

States of matter

1. What are the main states (phases) of matter?

Solid, liquid, gas

2. Identify the state of matter in each of the following cases:

- a) The substance has definite shape and volume. S
- b) The particles are not bound together. g
- c) The particles can slide over one another. L
- d) The particles are very far apart. g
- e) The particles are strongly bound together. S
- f) A closed container is needed to hold the substance. g
- g) The substance has definite volume, but no definite form. L
- h) The particles move rapidly around one another. g
- i) The substance occupies all available volume. g
- j) The substance remains in an open container and assumes its shape. L

3. Give a similarity and a difference for each comparison in the following table.

Comparison	Similarity	Difference
Solid state and liquid state	<ul style="list-style-type: none"> - occupies def. volume - very close together 	<ul style="list-style-type: none"> - <u>SOLID</u> has a definite shape. - Liquid - shape of container - Liquid particles flow
Liquid state and gaseous state	<ul style="list-style-type: none"> - assumes shape of container - more freedom than solid 	<ul style="list-style-type: none"> Liquid - particles slide over one another gas - far apart / move in all directions