

WELLAND GOULDSMITH SCHOOL,PATULI

CHEMISTRY

WORKSHEET ANSWER KEY

THE NATURE OF MATTER (STATES OF MATTER)

CLASS-VI

1. Give one word for the following: -

- a) Matter b) Heat c) Freezing or Solidification
d) Sublimation e) molecules

2. State true or false: -

- a) True b) False c) False d) True e) False

3. A 1(a), 2(c), 3(c), 4(a), 5(c), 6(a), 7(a), 8(a).

B 1. solid, liquids, gas.

2. looses.

3. solids.

4. fixed.

5. gas

6. weight, space

7. gases

C. 1. true. 2. true 3. false 4. true 5. true 6. false

D. 1. water (it is a liquid while rest are gases).

2. Protons (it is a subatomic particle rest are states of matter)

3. Atom (it is the smallest particle which makes up matter rest are states of matter)

4. naphthalene (it is a sublimable compound others are example of different states of matter of same thing which is water)

5. sublimation (it is direct conversion of solid to gas without passing through the intermediate liquid state, others are simple change of states of matter)

E. 1-(f), 2-(d), 3-(e), 4-(b), 5-(c), 6-(a)

4.F(2). Heat energy brings change of state.

Heat results in the weakening of the intermolecular forces of attraction thus, causing change of states.

Heat given to the substance changes into kinetic energy and the molecules start vibrating with the help of this energy. More is the energy supplied, more is the movement of molecules away from each other and as a result of this, change of state is observed.

5.

G2. In solids, the molecules are closely packed. Forces between particles are very strong due to this reason, the molecules can not be brought closer, hence solids can not be compressed.

G3.

Property	Solids	Liquids	Gases
1. Nature of molecules	Closely packed	Loosely packed	Very closely packed
2. Shape	Keep the same shape. do not flow	Flow easily and take the shape of the container	Flow easily and take the shape of the container
3. Volume	definite	definite	No definite volume
4. Compressibility	Cannot be compressed	Slightly can be compressed	Can be compressed easily.
5. Density	high	medium	low

G5. The following activity can be performed to prove gaps are present in water molecules:-

A glass filled with water upto the brim is taken and very carefully powdered sugar is added to it.

Observation:-

It is observed that water does not flow out of the glass.

Result:-

Intermolecular spaces are present in the liquid (water) which then gets filled with solid sugar molecules.

G8. The idea that all substances contain incredibly small moving particles is called the kinetic theory of matter.

i) All matter is made up of tiny, invisible moving particles, these particles are actually atoms, molecules and ions.

ii) Particles of different substances have different sizes.

iii) Small particles move faster than larger particles at the same temperature.

iv) As the temperature rises the particles possess more energy and move around faster.

v) In a solid the particles are very close and they can only vibrate about fixed positions.

vi) In a liquid the particles are further apart. They have more energy and they can roll around each other.

vii) In a gas the particles are far apart. They move very fast and randomly in all the space they can find.