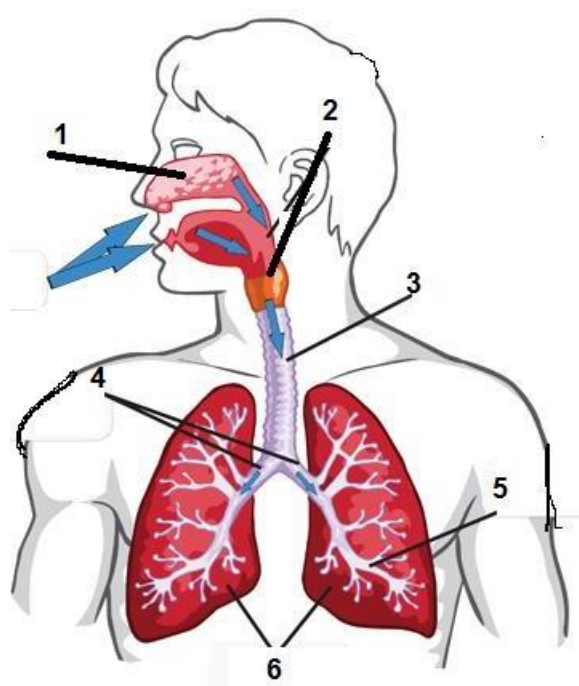


CLASS 7 ICSE BIOLOGY RESPIRATION AND TRANSPIRATION



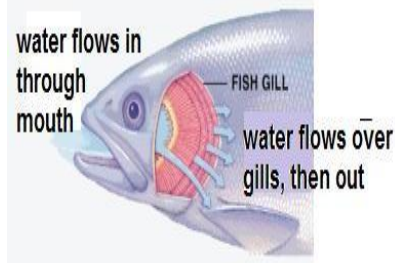
1. NOSE: Air enters through the mouth and nose which is lined with fine hair and mucus to trap dirt and bacteria
2. The EPIGLOTTIS is a flap of tissue which closes over the wind pipe when we swallow food
3. TRACHEA or wind pipe directs air into the lungs
4. The windpipe divides into two BRONCHI each of which enters into a lung
5. Bronchi branch into smaller BRONCHIOLES which end in minute bags called ALVEOLI
6. LUNGS: a pair of spongy lungs enclose the bronchioles and alveoli and oxygen is transferred to the blood and carbon dioxide is removed from the blood

IS RESPIRATION DIFFERENT FROM BREATHING?

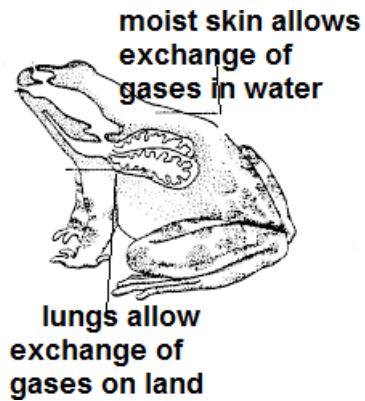
The diagram illustrates the exchange of gases between the environment, the lungs, and a typical cell in the body. At the top, 'Breathing' is shown with an arrow for O_2 entering and CO_2 leaving. Below, the 'Lungs' are shown with an arrow for O_2 entering and CO_2 leaving. At the bottom, a 'typical cell in body' is shown with an arrow for O_2 entering and CO_2 leaving. The process within the cell is labeled 'Cellular respiration'.	Breathing Takes place in the lungs Process of gaseous exchange between lungs and environment Uses oxygen from the environment Removes carbon dioxide produced by oxidation of food during respiration When we breathe out through a pipe into a beaker containing lime water, we find the lime water turns milky showing the presence of carbon dioxide	Respiration Takes place in each cell of the body Process by which food is broken down to release energy Aerobic respiration uses oxygen obtained through lungs $\text{Glucose} + \text{oxygen} \rightarrow \text{carbon dioxide} + \text{water} + \text{energy}$ Anaerobic respiration does not use oxygen Produces carbon dioxide due to oxidation of food
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RESPIRATORY ORGANS IN DIFFERENT ANIMALS

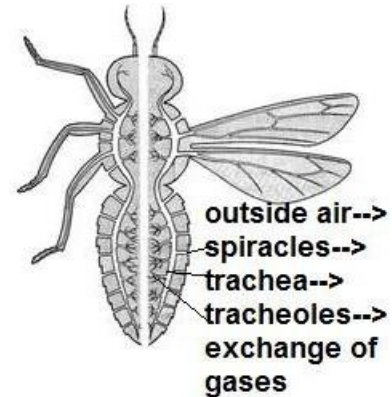
FISH: GILLS



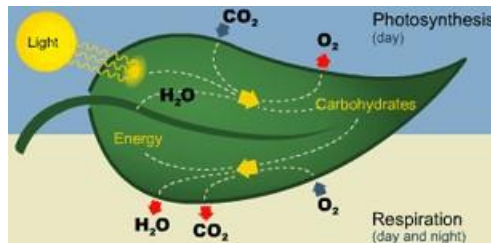
AMPHIBIANS: LUNGS AND SKIN



INSECTS: TRACHEA



RESPIRATION IN PLANTS:



Plants also respire by breaking down glucose to release energy and carbon dioxide and water
Photosynthesis involves using carbon dioxide and water to synthesize glucose

TRANSPIRATION IN PLANTS: Loss of water in the form of vapour from leaf surface

