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WELCOME TO THE ONLINE CLASS

SESSION NO.: 2
CLASS: 5
SUBJECT: SCIENCE
CHAPTER NUMBER: 5
CHAPTER NAME: SOLIDS, LIQUIDS AND GASES
SUB TOPIC: MORE ABOUT MOLECULES

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LEARNING OBJECTIVE

To enable the learner to:

- **Understand the arrangement of molecules in solids, liquids and gases**
- **Know more about the shape and volume of the state of matter**

RECAPITULATION

- Anything that occupy space and has weight.
- Is anger a state of matter? Why or why not?
- What are elements?
- Define atoms.

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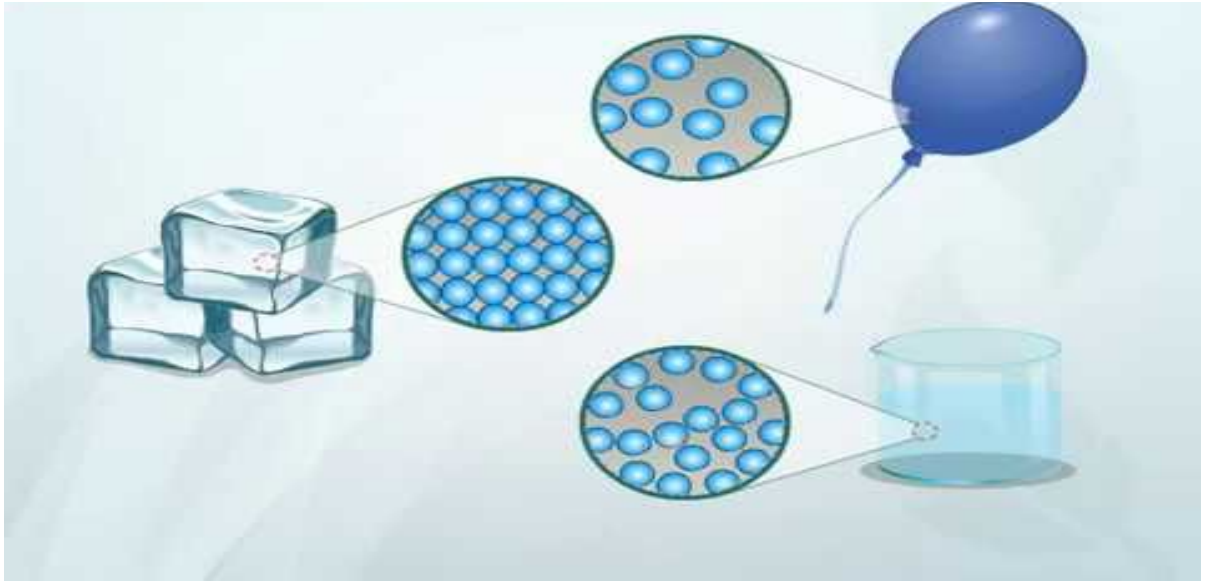
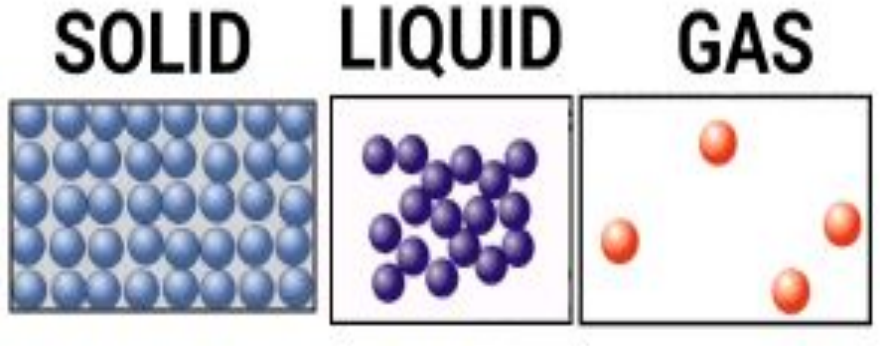
STATES OF MATTER

