

This is a really fun science experiment you can try at home!

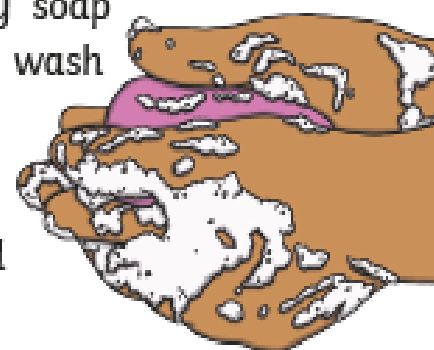
# Why Soap Works Experiment

## You will need:

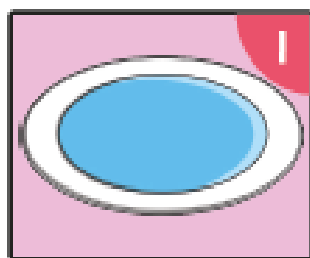
- A bowl
- Some water
- A sprinkle of black pepper (or another spice)
- Liquid hand soap
- A hand towel
- A camera (optional)

In this experiment, you are going to find out why soap works and why it is better than using just water to wash your hands.

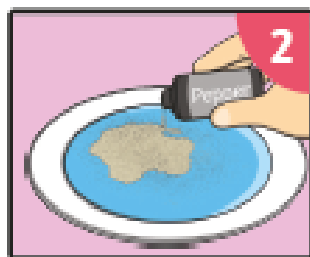
In the experiment, the surface of the water in the bowl represents your hands. The pepper represents harmful dirt and germs that need to be washed away.



There are two tests in this experiment and they will show you what happens when you wash your hands with and without soap.



Fill the bowl with water, but not all the way to the top.



Sprinkle some black pepper on to the surface of the water. You should see the black pepper floating.



**Test 1:** Dip your finger into the centre of the bowl of water. Watch what happens to the pepper and record this.



Dry your hand, then dip your finger into the liquid hand soap.

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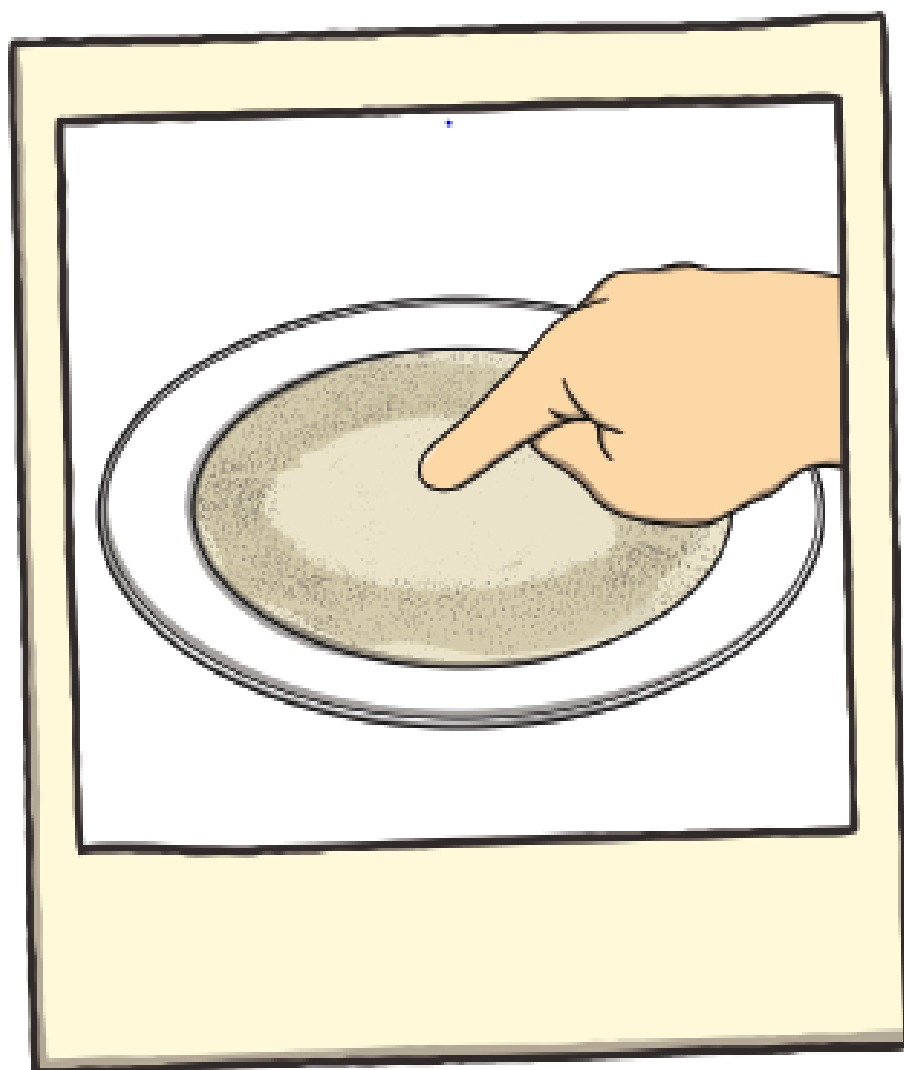


