

## **Activity P2: But is it really clean? Enhancing understanding**

This activity is linked to activity P2 and builds on the fact that even if the pupils managed to produce “clear” water from their samples of dirty water in activity P1, it may not have been “clean” water.

### **Resources**

Samples of clear liquids:

- Sea (salty) water
- Sweet water (sugary)
- Tap water
- Distilled water
- Water coloured with blue ink

Shallow dishes (or saucers)

### **Method**

1. Show the class a selection of clear liquids and ask them to predict which are pure and which have material dissolved in them. (Remind them that even if a liquid looks clear there might be things in it that they cannot see. Can they think what these might be?)
2. In small groups ask pupils to record their predictions and suggestions about how they might find out if their predictions are true. (This should lead into the fact that water evaporates in warm air and that if the water evaporated they would be left with whatever else was present in the water)
3. Give each group one type of liquid and ask the group to pour it into a shallow dish, label the dish and place it in a warm place and leave it to evaporate.
4. Once evaporation is complete, ask each group to observe and record whether or not a residue has been left on their dish.
5. Ask pupils to relate their observations to their predictions and then feed this back to the class.
6. Discuss what they have discovered. Ask the pupils if they can explain:
  - Why we can't see the materials in the liquids?
  - Why solids are left after evaporation?
  - Why nothing is left when distilled water evaporates?