ODM EDUCATIONAL GROUP
Changing your Tomorrow

WELCOME TO THE ONLINE CLASS

SESSION NO.: 4
CLASS: 5
SUBJECT: SCIENCE
CHAPTER NUMBER: 5
CHAPTER NAME: SOLIDS, LIQUIDS AND GASES
SUB TOPIC: HEATING AND COOLING, PHYSICAL CHANGE

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LEARNING OBJECTIVE

To enable the learner to:

- **know about the interchange in state of matter.**
- **learn about the different processes involved in interchange.**
- **understand the types of changes.**
- **know about physical change.**

WARM UP

- What happens when they keep a glass of cold water outside for some time?
- What happens when an ice tray is left out of the refrigerator?
- What happens when their mother is putting a pan filled with water on the gas?
- What happens when you keep an ice tray filled with water in the deep freezer?

STATES OF MATTER ARE INTERCHANEGABLE

MELTING

EVAPORATION

ICE

WATER

WATER
VAPOUR/ STEAM

FREEZING

CONDENSATION

CONDITIONS NECESSARY TO CHANGE OF THE STATE OF MATTER

HEATING

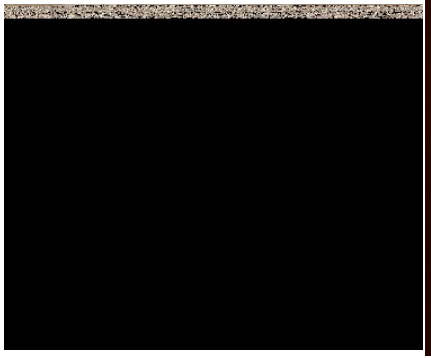
COOLING

DIFFERENT PROCESSES

- **MELTING: The process of change of ice into water on heating is called melting.**
- **EVAPORATION: The process of change of water into water vapour on heating is called evaporation.**
- **CONDENSATION: The process of change of water vapour into water on cooling is called condensation.**
- **FREEZING: The process of change of water into ice on cooling is called freezing.**

PHYSICAL CHANGE

- A change which is temporary and can be reversed is called a physical change.
- E.g.:
  - Water changes into ice
  - Boiling of water
  - Solid wax changing into liquid wax

