

GCSE Biology Learning Checklist

Unit 1: Organisation

Sub-unit: Organisation and the digestive system

I can...		After Lesson	After Revision
1	I can explain the differences between cells, tissues, organs and organ systems.		
2	I can describe how the organs of the digestive system work together to digest and absorb food.		
3	I can describe how to test for sugars, starch, proteins and lipids using qualitative reagents, including the expected results (required practical activity 4).		
4	I can describe the role of enzymes in digestion.		
5	I can describe how enzyme activity is affected by temperature and pH changes.		
6	I can carry out rate calculations for chemical reactions.		
7	I can explain enzyme action using the 'lock and key theory', including the specificity of the active site.		
8	I can recall the sites of production and the action of amylase, proteases and lipases.		
9	I can give the reactants and products of the reactions catalysed by carbohydrases (including amylase), proteases and lipases.		
10	I can describe a method to investigate the effect of pH on the rate of reaction of amylase enzyme (required practical activity 5).		
11	I can explain what the products of digestion are used for in the body.		
12	I can give the sites of production and storage of bile.		
13	I can describe the function of bile and explain why it is alkaline.		

Keywords:

Differentiate	Large intestine	Enzymes
Tissue	Small intestine	Active site
Organ	Gall bladder	Metabolism
Organ systems	Rectum	Amylase
Organism	Anus	Protease
Mouth	Carbohydrates	Carbohydrase
Gullet	Simple sugars	pH
Oesophagus	Proteins	Biuret solution
Stomach	Amino acids	Benedicts solution
Pancreas	Proteins	Iodine
Liver	Denatured	Starch
Catalysts	Lipids	Ethanol
	Fatty acids	Water bath
	Glycerol	

Exam insights:

- Learn the names of the parts of the digestive system. Make sure you know the difference between the larger, lobed liver and the thinner leaf-like pancreas.
- Remember it is the shape of the active site that allows it to bind with the substrate.
- Enzymes aren't killed (they are molecules, not living things)- make sure you use the term denatured.
- Understand that:
 - Hydrochloric acid gives the stomach a low pH suitable for the protease secreted there to work efficiently.
 - Alkaline bile neutralises the acid and gives a high pH for the enzymes from the pancreas and small intestine to work well.
 - Bile is not an enzyme, it emulsifies fat into smaller droplets which increases the surface area for lipase.