

SCIENCE
CHALLENGE

17

SCARED PEPPER



THE
JAMES
DYSON
FOUNDATION

SCARED PEPPER

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The brief

Move pepper away from you without touching it.

The method

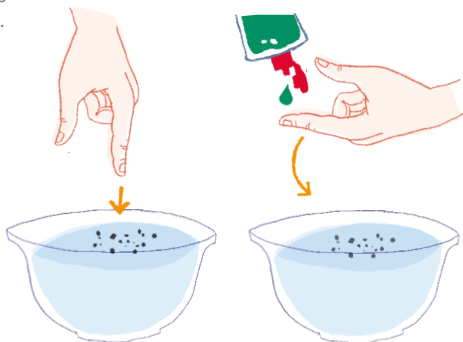
1. Fill the bowl with water.
2. Add some pepper to the top of the water, do not stir it in.
3. Dip your finger into the water, note down what happens.
4. Put a small amount of dish soap on your finger.
5. Dip it back into the water.
6. What happens to the pepper?

Materials

Ground black pepper

A bowl

Water and dish soap



How does it work?

Water normally bulges up a bit. You can see this by looking at a raindrop or by filling a glass slightly over the rim – the water will not spill out. When soap is added to water, surface tension is lowered. The water tries to spread out. As the top of the water flattens out, the pepper on the surface is carried to the edge of the bowl.

Did you know?

In the cosmetics industry the surface friction and consistency of various liquids are regularly changed in order to make them easier to pour or spray.

