

# B1 Topic 2 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
<b>2.1</b> Define homeostasis as the maintenance of a stable internal environment			
<b>2.2</b> Demonstrate an understanding of the homeostatic mechanisms of: <b>a</b> thermoregulation and the effect of temperature on enzymes			
<b>b</b> osmoregulation			
<b>c</b> blood glucose regulation			
<b>2.3</b> Explain how thermoregulation takes place, with reference to the function of the skin, including: <b>a</b> the role of the dermis – sweat glands, blood vessels, nerve endings, hair, erector muscles and sebaceous glands			
<b>b</b> the roles of the hypothalamus – regulating body temperature			
<b>H 2.4</b> Explain how thermoregulation takes place, with reference to: <b>a</b> vasoconstriction and <b>b</b> vasodilation <b>c</b> negative feedback			
<b>HSW 3</b> Describe how phenomena are explained using scientific models			
<b>2.19</b> Recall that the central nervous system consists of the brain and spinal cord and is linked to sense organs by nerves			
<b>2.20</b> Explain the structure and function of dendrons and axons in the nervous system			
<b>2.21</b> Describe how stimulation of receptors in the sense organs sends electrical impulses along neurones			
<b>HSW 11</b> Draw a conclusion, using scientific and mathematical language			
<b>2.22</b> <i>Investigate human responses to external stimuli</i>			
<b>2.10</b> Explain how a coordinated response to a stimulus is achieved, including the roles of the synapse and neurotransmitters			
<b>HSW 12</b> Describe the benefits, drawbacks and risks of using new scientific and technological developments			
<b>2.23</b> Describe the structure and function of sensory, relay and motor neurones and synapses including: <b>a</b> the role of the myelin sheath			
<b>b</b> the roles of neurotransmitters			
<b>c</b> the reflex arc			

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<b>HSW 4</b> Identify questions that science cannot address, and explain why these questions cannot be answered			
<b>2.5</b> Recall that hormones are produced in endocrine glands and are transported by the blood to their target organs			
<b>2.6</b> Explain how blood glucose levels are regulated by insulin and excess blood glucose is converted to glycogen in the liver			
<b>H 2.7</b> Explain how blood glucose levels are regulated by glucagon and glycogen causing the conversion of glycogen to glucose			
<b>HSW 11</b> Present information using scientific conventions and symbols			
<b>2.8</b> Recall that Type 1 diabetes is caused by a lack of insulin			
<b>2.9</b> Explain how Type 1 diabetes can be controlled, including the roles of diet and injection of insulin usually into the subcutaneous fat			
<b>2.10</b> Explain how, in Type 1 diabetes, the level of physical activity and diet affect the amount of insulin required			
<b>2.11</b> Recall that Type 2 diabetes is caused by a person becoming resistant to insulin			
<b>2.12</b> Explain how Type 2 diabetes can be controlled by diet and physical activity			
<b>2.13</b> Evaluate the correlation between obesity (including calculations of BMI) and Type 2 diabetes			
<b>HSW 2</b> Describe the importance of creative thought in the development of hypotheses and theories			
<b>2.16</b> <i>Investigate tropic responses</i>			
<b>2.14</b> Explain how plant growth substances (hormones) bring about: <b>a</b> positive phototropism in shoots			
<b>b</b> positive gravitropism (geotropism) in roots			
<b>2.15</b> Explain how auxins bring about shoot curvature using cell elongation			
<b>2.17</b> Analyse, interpret and evaluate data from plant hormone experiments, including the action of auxins and gibberellins			
<b>HSW 5</b> Plan to test a scientific idea, answer a scientific question or solve a scientific problem			
<b>H 2.18</b> Demonstrate an understanding of the uses of plant hormones, including: <b>a</b> selective weedkillers			
<b>b</b> rooting powder			

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<b>c</b> seedless fruit			
<b>d</b> fruit ripening			
<b>HSW 13</b> Describe the social, economic and environmental effects of decisions about the uses of science and technology			