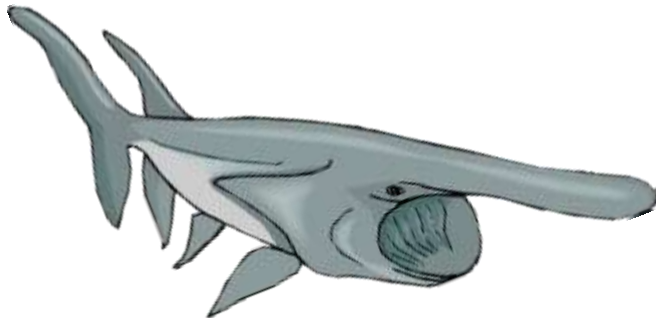


• **All living things respire.** Respiration is a process that includes breathing. The movement of air in and out of the body and vice-versa is known as breathing.

For example, animals such as earthworms breathe through their skin; fishes use gills for breathing and plants exchange gases through tiny pores called stomata, which are present mainly on the surface of leaves.



## Difference between Aerobic and Anaerobic respiration

| Aerobic respiration                                                            | Anaerobic respiration               |
|--------------------------------------------------------------------------------|-------------------------------------|
| It occurs in the presence of $O_2$ .                                           | It occurs in the absence of $O_2$ . |
| It involves the exchange of gases between an organism and outside environment. | Exchange of gases is absent.        |
| It occurs in the cytoplasm and mitochondria.                                   | It occurs only in the cytoplasm.    |
| It always releases $CO_2$ and $H_2O$ .                                         | End products may vary.              |
| It yields 36 ATP.                                                              | It yields 2 ATP.                    |
| Example: Cells in our body                                                     | Example: Yeast and muscle cells     |

**Adenosine triphosphate (ATP)** is the universal unit of energy used in all living cells. It is the very basic molecule which meets our energy needs and is formed in the later steps of glucose oxidation.