

Teacher Information Sheet: Soap powered boat

Materials needed:

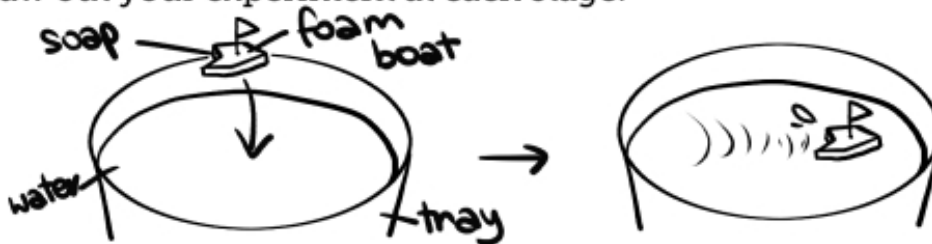
A foam tray (the kind meat comes in) or thin foam board
A flat tray
Water
Liquid dish soap
A toothpick

Method:

1. Cut the foam tray or cardboard into a boat shape
Make it around 5cm long.
2. Fill the tray with water
3. Dip the toothpick into the liquid soap and use the toothpick to put soap onto the back of the boat.
4. Place the boat onto the surface of the water and watch it zip across the water
5. To demonstrate again, you will need to rinse out the tray to remove any soap in it.



Draw out your experiment at each stage:



Questions to answer:

What happened to the boat when you put it on the water?

How long did it move for?

Why do you think this happens?

Does it work better with warm water or cold water?

What do you think will happen if you use milk?

What materials make the best floating boat?

Learning outcomes/real world applications

Soap is a surfactant – which means that it breaks down the surface tension of water. As the surface tension is broken up, it creates enough of a force to push the lightweight boat across the surface.