

investigation 1

Fill one balloon with liquid and another with gas (air), but do not fill either up too much. Seal the balloons and try squashing them gently.

Do they hold their shape?

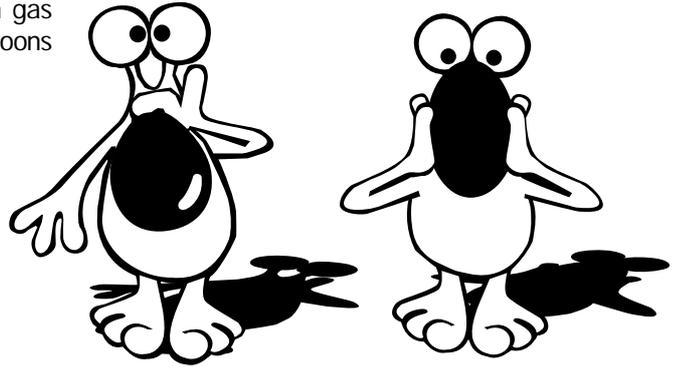
liquid YES/NO

air YES/NO

Can you change the shape easily?

liquid YES/NO

air YES/NO



Liquids and gases have no fixed shape.

investigation 2

All liquids evaporate, but different liquids evaporate at different temperatures and at different rates.

Which liquids evaporate at room temperature? Fill several measuring beakers with different liquids and leave on a window ledge.

type of liquid	volume after day 1	volume after day 2	volume after day 3	volume after day 4	volume after day 5
water					
milk					
salty water					
syrup					

On the back of this sheet draw a graph of your results and explain what you found out.

investigation 3

Which is the best shape for evaporating? Fill several containers with water. What must you do to make it a fair test? Which shape would you expect to be best? Why?

container	volume after day 1	volume after day 2	volume after day 3	volume after day 4	volume after day 5
cup					
beaker					
saucer					
plate					

On the back of this sheet draw a graph of your results and explain what you found out.

The container I think will be the best for evaporating.	The Result	Why ?

This worksheet looks at the difference between liquids and gases and how to change from one to the other.

ADVICE ON USING THE WORKSHEETS

Evaporation at room temperature is studied in two of the experiments. This takes a long time so it is suggested that children work in groups, with each studying one type of liquid (investigation 2) or container (investigation 3).

investigation 1

Fill one balloon with liquid and another with gas (air), but do not fill either up too much. Seal the balloons and try squashing them gently. Do they hold their shape? Can you change the shape easily? Liquids and gases have no fixed shape.

investigation 2

This experiment shows that all liquids evaporate, but different liquids evaporate at different temperatures and at different rates. It can also be used to introduce line graphs.

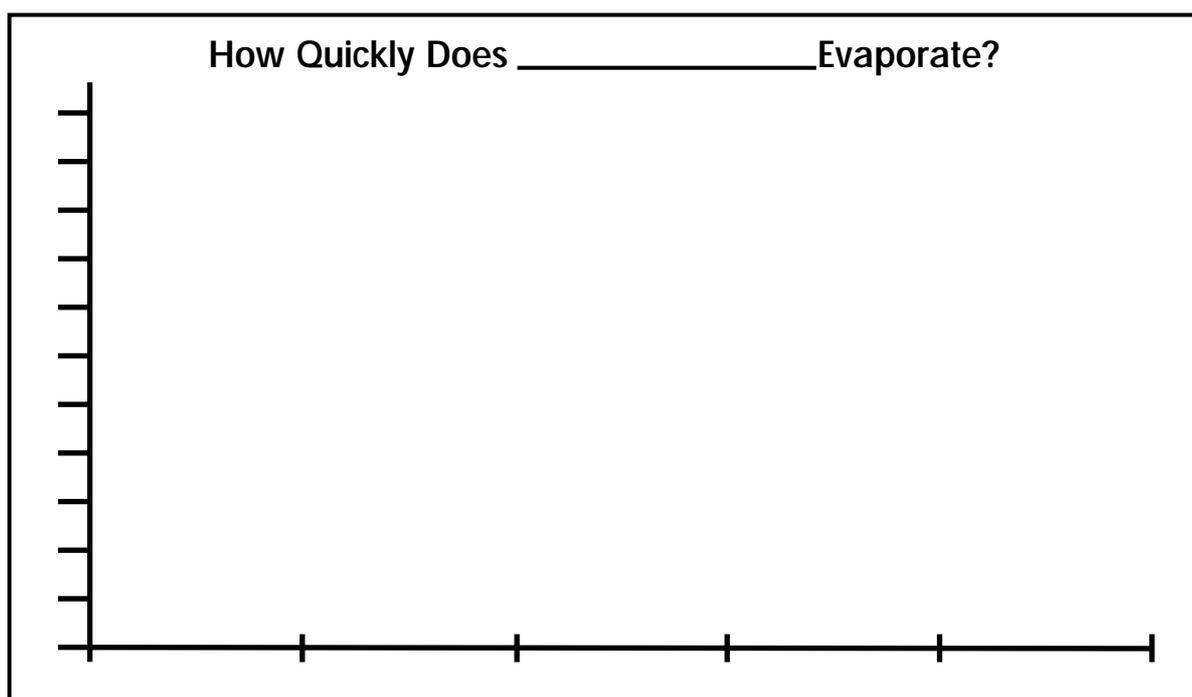
EQUIPMENT NEEDED:

Measuring beakers (important to show how much liquid is left), variety of liquids: water, milk, salty water, syrup.

Which liquids evaporate at room temperature?

Fill several measuring beakers with different liquids and leave on a window ledge. The results for each liquid can be shown as a line graph of volume against time. This can be used to emphasise that this is a continuous process which can not be shown on a bar graph.

A template for drawing the graph is provided. This can be pasted onto the back of the pupil sheet if required.





Investigation 3

This looks at factors affecting evaporation, in particular surface area and asks children to make predictions and plan a fair test.

EQUIPMENT NEEDED:

water, variety of containers (cup, beaker, saucer, plate), funnel, measuring jug or beaker.

Which is the best shape for evaporating? For a fair test use the same volume of water in each. To measure the remaining volume each day, pour the left over water into the jug to measure it, then replace in the evaporating container.

A line graph can be drawn of the results for each container. Alternatively a separate bar graph can be used to record the results for each container.

Which shape was the best? Was it the one predicted? A larger surface area will evaporate more quickly.

