6E).



# 'Mermaid' diver

Can you make the 'mermaid' sink or swim.

# YOU WILL NEED:

A plastic bottle full of water containing the mermaid.

# SAFETY:

PLEASE do not turn the bottle upside down as it will break the experiment. PLEASE do not take the top off the bottle.

### **INSTRUCTIONS:**

- 1). Examine the bottle the mermaid should be floating at the top of the bottle.
- 2). Squeeze the sides of the bottle what do you notice happens to the mermaid?
- 3). Now release the bottle what happens this time?
- 4). Squeeze the sides of the bottle again and carefully look at what happens to the water inside the mermaid. What do you notice?

### EXPLANATION.

Water compresses very little when squashed.

When the bottle is squeezed, water is forced into the mermaid and squashes the air inside.

This makes the density of the mermaid increase until it is greater than the water and so the mermaid sinks.

When the bottle is released, the compressed air in the mermaid pushes some of the water out of the pipette, reducing the density and so the mermaid floats again.