

NAME: .....

DATE: .....

CLASS: .....

MARKS

10

## Matter and Its Three States



1. For each of the differences listed in the table below, tick the correct column to show if it is a difference between a solid and a gas, a liquid and a gas, or a matter and a non-matter. In some cases, you may tick more than one column.

[3½m]

Difference	Between a solid and a gas	Between a liquid and a gas	Between a matter and a non-matter
(a) One has a definite volume but the other does not.			
(b) One has a definite shape but the other does not.			
(c) One occupies space but the other does not.			
(d) One can be compressed but the other cannot.			
(e) One has mass but the other does not.			

2. Look at the picture below.



Is fire a matter? Explain your answer.

[1m]

---

---

3. (a) Complete the comparison chart below by giving three similarities and two differences between a solid and a liquid. [2½m]

<u>Similarities:</u>			
•	_____		
•	_____		
•	_____		
<table border="1"><tr><td style="width: 50px; text-align: center;">Solid</td><td style="width: 50px; text-align: center;">Liquid</td></tr></table>		Solid	Liquid
Solid	Liquid		
<u>Differences:</u>			
•	_____		
•	_____		

- (b) In the space below, draw an experiment to illustrate clearly the differences you have mentioned in (a). Label any apparatus used and explain any observations made. [3m]

# Matter and Its Three States

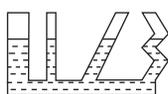


1.

Difference	Between a solid and a gas	Between a liquid and a gas	Between a matter and a non-matter
(a) One has a definite volume but the other does not.	✓	✓	
(b) One has a definite shape but the other does not.	✓		
(c) One occupies space but the other does not.			✓
(d) One can be compressed but the other cannot.	✓	✓	
(e) One has mass but the other does not.			✓

2. The burning flame consists of a mixture of gases and is matter. However, the heat and light given out by the burning fire are forms of energy and are not matter.

3. (a) Similarities:
- Both have mass and occupy space.
  - Both cannot be compressed.
  - Both have a definite volume.
- Differences:
- A solid has a definite shape.
  - A liquid takes the shape of its container.
- (b) Half fill a beaker with water. When the beaker is tilted, the water level becomes parallel to the table. When the water is poured into a container with a different shape, the water takes the shape of the new container. This shows that water has no definite shape.



communicating vessel

Next, half fill a beaker with water and freeze it in the freezer until it becomes solid ice. When the beaker is now tilted, the ice level does not move. This contents of the beaker is now stuck inside and cannot flow out. This shows that solids have a definite shape.

