

Ch-1Solids, Liquids and GasesHard words

1. Matter matter
2. molecules
3. movement
4. compressed
5. volume
6. melting
7. freezing
8. evaporation
9. condensation
10. solute
11. solvent
12. Solution

# Flow chart

Matter

Changing States by

Melting

Freezing

Evaporation

Condensation

States

Solid

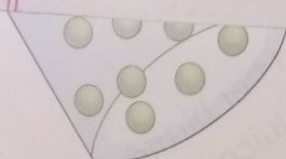
Liquid

Gas

Solute

Solvent

and Solution



2. Gas

Answer these question briefly.

Q1 What is matter?

Ans Anything that occupies space and has mass is known as matter.

Q2 Name two things that are non-matter.

Ans Light, sound are non-matter.

Q3 Define condensation.

Ans The process in which a gas changes into liquid on cooling is known as condensation.

Q4 Define solution.

Ans A solution is a mixture in which a solute dissolve in a solvent at a particular temperature.

Q5 Name any substance that is used as a solute.

Ans Sugar and salt are used as a solute.

1. Solid



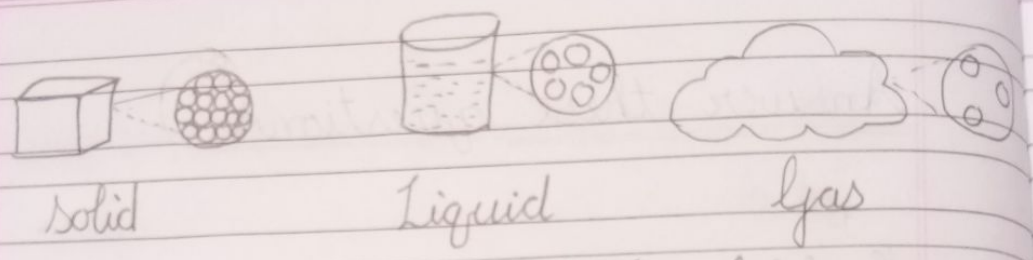
Answer these questions

Q1 Explain the differences in molecular arrangement of solids, liquids and gases.

Ans. Solids - Molecules are arranged very close to one another and they are arranged in a regular pattern.

Liquids - Molecules are loosely packed and they are not arranged in a regular pattern.

Gases - Molecules are very loosely packed.



Arrangement of molecules in different states of matter

Q2 Differentiate between freezing and melting.

Ans.	Freezing	Melting
1.	In this liquid changes into solid.	In this solid changes into liquid.
2.	In this temperature <del>increases</del> falls.	In this temperature <del>falls</del> increases

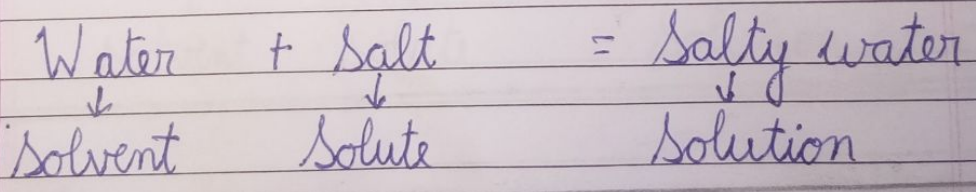
Q 3 Differentiate among solute, solvent and solution

Ans Solution  $\Rightarrow$  It is a homogeneous mixture consisting of a solute dissolved into a solvent.

Ex Salty water

Solute  $\Rightarrow$  It is the substance that is being dissolved. Ex. Salt

Solvent  $\Rightarrow$  It is the dissolving medium.  
Ex. Water



Q4 What is the difference among solids, liquids and gases? Write in a tabular form.

Ans	Solids	Liquids	Gases
1.	have definite shape.	have no definite shape.	have no definite shape.
2.	have definite volume.	have definite volume.	have no definite volume.
3.	cannot be compressed.	can be compressed.	can be compressed.
4.	Ex - Ice	Ex - Water <i>slightly</i>	Ex Water vapour



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5.

