

# Does It Dissolve?

Aim: To observe dissolving and identify when a solute is dissolved

## Equipment:

- A range of substances to test:
  - salt
  - sugar
  - flour
  - chalk
  - sand
  - fruit cordial
  - coffee
  - pepper
  - glass paint
  - jelly cube
- Beaker
- Stirring rod
- Teaspoon
- Timer
- Hot water (kettle)
- Bucket and sieve (for disposal)

## Safety Information

Spills – risk of slips

Mop up immediately, keep work area tidy

Glassware – risk of cuts if broken.

Apply pressure to wounds and inform teacher immediately.



## Method:

Step 1: Half fill the beaker with hot water.

Step 2: Add 1 spoonful of the substance you are testing and stir for 3 minutes.

Step 3: Observe the solution carefully. Can you see any of the substance remaining? Is the solution transparent (see-through)?

Step 4: Record your observations into the table.

Step 5: Empty and rinse your beaker through the sieve and into the bucket.

Step 6: Repeat steps 1 to 4 for all remaining substances.

**Questions:**

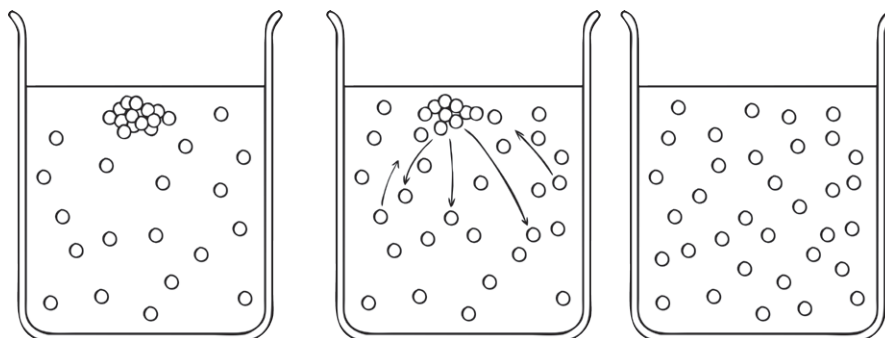
1. How can you tell if a substance has dissolved? Use the words transparent and opaque.
2. Draw a labelled particle diagram of a salt water solution.
3. What is the solvent being used in your investigation?
4. What does soluble and insoluble mean?
5. Copy and label the diagram below.  
Use with the words; solution, solute, solvent.



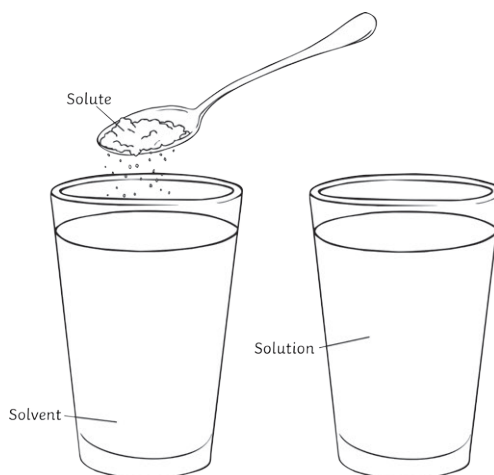
Substance/solute	Prediction	Observations	Result
	Will it dissolve? Y or N	What does the solution look like?	Did it dissolve? Y or N
salt			
sugar			
flour			
chalk			
sand			
fruit cordial			
coffee			
pepper			
gloss paint			
jelly cube			

# Answers:

1. How can you tell if a substance has dissolved? Use the words transparent and opaque.  
**The solution will be transparent and the solute will be completely mixed and not visible. If a substance has not dissolved the solution will appear cloudy or opaque.**
2. Draw a labelled particle diagram of a salt water solution.



3. What is the solvent being used in your investigation?  
**(Hot) water**
4. What does soluble and insoluble mean?  
**Soluble – a substance is able to dissolve in the solvent**  
**Insoluble – a substance is not able to dissolve in the solvent**
5. Copy and label the diagram below. Use with the words; solution, solute, solvent.



Substance/solute	Prediction	Observations	Result
	Will it dissolve? Y or N	What does the solution look like?	Did it dissolve? Y or N
salt		Transparent	Y
sugar		Transparent	Y
flour		Opaque/cloudy	N
chalk		Opaque/cloudy	N
sand		Cloudy/sediment	N
fruit cordial		Transparent	Y
coffee		Dark colour/transparent	Y
pepper		Sediment	N
gloss paint		Sediment	N
jelly cube		Transparent	Y