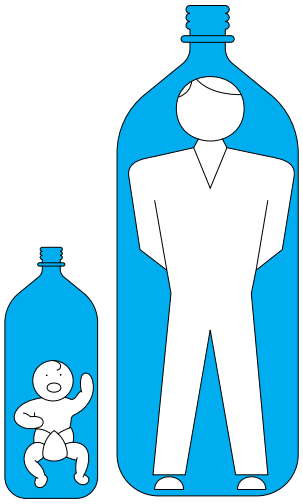
Keeping baby warm



What this is about

Babies and adults are warmer than their surroundings and constantly lose heat to it. Other things being equal, how quickly they lose heat depends on their size and the surrounding temperature.

The explanation is not so important at this level but the more skin you have contact with the surroundings the faster you lose heat. Animals huddle or curl up to expose less 'skin'. A baby has more skin for its size than an adult and it loses heat easily. Insulating materials, such as blankets, slow down the loss of heat.

In this activity the children make a fair test of a baby and an adult and make measurements using sensors. They compare their results and draw a conclusion.

You will need

Large and small metal containers decorated as 'baby' and 'adult' in a bowl or tray and hand hot water. Temperature sensor, interface, computer cable, software and printer.

Starting points

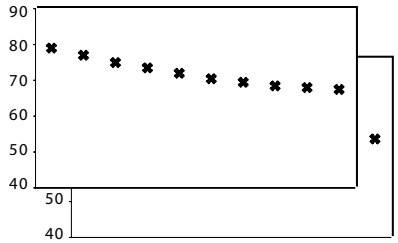
Ask the group how they would dress a small baby for a visit to the park. Would the baby need to have more covering than themselves? Is a baby more sensitive to cold? Does a baby get cold faster than an adult? How might we investigate this?

Investigate

The children can use temperature sensors to compare the cooling of containers filled with hot water. They might record for about 15 minutes.

If you have one temperature sensor they can do two separate runs, one for each container. To help compare the two graphs, ensure that the starting temperatures are similar. Place or trace one time graph over the other. The small container of hot water will cool faster than the large container. It will show a lower final temperature and the graph will fall more steeply.

Extra



Repeat the investigation using two baby containers, wrap one of these in a blanket.