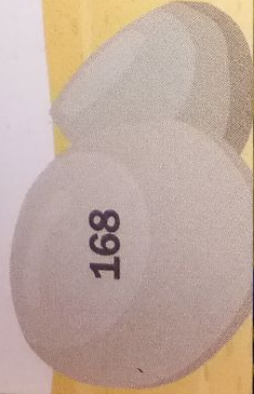
**Write**  
**C.**

## Evaluate

### Objective Type Questions

**A. Tick (✓) the correct answer.** molecules are very closely packed.

1. In a \_\_\_\_\_, molecules are very closely packed.  
a. liquid      b.  solid  
c. gas         d. none of these



2. Which of the following is matter?

- a. Shadow
- c. Voice

- b. Song
- d. Ship

3. Which of the following has the weakest forces of attraction between the molecules?

- a. Juice
- c. Pen

- b. Smoke
- d. Ice

4. The substance that dissolves itself in liquid is known as:

- a. solvent
- c. solute

- b. solution
- d. all of these

5. When two or more substances are mixed together, such that they are evenly distributed, they form a:

- a. solution
- c. solute

- b. solvent
- d. none of these

**B. State True or False.**

1. Matter is anything that occupies space.

True

2. Tea is non-matter.

False

3. Gas is matter.

True

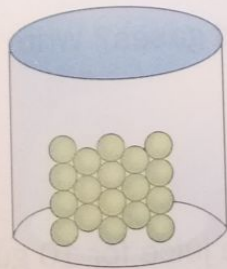
4. Salt does not dissolve completely in water.

False

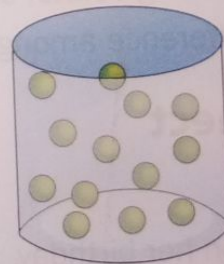
5. Solids and liquids are the only states of matter.

False

**C. Write solid, liquid or gas under its matching molecular arrangement.**



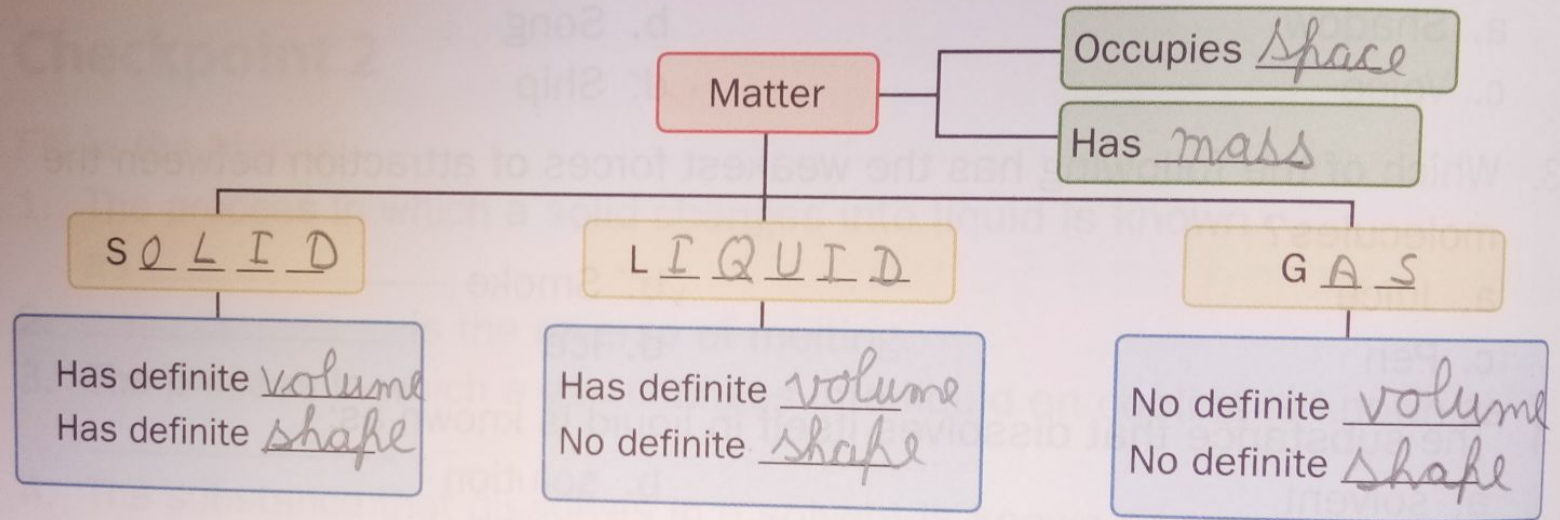
1. Solid



2. Gas



D. Complete the concept map.



### Short Answer Questions

Answer these questions briefly.

1. What is matter?
2. Name two things that are non-matter.
3. Define condensation.
4. Define solution.
5. Name any substance that is used as a solute.

