

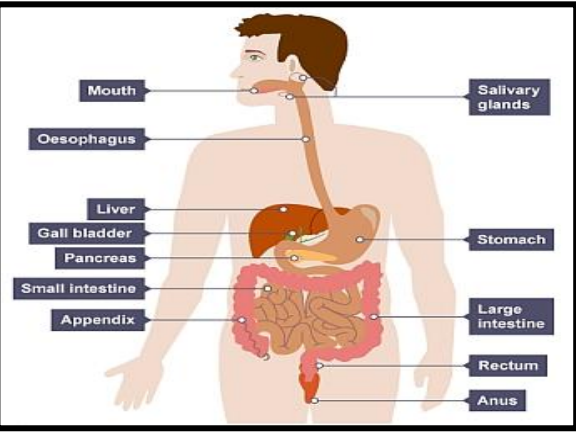
Chemical Digestion

	Enzyme or chemical	Where is it made?	Action
1	Amylase	Mouth pancreas, small int.	Starch to glucose
2	Protease	Stomach, pancreas, small int.	Protein to amino acids
3	Lipase	Pancreas, small int.	Fats/Lipids to fatty acid and glycerol
4	HCl/acid	Stomach	Optimum for Protease
5	Bile	Liver, stored in gall bladder	Neutralizes stomach acid so optimum for enzymes

Nutrients (Food Groups)

1	Carbohydrate	Energy source
2	Lipid (fats)	Stored energy source
3	Protein	Growth & Repair
4	Vitamins & Minerals	Only small amounts needed to keep your body healthy
5	Water	Needed to allow chemical reactions to take place
6	Fibre	Keeps food moving through gut

Digestive System



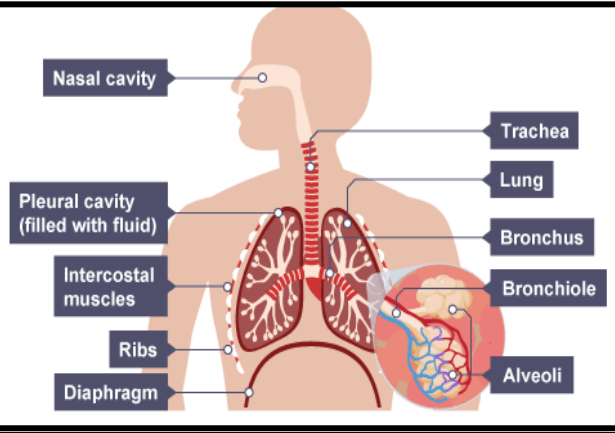
Mechanical Digestion chewing, churning due to **muscular contraction** in the stomach

Digestion definition break down of large insoluble molecules into soluble ones that can be absorbed **into the blood**

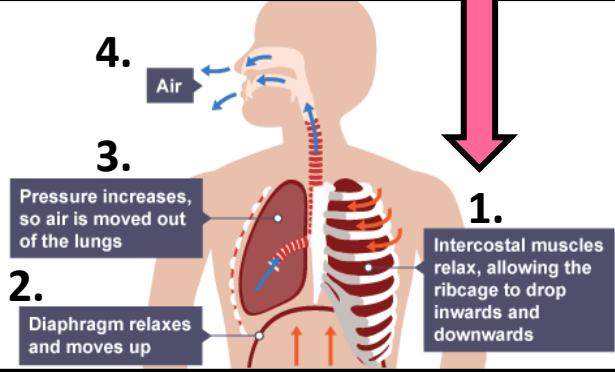
Food Tests and +ve results

1	Sugar	Boil with Benedict's soln.	Green through to brick red colour
2	Starch	Add Iodine solution	Blue / black colour
3	Protein	Add Biuret Reagent	Lilac colour
4	Lipid	Test on paper	Paper turns opaque

Respiratory System



How we breathe out..



Steps 1 to 4 are reversed when breathing in.

Drugs change your body chemistry.

Medicinal drugs – used for health reasons, eg: painkillers and antibiotics ,but can be harmful if taken incorrectly

Recreational drugs - taken for enjoyment, usually no health benefits. Eg: alcohol and nicotine. Some are illegal drugs.

Your body can become **addicted** to drugs and **withdrawal** symptoms can occur when a person stops taking them.

Key Vocabulary

Enzyme	A protein molecule that is a biological catalyst
Lock and Key	The model of how enzymes digest substrates
Balanced diet	Contains all the food groups in the correct proportions.
Deficiency	Lacking a nutrient in your diet.
Gas exchange	The movement of oxygen into your blood and carbon dioxide out at the alveoli.
Inhale	Breathing in
Exhale	Breathing out
Diaphragm	A sheet of muscle underneath your lungs
Respiratory System	The organ system including your lungs and trachea.
Illegal drug	It is against the law to take such drugs
Body chemistry	The healthy chemical balance of your body.
Withdrawal Symptoms	Unpleasant physical reactions to stopping taking an addictive drug
Addiction	When somebody cannot stop taking a substance or doing an activity – they are dependent.