

**PARAGON CONVENT SCHOOL**

**SECTOR: 24 B, CHANDIGARH**

**LESSON - 5**

**SOLIDS, LIQUIDS AND GASES**

**SUMMARY**

- Matter is defined as anything that has mass and occupies space.
- Solid, liquid and gas are the three states of matter.
- Matter is made of tiny particles known as molecules.
- Whether a matter is solid, liquid or gas depends on the arrangement of molecules in it.
- Matter may change from one state to another on heating or cooling.
- A solution is a mixture where a substance is dissolved into another.
- Solute is the substance that is being dissolved by another substance.
- Solvent is the substance that dissolves another substance.
- When two liquids can be mixed to form a solution they are called miscible.
- When two liquids cannot be mixed to form a solution they are called immiscible

**Multiple Choice Questions (Page No. 36)**

1. (a)                      2. (b)                      3. (a)

**Multiple Choice Questions (Page No. 39)**

1. (a)                      2. (c)                      3. (b)

## **EXERCISES**

### **Section A**

#### **Oral Question**

**Q1.-** Does air occupy space?

**Ans.-** Yes, air occupies space.

**Q2.-** Name a solid that dissolves in water.

**Ans.-** Sugar/Salt.

**Q3.-** Why do solids have a fixed shape?

**Ans.-** In solids, the molecules are very closely-packed and they have very strong force of attraction between them. Thus, they have a fixed shape.

#### **Science Quiz**

**Q1.-** Name the state of matter that does not have a definite shape and volume.

**Ans.-** Gas.

**Q2.-** Which gas escapes rapidly as we open a bottle of soda water?

**Ans.-** Carbon dioxide.

**Q3.-** Which force exist among the molecules of matter?

**Ans.-** The force of attraction.

#### **Worksheet**

##### **Multiple Choice Questions**

1. (c)      2. (c)

**Circle the odd ones. Give reason for your choice**

1. Solute                      Solvent                      Evaporation

**Ans.-** Evaporation - Others are components of a solution, whereas evaporation is a process.

2. Water                      Oxygen                      Milk

**Ans.-** Oxygen - Others are liquids, whereas oxygen is a gas.

3. Milk                      Orange juice                      Pen

**Ans.-** Pen - Others are liquids, whereas pen is a solid.

**Fill in the blanks with the help of the given words**

1. closely                      2. a definite                      3. solution                      4. oxygen

**Section B**

**Multiple Choice Questions**

1. (a)                      2. (b)

**Very short answer questions**

**Q1.-** Name one solid that does not dissolve in water.

**Ans.-** Sand/Paper/Wood/Metal.

**Q2.-** Name the state of matter that flows more easily than liquids.

**Ans.-** Gas flows more easily than liquids.

**Short answer questions**

**Q1.-** Write any two properties of solids.

**Ans.-** Properties of solids -

(i) Solids have a fixed shape.

(ii) Solids have a definite volume.

(iii) Solids are hard.

(iv) Solids do not flow.

**Q2.-** Write any two properties of gases.

**Ans.-** Properties of gases -

(i) Gases have no definite volume/shape.

(ii) Gases can flow.

(iii) Gases are not hard.

**Q3.-** Aditi's housemaid does not have a refrigerator. So, she gives ice and cold water to her daily in summers.

a) How is water changed to ice?

b) What can we learn from Aditi?

**Ans.-** (a) Water is changed into ice by the process of freezing.

(b) From Aditi, we learn to be kind and helpful to the poor and the needy.

### **Long answer questions**

**Q1.-** When sugar is dissolved in water, the volume of water remains the same. Why?

**Ans.-** The molecules of a liquid are not closely-packed. There are empty spaces among the liquid molecules. The volume of water does not change because when sugar is dissolved in water, sugar molecules occupy the empty spaces among the molecules of water.

**Q2.-** What is a solution? Give two examples.

**Ans.-** The liquid that we get by dissolving a solute in a solvent is called a solution.

Examples -

(i) In sugar solution, sugar is the solute and water is the solvent.

(ii) In salt solution, salt is the solute and water is the solvent.