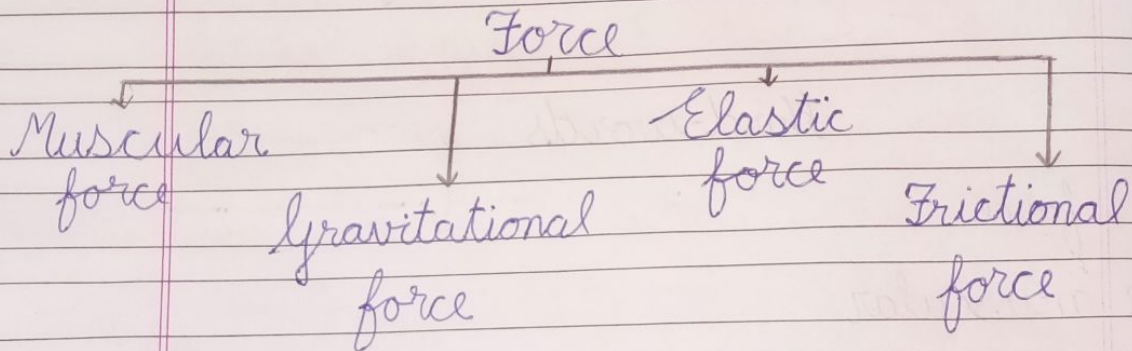
## Ch-2

## Force, Work and Energy

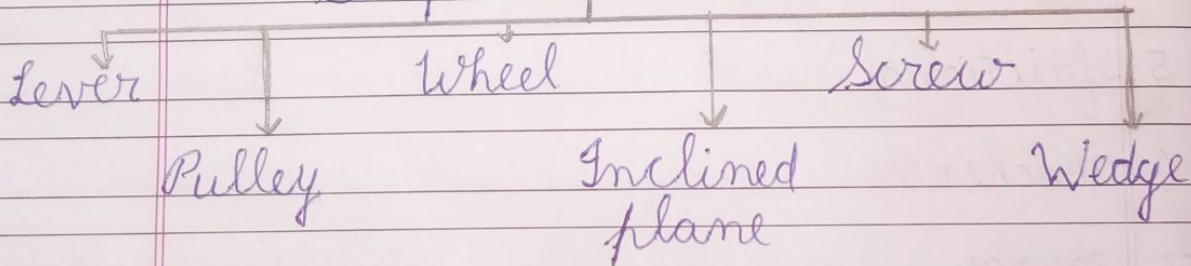
## Hard-words

- 1 force
- 2 muscular
- 3 gravitational
- 4 elastic
- 5 frictional
- 6 machines
- 7 energy
- 8 atomic
- 9 geothermal
- 10 chemical

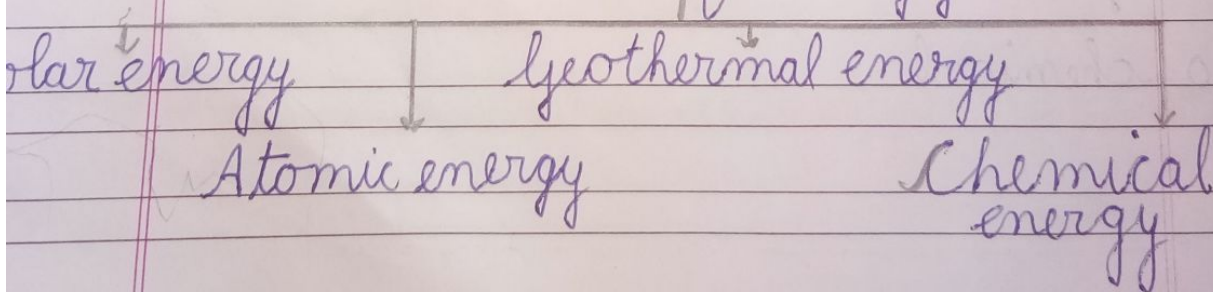
## Flow chart



## Simple Machines



## Sources of Energy



how it functions  
as a person slip easily on

Answer these questions briefly

Q1 Define force.

Ans Force is a push or a pull exerted on an object.

Q2 Name any two types of forces.

Ans Muscular forces and gravitational forces.

Q3 Define simple machines.

Ans Simple machines are devices that make doing work easier.

Q4 What is work?

Ans Work is the product of force and displacement in the direction of force.

Q5 Name any two simple machines.

Ans. Lever, Wheel.

Answer these questions.

