Science Notes

TOPIC: PHYSICAL PROPERTIES AND CHANGES

All substances have certain characteristics called ***properties***. ***Properties*** can be physical or chemical. A ***physical property*** is a chemical feature that can be *observed* or *measured* without changing the substance or any of the materials it is made of.

Physical properties that can be observed are:

*colour *shape *size *luster *texture

Physical properties that can be measured are:

*density *heat *length *density *height *width *thickness

Some *physical properties* such as **melting point**, **boiling point** and **colour** do not change. When we change the physical properties of a substance, this is called a physical change.

Examples of physical changes include:

**sharpening a pencil* **melting wax*
**grating coconut* **cutting paper*

Although change took place, the properties of each substance remained the same.

LIVEWORKSHEETS

CHEMICAL PROPERTIES AND CHANGES

Chemical properties describe how particles are re-arranged when one substance reacts with another reacts with another substance.

- When *two substances* substance **react** and *a new substance* is **produced**, which is unlike either of the original substances used, a chemical change has taken place.
- A new substance is formed during a chemical change. Some substances chemical change react quickly while others react slowly.

Combustion (burning) and ***decomposition*** (rotting) are types of ***chemical reactions.*** Some chemical changes give off energy.

E.g. burning coal releases heat and light energy.

Some changes require the addition of heat energy. **Examples** of these are the chemical changes that cause **food to spoil** or **iron to rust**.

Naturally occurring chemical changes can be *harmful*. To avoid the effect of naturally occurring chemical changes, we can resort to freezing or drying to *preserve food.*

Tools can be kept well oiled to prevent *rusting*. **Rusting** takes place when ***chemicals react with oxygen***. Substances that prevent **corrosion** (rusting) are called **antioxidants**.

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