

B2 Topic 3 Revision tracker

BIOLOGY

Learning objectives I can:	I can do this very well	I can do this quite well	I need to do more work on this
3.1 Evaluate the evidence for evolution, based on the fossil record			
3.2 Explain why there are gaps in the fossil record, including:			
a because fossils do not always form			
b because soft tissue decays			
c because many fossils are yet to be found			
H 3.3 Explain how the anatomy of the pentadactyl limb provides scientists with evidence for evolution			
HSW 14 Describe how scientists share data and discuss new ideas, and how over time this process helps to reduce uncertainties and revise scientific theories			
3.4 Describe growth in terms of increase in size, length and mass			
3.5 Interpret growth data in terms of percentile charts			
3.6 Explain how cell division, elongation and differentiation contribute to the growth and development of a plant			
3.7 Explain how cell division and differentiation contribute to the growth and development of an animal			
HSW 5 Plan to test a scientific idea, answer a scientific question, or solve a scientific problem by choosing appropriate resources			
3.8 Recall the structure and function of the following parts of the blood, including:			
a red blood cells			
b white blood cells			
c plasma			
d platelets			
HSW 11 Present information, develop an argument and draw a conclusion, using scientific, technical and mathematical language			
3.9 Describe the grouping of cells into tissues and tissues into organs			
3.10 Explain how the structure of the heart is related to its function, including:			
a the four major blood vessels associated with the heart (pulmonary artery, pulmonary vein, aorta, vena cava)			
b left atrium and ventricle to pump oxygenated blood			
c right atrium and ventricle to pump deoxygenated blood			
d valves to prevent backflow (names not required)			
e left ventricle has a thicker muscle wall than the right ventricle			
f the direction of blood flow through the heart			
3.9 Describe the grouping of cells into tissues and tissues into organs and organs into organ systems			
3.11 Describe how the circulatory system transports substances around the body, including:			
a arteries transport blood away from the heart			
b veins transport blood to the heart			
c veins transport blood to the heart			
HSW 3 Describe how phenomena are explained using scientific theories and ideas			
3.12 Describe the functions of the parts of the digestive system, including:			
a mouth,			
b oesophagus,			
c stomach,			
d small and large intestines,			
e pancreas,			

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f liver,			
H g gall bladder			
3.13 Explain the role of the muscular wall of the alimentary canal in peristalsis			
HSW 11 Present information using scientific conventions and symbols			
3.14 Explain the role of the digestive enzymes, including:			
a carbohydrases, including amylase, which digest starch to simple sugars			
b proteases, including pepsin, which digest proteins to amino acids			
c lipase which digests fats to fatty acids and glycerol			
H 3.15 Explain the role of bile in neutralising stomach acid and emulsifying fats			
HSW 3 Describe how phenomena are explained using scientific models			
H 3.16 Explain how the structure of villi (large surface area, single layer of cells and capillary network) allows efficient absorption of the soluble products of digestion			
3.17 Investigate the effect of different concentrations of digestive enzymes, using and evaluating models of the alimentary canal			
3.18 Evaluate the evidence for the claimed benefits of the use of functional foods as part of a healthy diet, including:			
a probiotics containing <i>Bifidobacteria</i> and lactic acid bacteria <i>Lactobacillus</i>			
b prebiotic oligosaccharides			
c plant stanol esters			
HSW 13 Explain how and why decisions about uses of science and technology are made			