Q1 What is gravitational force? Explain how it functions.

Ans The force of Earth that pulls objects towards itself is known as gravitational force. When we throw an object in the air, it falls back on the ground. This is gravitational force.

in how it funcu-  
es a person slip easily



Q2 What is frictional force? Why does a person slip easily on a banana peel?

Ans Frictional force is force exerted by a surface when an object slides or rolls over it.

A person slip easily on a banana peel because the inner side of banana peel being smooth and slippery reduces the friction between the sole of shoe and the surface.

Q3 What is solar energy? Name any two devices that use solar energy.



Ans The energy that we get from the sun is called solar energy.

Solar cooker and solar heater ~~are~~ use solar energy.

Q4 How do simple machines help us?  
Discuss any two in detail.

Ans Simple machines make our work easier as it requires less energy.

Pulley - A pulley is a machine made of wheel with a groove and a rope. The rope helps to lift heavy objects easily.

how it func...  
a person slip easily



Inclined Plane  $\rightarrow$  An inclined plane is a flat surface that is higher on one end. We can use this to move heavy objects to a lower or higher place.

Q5 Define energy. Give details of two sources of energy

Ans Energy is the ability ~~to~~ or the capacity to do work.

1 Chemical energy  $\Rightarrow$  The energy obtained by chemicals acting on one another is called chemical energy. Example battery, cell etc.

2 Wind and water energy  $\Rightarrow$  Energy from wind and flowing water can be used to generate electricity.

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es a person slip ea-



### SUMMARY

- Force is a push or a pull exerted on an object.
- The types of forces are muscular, gravitational, elastic and frictional.
- The various simple machines are lever, pulley, wheel and axle, inclined plane, screw and wedge.
- Energy is the ability to do work.
- Things from which we get energy are called sources of energy.
- The Sun is the biggest source of energy.
- Energy can change from one form to another.

## Evaluate

### Objective Type Questions

A. Tick (✓) the correct answer.

- Force can
  - move a stationary object.
  - stop a moving object.
  - change the direction of a moving object.
  - all of the above.
- The force which acts in an opposite direction and slows or stops a moving object is
  - frictional force.
  - gravitational force.
  - magnetic force.
  - none of these.
- Work is said to be done when a
  - boy tries to move a wall.
  - boy kicks a football.
  - boy sleeps.
  - boy thinks.
- The source of all energy is
  - water.
  - the Sun.
  - heat.
  - wind.
- Lever is a
  - simple machine.
  - force.
  - work.
  - energy.



Ch - 3  
Solar System

Hard words

1. planets
2. comets
3. asteroids
4. orbits
5. satellites
6. galaxy
7. universe
8. constellations
9. equator
10. hemispheres

Answer these questions briefly.

Q1 What is the solar system?

Ans The Sun, the planets and their moons along with smaller bodies like dwarf planets, comets and asteroids <sup>form</sup> the solar system.

Q2 Write the names of planets in increasing order of their distance from the Sun.

Ans Mercury, Venus, ~~Mars~~ Earth, Mars, Jupiter, Saturn, Uranus, Neptune.

Q3 What are ~~the~~ stars?

Ans Stars are huge balls of gases. They give out light of their own.

### Answer Questions

Answer the questions.

1. Gravitational force? Explain how it functions.

2. Frictional force? Why does a person slip easily on a banana peel?

Q4 What is the movement of the Earth on its imaginary axis called?

Ans The movement of the Earth on its imaginary axis is called rotation.

Q5 What causes seasons?

Ans Revolution causes seasons.

Answer these questions

Q1 What are satellites? Why is the moon called the natural satellite of the Earth?

Ans The heavenly bodies which revolve around planets are called satellites.

banana peel?

The moon is a natural satellite of ~~moon~~ Earth because it moves around Earth.

Q2 What is the difference between rotation and revolution?

Ans.	Rotation	Revolution
1.	It completes in 24 hours	It completes in 365 $\frac{1}{4}$ days
2.	It causes day and night.	It causes seasons
3.	In this earth moves on imaginary axis.	In this earth moves on orbit.

4. Name any two

### Long Answer Questions

Answer these questions.