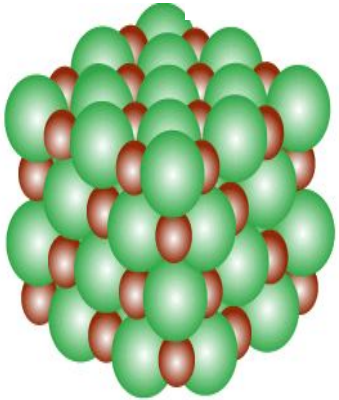
- **Matter exists in three states :**
  - **Solids**
  - **Liquids**
  - **Gases**



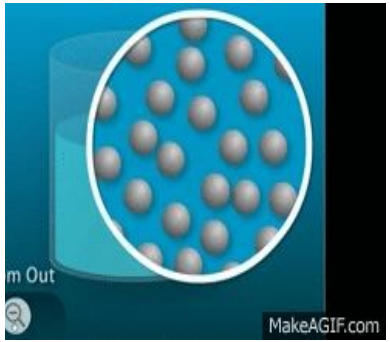
MORE ABOUT MOLECULES

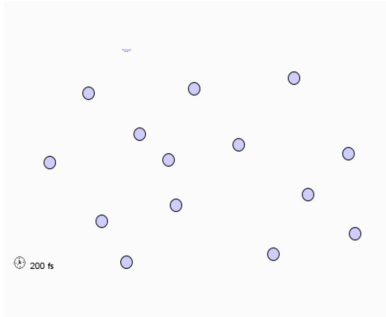
- Molecules are always in a state of motion.
- They never stop moving.
- They are constantly attracted towards each other.





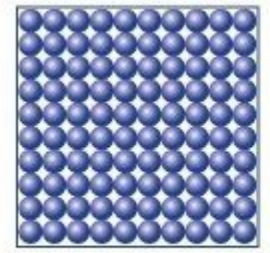
Solid state





SOLIDS

- Molecules are very tightly packed.
- Force of attraction between the molecules is very high.
- Solid is hard and rigid and has a definite shape and definite volume.



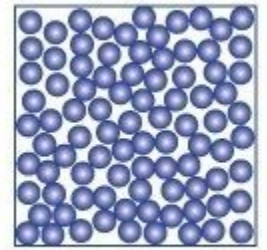
Solid

Solid

Has fixed shape and volume

LIQUIDS

- Molecules are loosely packed.
- The attraction between the molecules is less.
- Molecules can move freely. That is why liquids can flow.
- Liquids have a definite volume, but no definite shape. It takes the shape of its container.



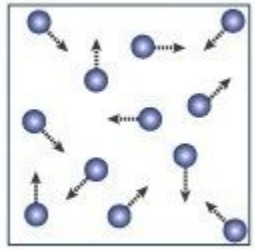
Liquid

Liquid

Takes shape of container
Forms horizontal surface
Has fixed volume

GASES

- Molecules are far apart.
- Space between the the molecules is maximum.
- Molecules move fastest in gases. That is why they can flow much easily then water.
- Gases neither have a definite shape nor volume.