**Test 2:** Dip your soapy finger into the centre of the bowl of water. Watch what happens to the pepper and record this.

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### Top Tip

Use a camera to take photos to record what happens to the pepper each time you put your finger into the bowl.



# Why Soap Works Experiment

## Record Sheet

### Test 1

What I think will happen when I put my finger in the bowl the first time:

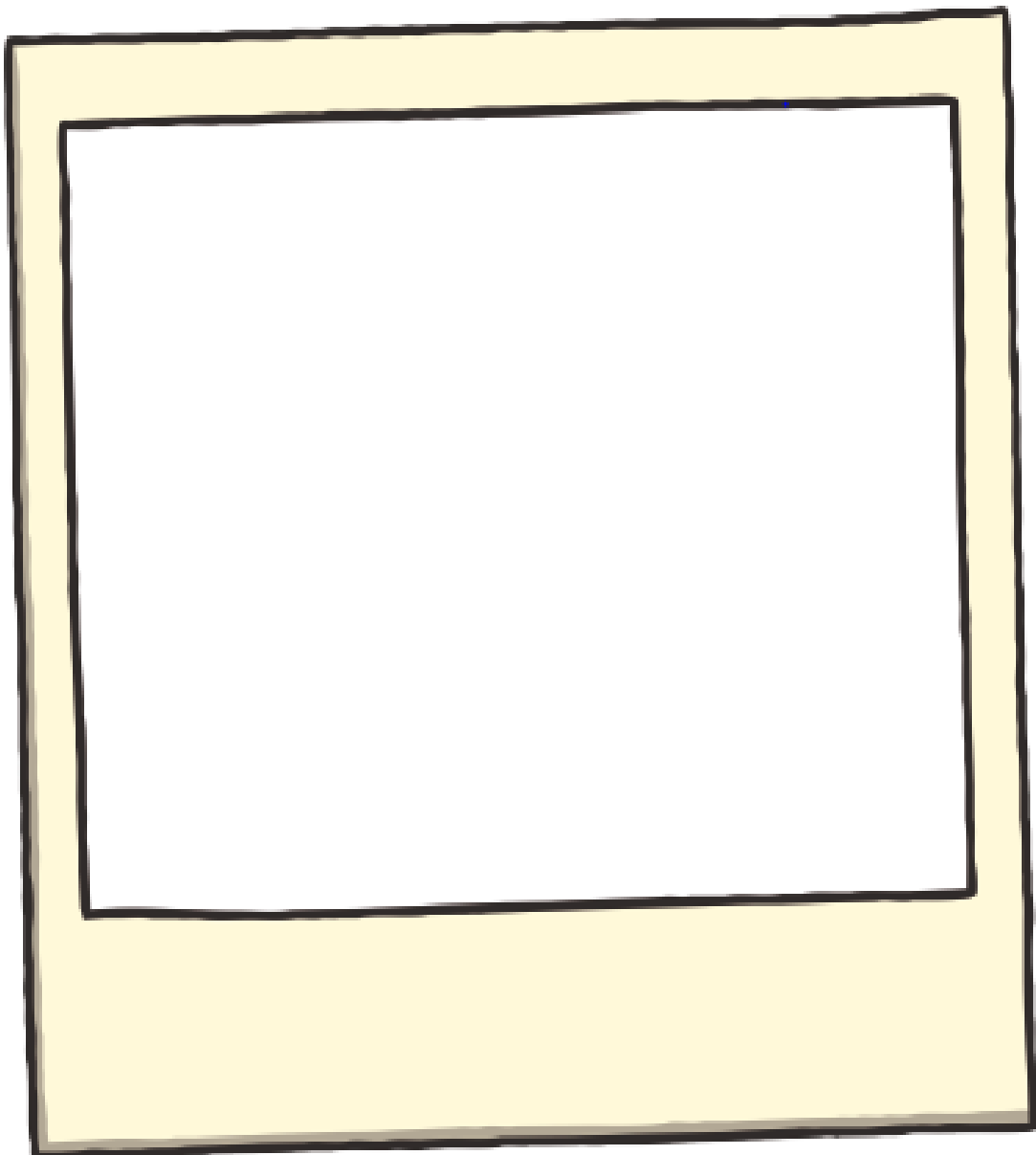
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What actually happened?

