

C. LIQUIDS

Liquids: Taking the Shape of their Container

Did you know that there are different types of matter all around us? Matter can be a solid, a liquid, or a gas. Today, we're going to dive into the world of liquids! Liquids are special because they have some unique properties. Let's explore how liquids behave and why they're different from solids and gases.

One important property of liquids is that they have a definite volume. That means that liquids take up a certain amount of space, and this amount doesn't change. Imagine you have a glass of water. No matter how you tilt or pour it, the water will always fill the same amount of space. It won't get bigger or smaller. That's because liquids have a fixed volume.

Unlike solids that have a definite shape, liquids take the shape of their container. This means that if you pour a liquid into a different container, it will change its shape to fit the new container. For example, if you pour water into a cup, the water will take the shape of the cup. If you pour the same water into a bowl, it will take the shape of the bowl. Liquids are very adaptable!

Have you ever seen water flowing in a river or milk pouring from a jug? Liquids can move! They can flow and pour because their particles can move freely. When you tilt a container filled with a liquid, the liquid can easily change its position and flow from one place to another. It's like a liquid dance!

Liquids also have something called surface tension. Surface tension is what allows some insects, like water striders, to walk on water. It's like a thin skin on the surface of the liquid that makes it act like a stretchy sheet. If you put a paperclip on water, it may float because of the surface tension.

Liquids can interact with other types of matter too! When a liquid comes in contact with a solid, it can wet or stick to the solid's surface. Have you ever seen how water sticks to your skin when you wash your hands? Liquids can also interact with gases. They can evaporate and turn into a gas when heated, like when water boils and turns into steam.

Now, let's see how well you understood the passage with some multiple-choice questions:

1. What is a definite volume?

- a) The ability to change shape
- b) The ability to change size
- c) A fixed amount of space

Answer: c) A fixed amount of space

Explanation: A definite volume means that a liquid takes up a fixed amount of space that doesn't change.

2. What is one property of liquids?

- a) They have a definite shape
- b) They have no volume
- c) They take the shape of their container

Answer: c) They take the shape of their container

Explanation: Liquids can change their shape to fit the container they are in.

3. What happens to the shape of a liquid when poured into a new container?

- a) It stays the same
- b) It changes to fit the new container
- c) It disappears

Answer: b) It changes to fit the new container

Explanation: Liquids take the shape of the container they are poured into.

4. How do liquids move?

- a) They stay still
- b) They can flow and pour
- c) They evaporate into a gas

Answer: b) They can flow and pour

Explanation: Liquids can move and change their position, allowing them to flow and pour.

5. What is surface tension?

- a) The ability to change shape
- b) The ability to evaporate
- c) A thin skin on the surface of a liquid

Answer: c) A thin skin on the surface of a liquid

Explanation: Surface tension is like a thin skin on the surface of a liquid that makes it act like a stretchy sheet.

6. How do liquids interact with solids?

- a) They repel solids
- b) They stick to solids
- c) They evaporate solids

Answer: b) They stick to solids

Explanation: Liquids can wet or stick to the surface of solids.

7. What happens when a liquid is heated?

- a) It evaporates into a gas
- b) It becomes a solid
- c) It changes color

Answer: a) It evaporates into a gas

Explanation: When a liquid is heated, it can evaporate and turn into a gas.

8. Can a liquid change its volume?

- a) Yes, it can change its volume
- b) No, its volume is fixed
- c) It depends on the liquid

Answer: b) No, its volume is fixed

Explanation: Liquids have a definite volume, which means their volume is fixed and does not change.

9. What property allows insects like water striders to walk on water?

- a) Evaporation
- b) Surface tension
- c) Interaction with solids

Answer: b) Surface tension

Explanation: Surface tension allows insects like water striders to walk on the surface of water.

10. What happens to a liquid when it is poured into a different container?

- a) It disappears
- b) It changes its shape to fit the new container
- c) It becomes a gas

Answer: b) It changes its shape to fit the new container

Explanation: Liquids change their shape to fit the container they are poured into.

C. Answers

1. c) A fixed amount of space

Explanation: A definite volume means that a liquid takes up a fixed amount of space that doesn't change.

2. c) They take the shape of their container

Explanation: Liquids can change their shape to fit the container they are in.

3. b) It changes to fit the new container

Explanation: Liquids take the shape of the container they are poured into.

4. b) They can flow and pour

Explanation: Liquids can move and change their position, allowing them to flow and pour.

5. c) A thin skin on the surface of a liquid

Explanation: Surface tension is like a thin skin on the surface of a liquid that makes it act like a stretchy sheet.

6. b) They stick to solids

Explanation: Liquids can wet or stick to the surface of solids.

7. a) It evaporates into a gas

Explanation: When a liquid is heated, it can evaporate and turn into a gas.

8. b) No, its volume is fixed

Explanation: Liquids have a definite volume, which means their volume is fixed and does not change.

9. b) Surface tension

Explanation: Surface tension allows insects like water striders to walk on the surface of water.

10. b) It changes its shape to fit the new container

Explanation: Liquids change their shape to fit the container they are poured into.