

# Burstin' out all over

Children will be aware that when water freezes it turns to a solid known as ICE. As the water freezes it expands and takes up more space. Ask the children how this will affect the pipes that carry water entering and leaving the house. The need for protecting pipes from ice damage should be evident from the first activity.

One possible way of finding a good insulating material could be for children to fill a number of drinks cans with water and 'lag' each with a different material, e.g. cotton wool, plastic bubble wrap, foam etc. The cans should then be placed in a fridge or freezer. The cans can be checked at regular intervals with a thermometer to see which retains its heat the longest, or which retains the most heat after a specified time.

Children could use computer linked sense and measuring equipment and produce a graph of the results.

## COMMUNICATING TO OTHERS

The children could draw a graph to show the results of the test.

## EXTENSIONS

Does water always freeze at this temperature? Try making other solutions, e.g. salt and water and test your ideas.

## MATERIALS

Lidded plastic pots and drink cans

Timer or stopwatch

Water

Thermometer

Variety of different 'lagging' materials

Sense and measuring equipment

Computer