Gas

Gas

Expands to fill container

COMPARISON BETWEEN THE STATES OF MATTER

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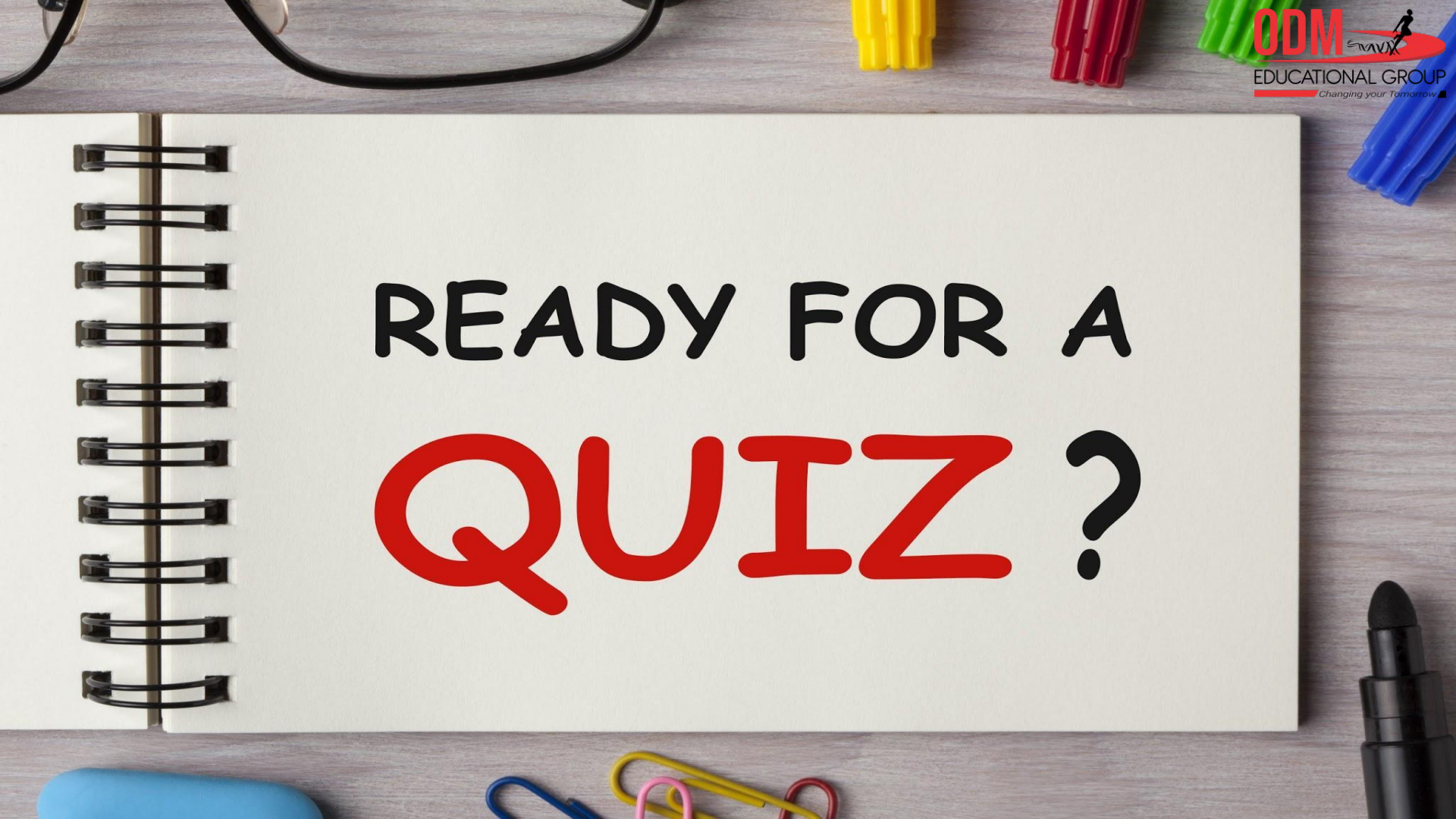
Properties/ State	Solid	Liquid	Gas
Molecules	Tightly packed	Loosely packed	Far apart
Attraction between molecules	Strongest	Less strong	Least
Shape	Fixed	Not fixed	Not fixed
Volume	Fixed	Fixed	Not fixed
Space between molecules	Very less	Less	Very high
Movement of molecules	Very less	Less	Very high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READY FOR A
QUIZ ?

1. **In which state of matter molecules have maximum space?**

Ans: Gases

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2. Why do gases flow more easily than liquids?

Ans: In gases, molecules are more loosely packed than liquids, that’s why gases flow more easily than liquids.

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3. Which states of matter have definite volume?

Ans: Solids and liquids

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4. In which state of matter the attraction between the molecules is least?

Ans: Gases

HOMEWORK

- **Draw the picture of molecular arrangement in solids, liquids and gases in your notebook.**

Things needed for next class activity:

1. Oil
2. Water
3. Lemon
4. Salt
5. Sugar
6. Sand
7. Food colour
8. Milk
9. Honey
10. Face powder
11. 2 glasses

LEARNING OUTCOME

The learner will be able to:

- **Understand the arrangement of molecules in solids, liquids and gases**
- **Know more about the shape and volume of the state of matter**

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THANKING YOU

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