1. What is gravitational force? Explain how it functions.
2. What is frictional force? Why does a person slip easily on a b



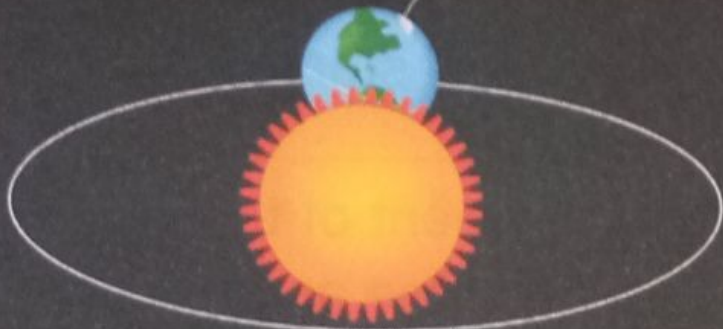
Q 3 How are seasons caused? Explain with the ~~ht~~ help of a diagram.

Ans Seasons are caused by:-

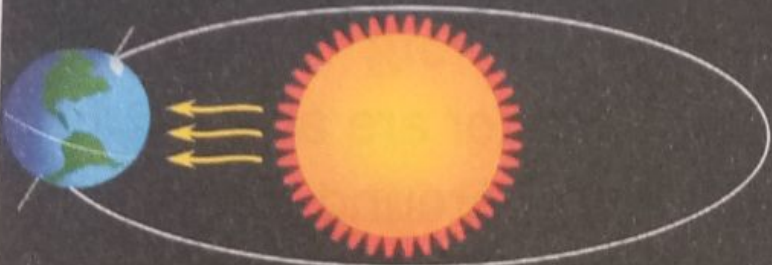
- 1 the revolution of the Earth around the Sun in its elliptical orbit.
- 2 the tilt of the Earth at  $23.5^\circ$  on its imaginary axis.



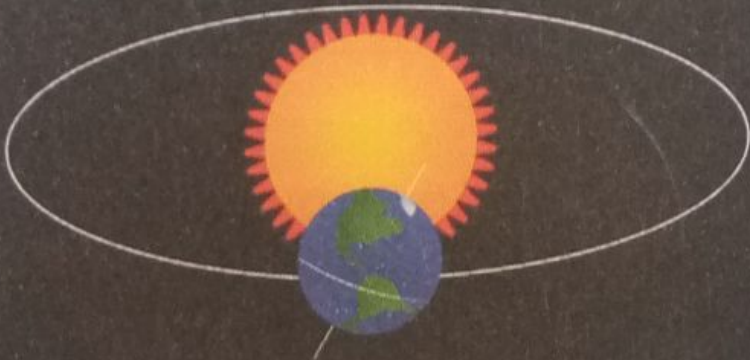
Winter in the northern hemisphere and summer in the southern hemisphere



The season of spring, as both hemispheres receive equal amount of sunlight



Summer in northern hemisphere and winter in the southern hemisphere



The season of autumn, as both the hemispheres receive an equal amount of sunlight

## Evaluate

### Objective Type Questions

A. Tick (✓) the correct answer.

- Jupiter is the  
a. coldest planet.  
c. first planet.  
 b. largest planet.  
d. red planet.
- Mars is \_\_\_\_\_ in colour.  
a. blue       b. red      c. green      d. brown
- The Earth's axis is tilted at:  
 a. 23.5°      b. 32.5°      c. 30.5°      d. 53.5°
- Which of the following causes day and night?  
a. Revolution      b. Equator  
 c. Rotation      d. None of these
- The Orion and Ursa Major are types of:  
a. animals       b. constellations  
c. moons      d. none of these
- Seasons are caused by  
a. the rotation of the Earth.      b. constellations.  
 c. the revolution of the Earth.      d. none of these.

B. Give one word for the following.

- This planet is also called morning or evening star.
- The imaginary line that runs through the centre of the Earth and divides it into two equal halves.
- This movement of Earth causes seasons.
- This is a group of stars.
- These are heavenly bodies which revolve around planets.

Venus

axis

revolution

constellation

satellites

C. Rapid Fire with Planets!

Identify the planets.

1. It has red soil and rocks.
2. It is the biggest planet of our solar system.
3. It is the hottest planet.
4. It is the third planet of the solar system.
5. It has beautiful rings around it.
6. It is the last planet in our solar system.

Mars  
 Jupiter  
 Venus  
 Earth  
 Saturn  
 Neptune

D. Complete the concept map.



Short Answer Questions

Answer these questions briefly.

- What is the solar system?  
 Write the names of planets in increasing order of their distance from the Sun.  
 What are stars?  
 What is the movement of the Earth on its imaginary axis?  
 What causes seasons? *Revolution*