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You may wish to draw a picture or add a photograph here:



## Why Soap Works Experiment Record Sheet

### Test 2

What I think will happen when I put soap on my finger and then put it in the bowl:

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What actually happened?

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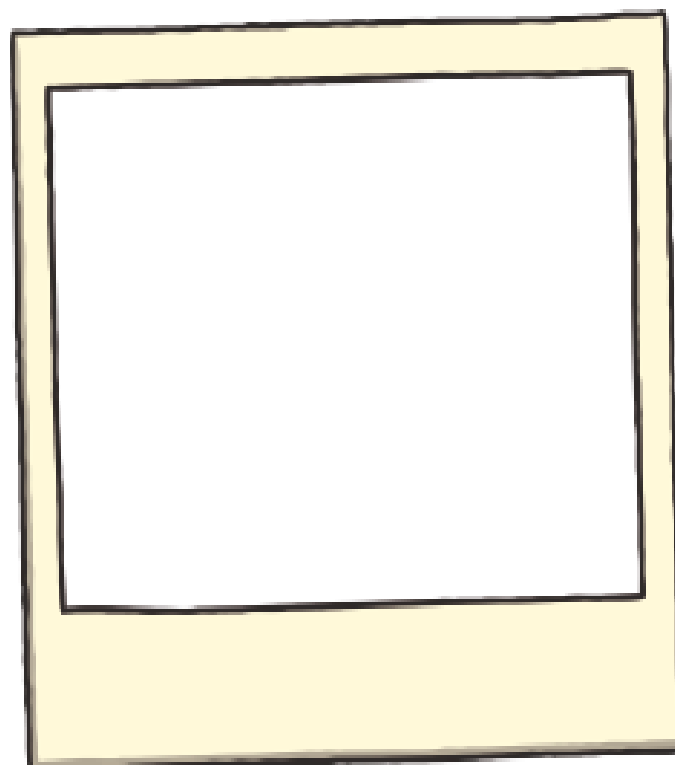
Why do you think this was?

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You may wish to draw a picture or add a photograph here:



## Why Soap Works Experiment

### Record Sheet

#### Explanation:

In the experiment, the surface of the water represents the skin on our hands. The pepper represents harmful dirt and germs (microbes) that need to be washed away to keep us healthy.

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In the first test, the pepper shouldn't have moved much. A little may become stuck to the finger but it will have remained on the surface and represented the germs remaining on a hand.

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In the second test, the pepper should have moved away from the soapy finger. This shows that the soap moved the dirt and germs away because the soap removes the oils found on your hands.

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Microbes stick to the oils on our hands so we need soap to remove them. Without soap, the oils stay on our hands and the microbes find it easier to stick!

