

Summary of lesson 1

Identify properties of materials.

Matter: is anything that **has mass** and **takes up space**. All matter is made up of tiny particles.

Examples of matter: Water, book, Air, and yourself.

Examples of Non-Matter: Time, Energy, Motion , Feelings.

Mass: is the measure of the amount of matter in an object.

More matter → More mass

Weight: is how strongly gravity pulls on an object. (how heavy or light is an object)

Volume: The amount of **space** an object takes up.(Describe how large or small an object is).

1. Think about an inflated balloon with a small bag of marbles that is half its size. Which one has more volume? Explain your answer.



Sample answer: The balloon has more volume, because it takes up more space.

2. Which one has more mass? Explain your answer.

Sample answer: The bag of marbles has more mass, because it contains more matter.

We can identify materials based on their properties can be **PHYSICAL** or **CHEMICAL**.

Physical properties: Characteristics of matter that can be observed and measured. (Can be observed without changing materials)

Examples of physical properties

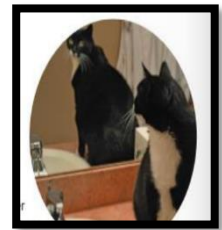
- 1- **Conductivity:** Describe how **energy** such as **heat** or **electricity** can move through materials.

Example: **Metal** such as iron, copper, and silver has conductivity.



- 2- **Reflectivity:** the way light reflects or bounces off an object.

Example: Smooth, flat surfaces such as **mirror** and **shiny pans** has reflectivity.



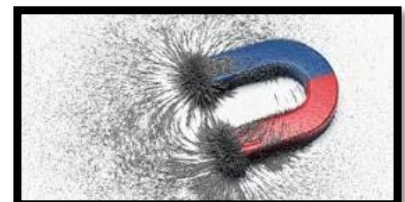
- 3- **Solubility:** the ability of matter to dissolve in a liquid.

Example: **Salt** has solubility.



- 4- **Magnetism:** is the ability of a material to **be attracted to a magnet**, without needing to be a magnet itself.

Example: **Metals like iron** has magnetism.



Chemical properties: Characteristics that can **only be observed** when there is a change in the type of matter.

Examples of chemical properties:

- 1- **Combustible:** the ability to burn.

For example: **Wood is combustible.**



- 2- **Rusting:** the ability to rust or tarnish through a process called corrosion.

For example: **Some metal is rusting.**

