

Mass:

The amount of matter in an object.



How do you measure the mass?

Mass measurement:

Different types of scales are used to measure the mass such as: The balance scale and one-arm scale.



▲ A balance scale



▲ A sensitive two-arm scale



▲ A one-arm digital scale



▲ A one-arm scale with a pointer

➤ **Activity** : (How do we measure mass?)

➤ **Tools:**

A balance scale, standard masses of the object we need to measure its mass.

➤ **steps:**

- (1) Put the balance scale on a stable shelf horizontally to avoid any vibrations.
- (2) Make sure that the balance scale is clean in and out.
- (3) Put the object on one of the arms.
- (4) Put standard masses on the other arm until the two arms balance.
- (5) Add up the written numbers on the standard masses.

➤ Observation :

The total of the standard masses is the mass of the object.

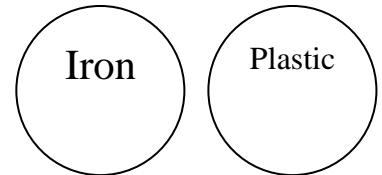
➤ Conclusion:

The object mass is equal to the total mass of balance masses that are already known.

➤ Exercise:

The opposite two balls have the same volume.

- Are the two balls have the same mass?
- Which one will have larger mass?

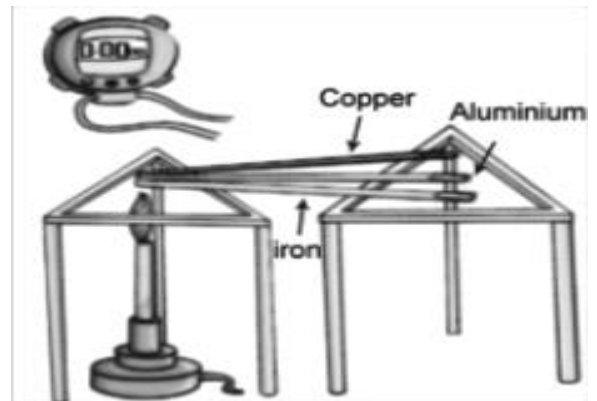


★ *We can conclude that: materials differ in conducting heat and are classified into two types:*

- *Good conductors of heat: these are the materials that conduct heat and let heat flow through such as copper, aluminium, iron and mercury.*
- *Bad conductors of heat: these are known as insulators that do not let heat flow through such as wood, glass, plastic, paper, and air.*

➤ Activity: ➤ steps:

- Bring copper, aluminum and iron rods.
- Ignite the wax and put some drops of molten wax on the end of each three rods.
- Fix pin on each rod in the molten wax, before freezing.
- Put the three rods on two holders.
- Put the ends of rods that don't have wax above a Bunsen flame.
- Which one conducts heat faster?



➤ Activity : ➤ steps:

- Prepare some rods almost equal in length and thickness from (plastic, Aluminum, iron and wood).
- Put a beaker of water above Bunsen flame and heat water then put four rods in it.
- Hold the end of aluminum rod.
- Repeat the previous step with other rods.
- Which one is good or bad conductor of heat?

