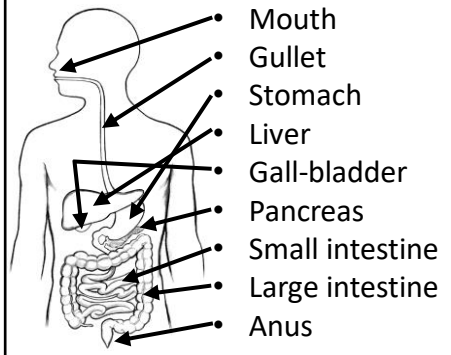
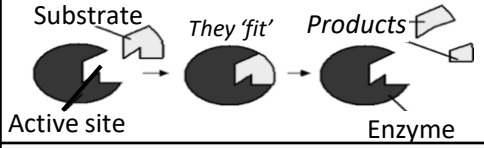
Key points to learn

1. Specialised animal cells	1. Sperm – tail to swim 2. Nerve – carry electrical impulses 3. Muscle – contract and relax
2. Tissue	Group of similar cells
3. Organ	Group of tissues working together
4. Organ systems	Group of organs which work together in organism
5. Digestive system	A group of organs that digest and absorb food
6. Digestion	Breaking large food molecules into small soluble ones
7. Human digestive system	 Mouth, Gullet, Stomach, Liver, Gall-bladder, Pancreas, Small intestine, Large intestine, Anus
8. Carbohydrate	Types of sugars: glucose, starch, cellulose. Used for energy Test: Starch turns iodine bluey black
9. Proteins	Used to make enzymes, tissues and cells. Found in meat, fish, pulses, milk Test: Biuret reagent turns from blue to purple
10. Lipids	Fats and oils made of fatty acids and glycerol

Key points to learn

11. Mouth	Chews food, releases saliva
12. Stomach	Churns food. Partial digestion here
13. Liver	Makes bile to be stored in gall bladder
14 Pancreas	Releases enzymes in small intestine
15. Small intestine	Majority of digestion happens here. Makes lots of enzymes
16. Large intestine	Absorbs water
17. Bile	Alkaline to neutralise stomach acid. Added at start of small intestine. Emulsifies fat into small droplets
18. Catalyst	Chemical which speeds up a reaction without being used itself
19. Enzyme	Biological catalysts Like a specific temperature and pH
20. Lock and key theory	Model showing how enzymes work. Substrates fit the enzyme active site, then react, turning into products  Substrate, They 'fit', Products, Active site, Enzyme
21 Metabolism	The sum of all the reactions in a cell or the body of an organism
22 Protease	Enzyme breaks down protein. Made in stomach, pancreas, small intestine
23 Lipase	Enzyme breaks down lipids. Made in pancreas, small intestine
24 Amylase	Type of carbohydrase enzyme. Breaks down starch. Made in salivary glands, pancreas, small intestine

Trilogy B3: Organisation and the digestive system

Part of: Organisation

Knowledge Organiser

Big picture (Biology Paper 1)

- Cells and organisation
  - Cell structure and transport
  - Cell division
  - **Organisation and the digestive system**
  - Organising animals and plants
- Disease and bioenergetics
  - Communicable diseases
  - Preventing and treating disease
  - Non-communicable diseases
  - Photosynthesis
  - Respiration

Background

Have you ever wondered why the human body temperature is 37°C or why the male testes are outside the body? The answer is enzymes. They are also crucial for digestion…

Key points to learn

25. Why you can't kill an enzyme	They are not alive so can't die.
	But they will change shape and 'denature' at the wrong temperature or acidity (pH) Each one has an ideal temperature and pH they work best at.