

Activity P3: Investigating whether or not different types of water produce varying amounts of lather.

This activity builds on activity P2 and gives pupils opportunities to think about other uses of water and then carry out a simple experiment to see if different types of water may be better for washing because they use less soap to produce lather.

Equipment

Distilled water

Tap water

Bottled water

Screw top jars of the same size

Washing up liquid

Stopwatch

Method

1. Choose one type of water and pour it into a screw top jar so it is about half full and label the jar.
2. Repeat step 1 for each of the other three types of water. Each time pour the same amount of water into an empty screw top jar.
3. Add one drop of washing up liquid to each jar. Put the jar tops on securely and shake each jar well for 30 seconds.
4. Measure the amount of lather in each jar and, using a chart, record the amounts of lather produced.

Notes:

A. Distilled water is soft because it doesn't contain dissolved calcium and magnesium compounds. Water in some parts of the country is soft because it also has low levels of these dissolved compounds, but water in other parts of the country is hard because it has higher levels. Softer water will produce more lather than hard water. More soap will be needed to produce lather in hard water areas, which increases costs.

B. Try linking this to activity to finding out what happens when detergents get into rivers and cause particular types of pollution.