THE STRIVING

MUSLIM ACADEMY

Islamic and Academic Education

STAGE 4 · SCIENCE · STATES OF MATTER

States of matter

Everything the questions ask about is taught on the page before them, so nobody has to know the science beforehand.

WHAT IS INSIDE

- Solid, liquid and gas
- Changing state
- The water cycle
- Try it yourself
- How each one is worked

The Striving Muslim Academy

3 topics · something to do at the end

Written for a parent teaching at home. No training assumed, and nothing else to buy.

strivingmuslimacademy.com

Solid, liquid and gas

Read this first. Then answer the questions underneath.



Solids, liquids and gases are the three states of matter commonly found on earth. There is a fourth, plasma, which occurs naturally in the interiors of stars.

A solid keeps its own shape and its own size. A brick stays brick-shaped wherever you put it.

A liquid keeps its size but takes the shape of whatever holds it. A litre of water poured from a jug into a bowl is still a litre, but it is now bowl-shaped.

A gas does neither. It spreads out to fill whatever holds it, however big that is.

Powders such as sand are not a fourth thing. Each grain is a tiny solid, and a heap of them only looks like a liquid when it is poured.

1. **What does a solid keep?**
   Two things.

2. **What does a liquid take the shape of?**
   Look at the liquid paragraph.

3. **What does a gas do?**
   It keeps neither shape nor size.

The Striving Muslim A

Quick check



One right answer each, and every answer is somewhere in this pack. Ring the letter.

1. **The water cycle** What does evaporation turn liquid water into?
   (A) A gas called water vapour (B) 0 degrees Celsius (C) 100 degrees Celsius (D) Whatever holds it

2. **Solid, liquid and gas** What does a liquid take the shape of?
   (A) Solid to liquid (B) 100 degrees Celsius (C) Whatever holds it (D) Spreads out to fill whatever holds it

3. **Changing state** What is melting?
   (A) When it is warmer (B) Solid to liquid (C) Spreads out to fill whatever holds it (D) Its own shape and its own size

4. **Changing state** At what temperature does water freeze?
   (A) When it is warmer (B) Its own shape and its own size (C) 100 degrees Celsius (D) 0 degrees Celsius

5. **Changing state** At what temperature does water boil?
   (A) Turns water vapour back into liquid (B) 100 degrees Celsius (C) Its own shape and its own size (D) When it is warmer

6. **Solid, liquid and gas** What does a gas do?
   (A) Spreads out to fill whatever holds it (B) Whatever holds it (C) Its own shape and its own size (D) 100 degrees Celsius

7. **Solid, liquid and gas** What does a solid keep?
   (A) Its own shape and its own size (B) A gas called water vapour (C) Turns water vapour back into liquid (D) Whatever holds it

8. **The water cycle** What does condensation do?
   (A) A gas called water vapour (B) Its own shape and its own size (C) Whatever holds it (D) Turns water vapour back into liquid

The Striving Muslim Academy

How each one is worked

The answers to the **work it out** questions are model answers. A child who says something different and can show you where on the page it came from has done the work.



SOLID, LIQUID AND GAS

1. What does a solid keep?

1. The passage says a solid keeps its own shape and its own size.
2. So that is the answer.

Answer: **Its own shape and its own size**

2. What does a liquid take the shape of?

1. The passage says a liquid takes the shape of whatever holds it.
2. So that is the answer.

Answer: **Whatever holds it**

3. What does a gas do?

1. The passage says a gas spreads out to fill whatever holds it.
2. So that is the answer.

Answer: **Spreads out to fill whatever holds it**

4. WORK IT OUT **Sand pours like a liquid. Why is it still a solid?**

1. The passage says each grain is a tiny solid.
2. A heap of solids can be poured without any of them changing shape.
3. So the pouring is about the heap, not about the material.

Answer: **Because each grain is a tiny solid that keeps its own shape**

CHANGING STATE

1. What is melting?

1. The passage says melting is solid to liquid.
2. So that is the answer.

Answer: **Solid to liquid**

2. At what temperature does water freeze?

1. The passage says for water both happen at 0 degrees Celsius.
2. So the answer is **0 degrees Celsius**.

Answer: **0 degrees Celsius**

3. At what temperature does water boil?

1. The passage says for water that is 100 degrees Celsius.
2. So the answer is **100 degrees Celsius**.

Answer: **100 degrees Celsius**

The Striving Muslim Academy

SAMPLE PAGES

You have read a few pages. The pack is longer.

What you are holding is a short sample, taken from different parts of the pack so that you can see how a week is planned and what a child is actually asked to do, before you decide.

The complete pack, and the rest of the academic materials, are on our website: schemes of work for a parent teaching at home, and practice packs for the skills children get stuck on.

The Striving Muslim Academy

strivingmuslimacademy.com

Islamic and Academic Education

Members of the homeschool community do not buy these. If you have joined the community, the pack for the term you are working on is given to you at no cost.

Our Islamic Education classes are free. These packs are part of what pays the teachers who teach them.