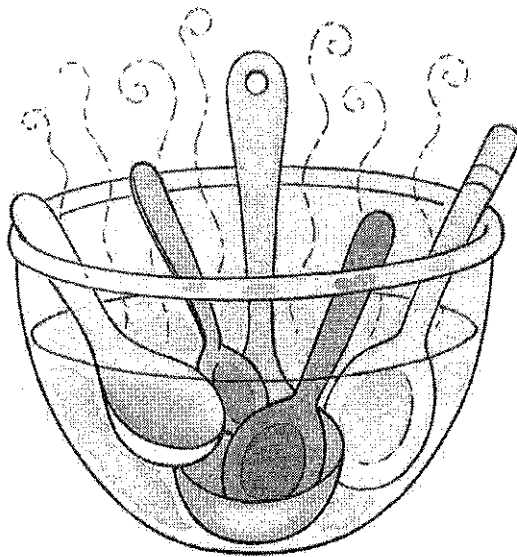
## Background knowledge

Some materials, such as metal, feel cold when you touch them because they take heat away from your hand. When heat is taken away from you, you feel cooler. These materials are said to be good *thermal conductors*, as they are able to conduct heat. Other materials, such as wood, do not feel cold to the touch. They do not take heat away from your hand. These materials are *thermal insulators*. They are poor conductors of heat.

## Science activity

Five spoons made of different materials were placed in a bowl. Five people each held a spoon while hot water was poured into the bowl. When a spoon became too hot to hold, the holder let go and said, "Now." Here are the results.

Type of spoon	How long it took to say "Now"
Plastic spoon	Did not say "Now"
Steel spoon	15 seconds
Wooden spoon	Did not say "Now"
Porcelain spoon	Did not say "Now"
Aluminium ladle	30 seconds



Which spoon is the best thermal conductor?  
Explain.

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## Science investigation

⚠ Take extra care - ask an adult to supervise you.

Obtain five ice cubes of the same size. Use tongs to handle them so the heat of your hands does not melt them. Wrap each one in a different type of material and then place each ice cube in a small plastic bag. Rank the materials from best to poorest thermal insulator.