



# STEM ACTIVITY

## Why do we use soap to wash our hands?



To find this out, you will need:

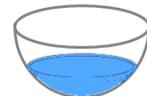
### Ingredients

- 1 Bowl (a cereal bowl will be fine)
- Some water
- A sprinkle of black pepper or other spice
- Some hand soap or washing up liquid
- A Towel
- A Pen
- A Notebook
- A Camera (optional)

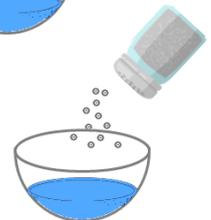
### Method



Fill the bowl with **water**, but not right to the top.



**Sprinkle** some black pepper or spice onto the surface of the water. It should **float** on top.



**Dip** your finger into the centre of the water and **watch** what happens to the pepper. Take a **photo** to record what has happened.



**Dry** your hand, and then dip your finger into the **soap**.



Dip your soapy finger into the **water**. Watch what happens to the pepper. Take a **photo** to record what has happened.



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**Now answer this question:**

What happened with and without the soap?

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**From your results, can you answer the question: “Why do we use soap to wash our hands?”**

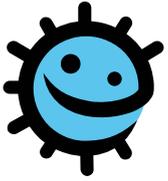
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## **Explanation**

The experiment with and without soap should have been different.

When the soap was on your finger the pepper should have moved towards the edges of the bowl. This is because the soap removes the oils on your hands and the oil pushes the pepper towards the edge of the bowl.

Microbes like to stick to the oils on your hands, which is why we wash our hands with soap. Without soap, the oils are not removed, and microbes find it easier to stick!



\*e-Bug\*

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Colour in Harry and make his hands  
look dirty!



Harry has dirty hands  
with lots of microbes  
because he has not  
washed his hands  
with warm water and  
soap



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Colour in Amy to show she has clean hands!



Amy has clean hands because she washed her hands with soap and warm water. She only has a few good microbes on her hands.