

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"
Aluminum tinfoil	5 seconds



Which spoon is the best thermal conductor?
Explain.

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 cube 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.