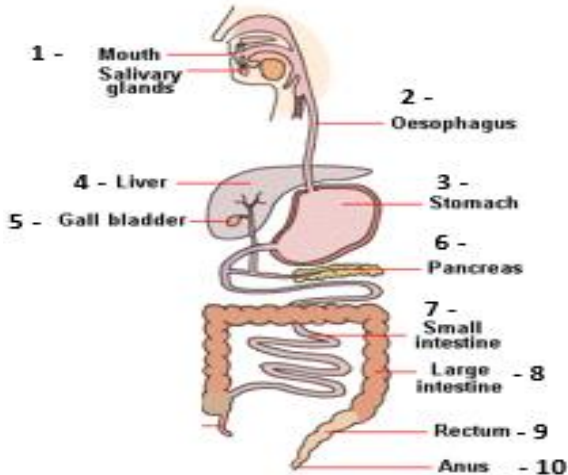


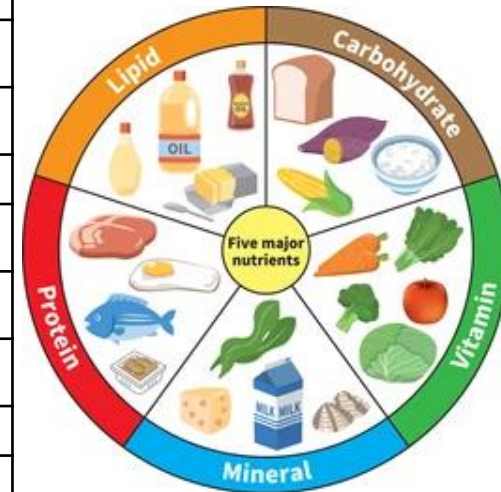
The Digestive System



Enzymes

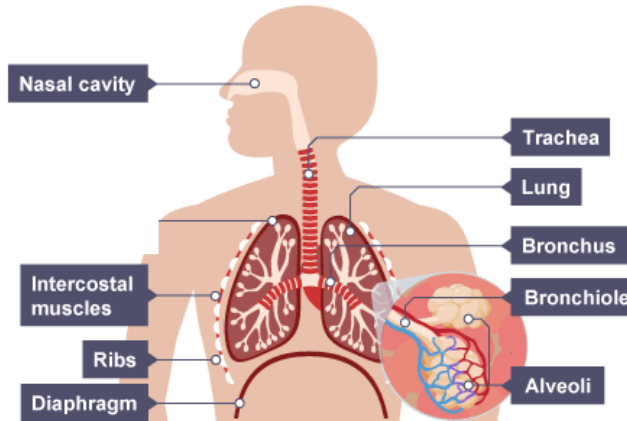
Mouth (salivary glands)	Where food enters the alimentary canal and mechanical digestion begins. Salivary glands produce amylase .
Oesophagus	Muscular tube which moves ingested food to the stomach. This is called peristalsis.
Stomach	Churns the food and contains hydrochloric acid which provides the appropriate pH for enzyme pepsin to work.
Liver	Produces bile, which emulsifies fats and neutralises stomach acid.
Pancreas	Produces digestive enzymes, amylase, lipase and protease which are released into the small intestine.
Small Intestine	Where digested food is absorbed into the blood. They walls are folded into projections called villi which gives it a large surface area.
Large Intestine	Where water is reabsorbed
Rectum	Where faeces are stored.
Anus	Where faeces leave the alimentary canal

Nutrient Groups



Water is also an essential nutrient.
Carbohydrates are split into starch and sugars

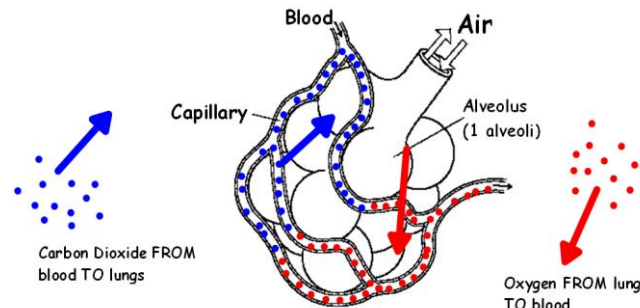
Respiratory and Gas Exchange System



The function of the alveoli is to exchange gases in the lungs
Gases move into the lungs by diffusion
Alveoli are adapted by having a large surface area to increase diffusion
They are very thin, this means diffusion is very quick
They have a good blood supply, which maintains the concentration gradient
They are moist so that gases dissolve quickly

Gas Exchange in Plants

Gases diffuse in and out of the leaf through little holes called the stomata

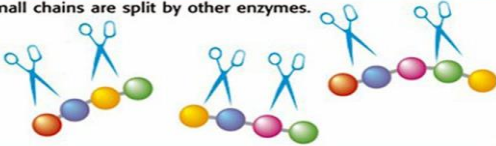


The Role of Enzymes in Protein Digestion

1 Enzymes act as chemical scissors to cut the long chains of amino acids into small chains.



2 The small chains are split by other enzymes.



3 Individual amino acids are small enough to enter the bloodstream, where they can be used to make new proteins.



Enzyme	Found in the				Breaks down	Into
	Salivary glands	Stomach	Pancreas	Small intestine		
Amylase	✓		✓	✓	Starch	Sugars
Lipase		✓	✓	✓	Fats	Fatty acids & Glycerol
Protease e.g. pepsin		✓	✓	✓	Proteins	Amino Acids