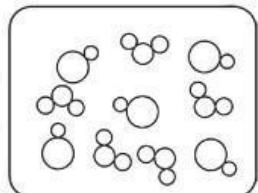


Evaporation Quick Assessment

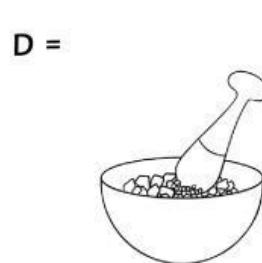
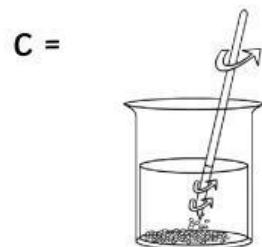
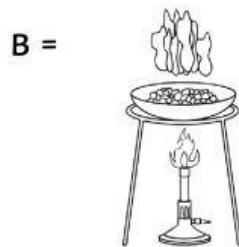
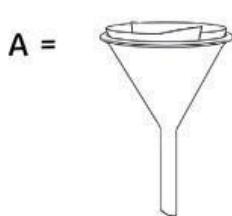
1. Why can mixtures be separated relatively easily?



2. What is evaporation?



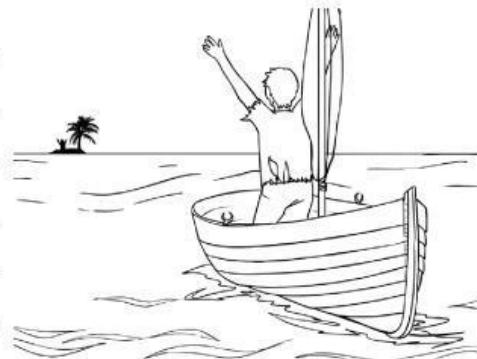
3. Place these pictures in the correct order to show how to separate pure salt from rock salt.



The correct order is:

4. Imagine you were stranded on a desert island, with no fresh water supply. Describe the steps you would take to turn seawater into safe drinking water, using no scientific apparatus. The end stage will be different – be careful! **Tip:** Think about how to trap evaporating water!

Challenge: Use keywords from today's practical in your answer.



Learning Objectives:

- I can describe why mixtures can be separated.
- I can define evaporation.
- I can sequence a method.
- I can apply my knowledge to new situations.

Evaporation Quick Assessment Answers

1. Why can mixtures be separated relatively easily?

Mixtures can be easily separated as the **particles** of each **substance** are not **chemically joined (bonded)** to each other.

2. What is evaporation?

Evaporation is the **change of state** when a **liquid** becomes a **gas**. In order to achieve this, the **forces** between the **particles** must be **overcome** by supplying heat **energy**.

3. Place these pictures in the correct order to show how to separate pure salt from rock salt.

D = pestle and mortar crushing rock salt, **C** = stirring solution in glass beaker, **A** = funnel and filter paper, **B** = Bunsen burner heating evaporating dish



4. Imagine you were stranded on a desert island, with no fresh water supply. Describe the steps you would take to turn seawater into safe drinking water, using no scientific apparatus. The end stage will be different – be careful! Tip: Think about how to trap evaporating water! Challenge: Use keywords from today's practical in your answer.

Student's answers will vary, but here is a general example:

- obtain seawater;
- find a suitable material/piece of clothing to use as a **filter**;
- place a cup/bucket/container under the filter;
- pour the seawater (a **solution**) through the filter;
- Seaweed/sand etc. will be left behind (the **residue**);
- The **filtrate** will consist of salt and water because **salt** is a **solute** and is **soluble** in water, which is the **solvent**;
- dig a hole and place the filtrate inside;
- build a slightly higher mound of ground next to the hole with the seawater in and add a small container;
- place a piece of material over both holes, secured with stones;
- the water should **evaporate**;
- then be trapped by the material;
- it **condenses** and falls into the small container.

Credit should be given to other method of boiling seawater, trapping the evaporating (pure) water and using a connecting tube to condense it into another container.

Evaporation Quick Assessment **Teacher Feedback**

Effort: 1 2 3 4 5

<p>You can describe why a mixture can be separated using some keywords.</p>	<p>You can describe why a mixture can be separated using most keywords.</p>	<p>You can describe why a mixture can be separated using all keywords.</p>
<p>You can define evaporation simply, using some keywords.</p>	<p>You can define evaporation, using most keywords.</p>	<p>You can define evaporation, using all keywords and linking the process to energy.</p>
<p>With guidance, you can sequence a method.</p>	<p>You can independently sequence a method with most steps in the correct order.</p>	<p>You can independently sequence a method with all steps in the correct order.</p>
<p>With guidance, you can apply some of your knowledge to a new situation.</p>	<p>You can independently apply most of your knowledge and keywords to a new situation.</p>	<p>You can independently apply all of your knowledge and keywords to a new situation, including the final change of state (condensation).</p>

Next Steps:

