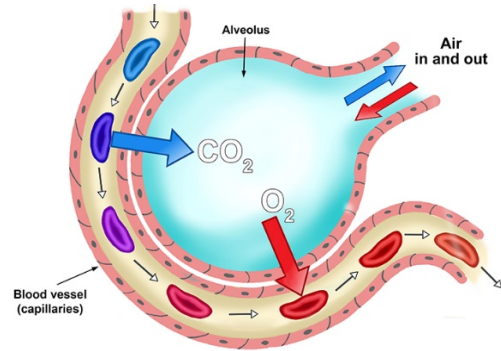
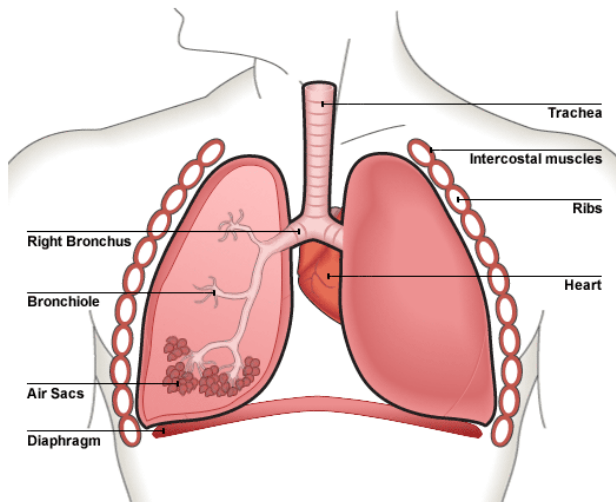


**BREATHING**

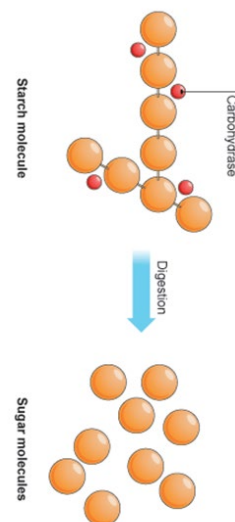
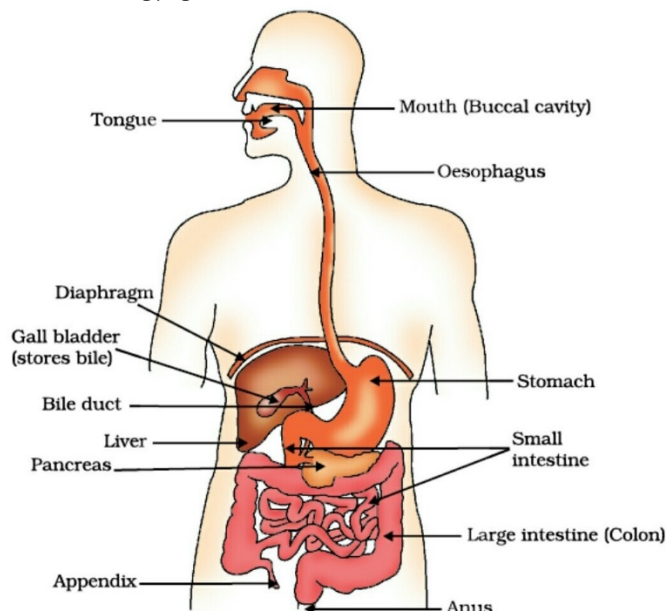


In gas exchange, oxygen and carbon dioxide move between alveoli (air sacs) and the blood. Oxygen is transported to cells for aerobic respiration and carbon dioxide, a waste product of respiration, is removed from the body (breathed out).

<b>Trachea (windpipe)</b>	<b>Carries air from mouth to lungs.</b>
<b>Bronchi</b>	<b>2 tubes carry air to lungs</b>
<b>Bronchiole</b>	<b>Small tubes in lung.</b>
<b>Rib</b>	<b>Bones around lungs to form the ribcage.</b>
<b>Alveoli</b>	<b>Air sacs at end of bronchiole.</b>
<b>Diaphragm</b>	<b>Sheet of muscle under lungs.</b>

**DIGESTION**

The body needs a balanced diet with carbohydrates, lipids, proteins, vitamins, minerals, dietary fibre and water, for its cells' energy, growth and maintenance.



**Stomach:** A sac where food is mixed with acidic juices to start the digestion of protein and kill microorganisms.

**Small intestine:** Part of the intestine where digestion is completed and nutrients are absorbed by the blood.





**Large intestine:** Lower part of the intestine from which water is absorbed and where faeces are formed.

**Gut bacteria:** Microorganisms that naturally live in the intestine and help food break down.

**Enzymes:** Substances that speed up the breakdown of large molecules into small molecules.

Food Group	Why do we need this in our diet?
Carbohydrate	The body's main source of energy.
Fat	Insulation, energy and cell membranes. Found in butter, milk, eggs and nuts.
Protein	Growth and repair. Sources are meat, fish, eggs, beans, nuts and seeds.
Vitamins and minerals	Small amounts needed for the body to work properly. E.g: iron for blood.
Fibre	Parts of plants that cannot be digested, which helps the body eliminate waste.
Water	Hydration.

**BIOCHEMICAL (FOOD) TESTS**

CHEMICAL	TESTS FOR ...?	HOW TO CARRY OUT THE TEST	RESULT	CHEMICAL	TESTS FOR ...?	HOW TO CARRY OUT THE TEST	RESULT
	Starch	1.) Add the iodine solution directly to the substance to be tested (in solid or liquid form) and look for a colour change.	Turns blue black with starch		Protein	1.) Add Biuret's to the solution/suspension to be tested and look for a colour change.	Turns purple with protein
	Reducing Sugar	1.) Add Benedict's to the solution/suspension to be tested. 2.) Heat for 2 mins in a water bath at boiling point and look for a colour change.	Turns brick red with reducing sugars (green/yellow/orange if less sugar present)		Lipid (known as the Emulsion test)	1.) Add ethanol to the solution/suspension to be tested and shake thoroughly. 2.) Then add water and look for a colour change.	Turns cloudy/milky with lipid

Subject	Year 8 Organisms
Key word - Carries air from mouth to lungs.	Trachea
Key word - 2 tubes carry air to lungs	Bronchi
Key word - Small tubes in lung.	Bronchiole
Key word - Bones around lungs.	Rib/Rib cage
Key word - Air sacs at end of bronchiole.	Alveoli
Key word - Sheet of muscle under lungs.	Diaphragm
The oesophagus takes food from the mouth to where?	The stomach.
Where is food digested and absorbed into the blood?	The small intestines.
Where is water reabsorbed from our waste?	The large intestines.
The mouth, stomach, pancreas and small intestines all make special chemicals called what?	Enzymes.
What is the job of an enzyme?	To 'cut up' or digest our food into small molecules.
Why do we need to digest our food into small particles?	To absorb it into our blood.
Which food group is needed for energy only?	Carbohydrates.
Which food group is needed for growth and repair?	Proteins.
Which food group is needed for insulation, energy and making cell membranes?	Fats.
Names the other three food groups.	Vitamins and minerals, fibre and water.
Name the test and result for the starch test.	Iodine. Turns blue/black.
Name the test and result for the reducing sugar (glucose) test.	Benedict's. Turns brick red.
Name the test and result for the lipid (fat) test.	Emulsion test. Turns cloudy/milky.
Name the test and result for the protein test.	Biuret. Turns purple.

Subject	Year 8 Organisms
Key word - Carries air from mouth to lungs.	
Key word - 2 tubes carry air to lungs	
Key word - Small tubes in lung.	
Key word - Bones around lungs.	
Key word - Air sacs at end of bronchiole.	
Key word - Sheet of muscle under lungs.	
The oesophagus takes food from the mouth to where?	
Where is food digested and absorbed into the blood?	
Where is water reabsorbed from our waste?	
The mouth, stomach, pancreas and small intestines all make special chemicals called what?	
What is the job of an enzyme?	
Why do we need to digest our food into small particles?	
Which food group is needed for energy only?	
Which food group is needed for growth and repair?	
Which food group is needed for insulation, energy and making cell membranes?	
Names the other three food groups.	
Name the test and result for the starch test.	
Name the test and result for the reducing sugar (glucose) test.	
Name the test and result for the lipid (fat) test.	
Name the test and result for the protein test.	

Subject	Year 8 Organisms
Key word - Carries air from mouth to lungs.	
Key word - 2 tubes carry air to lungs	
Key word - Small tubes in lung.	
Key word - Bones around lungs.	
Key word - Air sacs at end of bronchiole.	
Key word - Sheet of muscle under lungs.	
The oesophagus takes food from the mouth to where?	
Where is food digested and absorbed into the blood?	
Where is water reabsorbed from our waste?	
The mouth, stomach, pancreas and small intestines all make special chemicals called what?	
What is the job of an enzyme?	
Why do we need to digest our food into small particles?	
Which food group is needed for energy only?	
Which food group is needed for growth and repair?	
Which food group is needed for insulation, energy and making cell membranes?	
Names the other three food groups.	
Name the test and result for the starch test.	
Name the test and result for the reducing sugar (glucose) test.	
Name the test and result for the lipid (fat) test.	
Name the test and result for the protein test.	