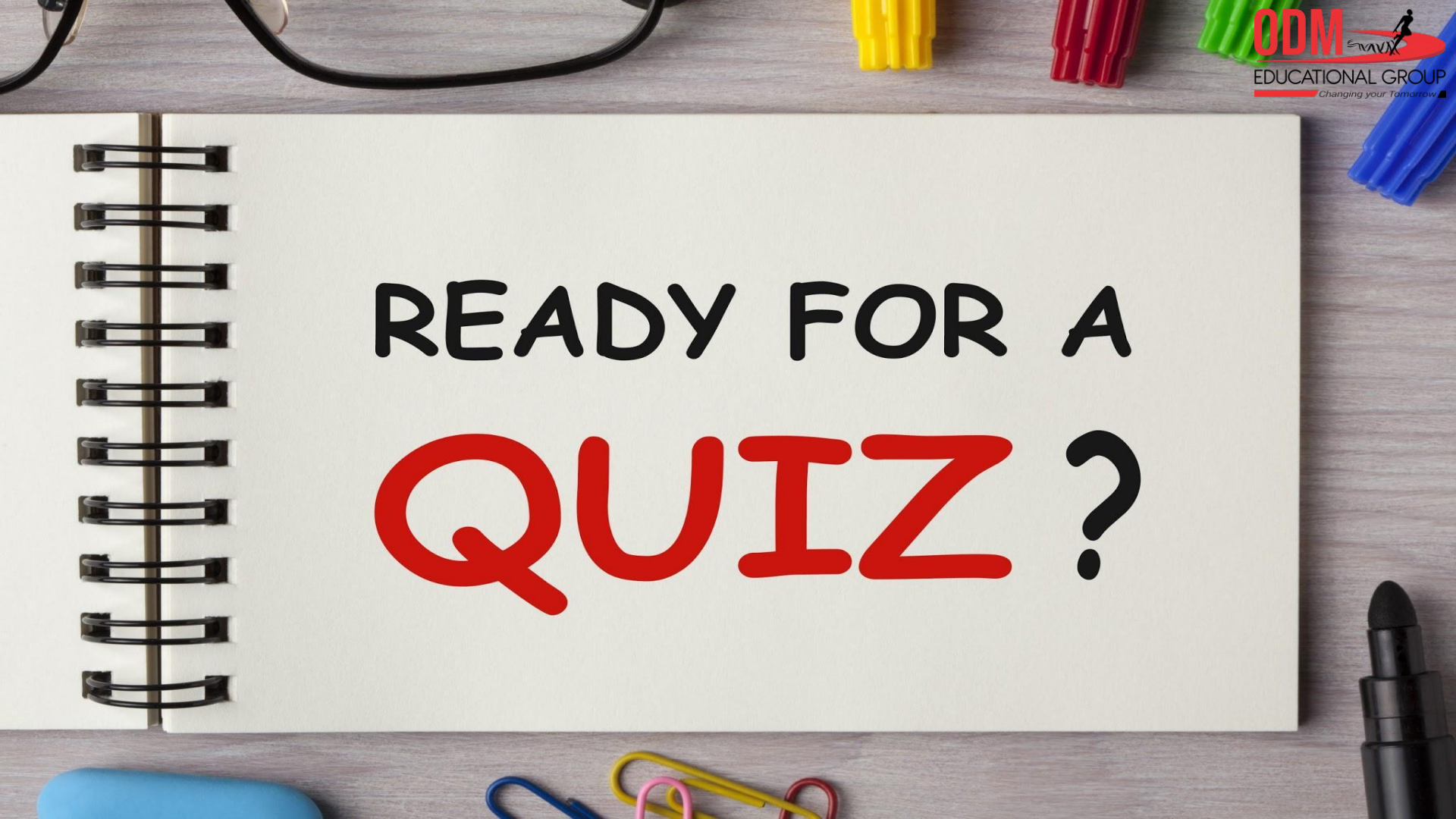


PHYSICAL CHANGE

- **Properties of physical change:**
  - **Change occurs only in states of matter**
  - **It is a temporary change.**
  - **It can be easily reversed.**
  - **No new substance is formed.**

SUMMARY

- States of matter are interchangeable.
- State of matter can be changed either by heating or by cooling.
- A change which is temporary and can be reversed is called a physical change.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READY FOR A
QUIZ ?

1. **The process of change of solid into liquid on heating.**

Ans: Melting

2. The process of change of gas into liquid on cooling.

Ans: Condensation

3. What causes a change in state of matter?

Ans: Heating or cooling

4. What are the properties of physical changes?

Ans:

- **Physical changes are temporary**
- **They can be easily reversed.**
- **Changes are only in the states of matter.**
- **No new substance is formed.**

HOMEWORK

- **Do the short Q & A in your notebook.**

C. Write short answers.

4. Name any two solids, two liquids and two gases that can dissolve in water.

Ans:

- **Two solids that can dissolve in water are sugar and salt.**
- **Two liquids that can dissolve in water are lemon juice and Vinegar.**
- **Two gases that can dissolve in water are oxygen and nitrogen.**

D. Answer these questions.

1. Why do solids have a fixed shape?

Ans:Solids have a fixed shape because the molecules are very close to each other and they have a very great force of attraction between the molecules.

2. Why do liquids flow?

Ans:In liquids, the molecules are less closely packed and the attraction between the molecules is also less. Molecules can move around freely. That is why liquids can to flow.

LEARNING OUTCOME

The learner will be able to:

- **know about the interchange in state of matter.**
- **learn about the different processes involved in interchange.**
- **understand the types of changes.**
- **know about physical change.**

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THANKING YOU

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