

## VOCABULARY

**MATTER:** everything around us which has mass and volume.

### a) PROPERTIES

- **Mass:** the quantity of matter in an object.  
We measure it in grams or kilograms.
- **Volume:** the space that an object occupies.  
We measure it in litres.



### b) TYPES OF MATTER

- **Pure substance:** matter that is made up of just one component. Example: water is a pure substance.
- **Mixture:** matter that contains two or more substances.



- **Homogeneous mixture:** matter that blends together when it is mixed and cannot be easily separated.  
Example: lemonade and sea water.



- **Heterogeneous mixture:** matter that can be easily separated after it is mixed.  
Example: salad and water with sand.

### c) STATES OF MATTER

- **Solid:** matter that has a fixed shape and volume.  
Examples: an ice cube and a pencil are solids.



- **Liquid:** matter that has a fixed volume but changes shape to fit its container.

Examples: water and lemonade are liquids.



- **Gas:** invisible matter that does not have a shape or volume. Examples: water vapour and oxygen are gases.



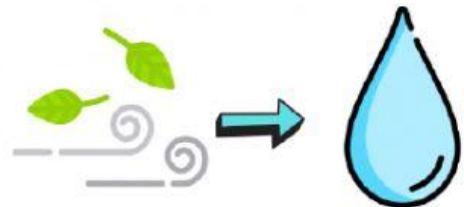
#### d) CHANGES IN MATTER

- **CHEMICAL CHANGE:** the transformation of a substance into another substance.
- **PHYSICAL CHANGE:** a transformation that does not change the composition of matter (the volume and mass doesn't change).

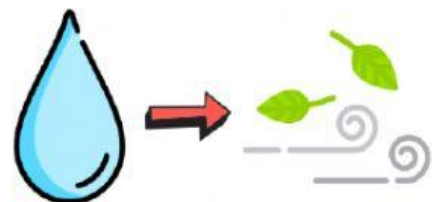
Example: the changes of state\* are physical changes.

\* **CHANGE OF STATE:** when matter varies from one state or form into another.

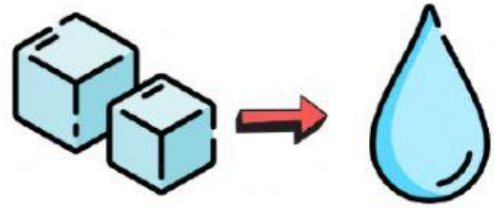
- **Condensation:** when gas **cools** and changes into a liquid. Example: the water vapour that appear on the mirror when you have a shower with hot water.



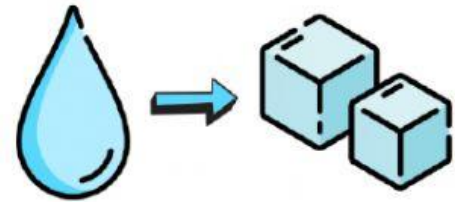
- **Evaporation:** when a liquid is **heated** and changes into a gas. Example: if you leave a glass with water it evaporates (it disappears because of evaporation).



- **Melting:** when a solid is **heated** and changes into a liquid. Example: when an ice cream starts melting in a hot summer day.



- **Solidification:** when liquid cools and changes into a solid. Example: when you pour some water in an ice bucket tray and leave it inside the freezer.



**ENERGY:** an invisible force that makes things change and move.

### TYPES OF ENERGY

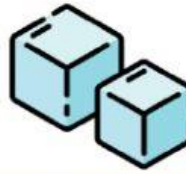
- **Chemical energy:** energy that is stored in food and living things.  
Example: food give us energy.
- **Heat energy:** energy that produces heat. It is also known as **thermal energy**.  
Example: we can feel it in a cup of hot chocolate.
- **Electrical energy:** energy that comes from the flow of electric charge.  
Example: TV uses this kind of energy.
- **Kinetic energy:** energy that an object possesses because of its motion.  
Example: when you run or walk.
- **Light energy:** energy that produces light.  
Example: the Sun give us light energy during the day.
- **Sound energy:** energy that produces sound.  
Example: when you play the recorder in Music class.





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