



Year 9 - Biology – Spring Term 2 – KNOWLEDGE OVERVIEW

Year group:		Unit: Organisation		Resources	
Week beginning:	Big question / concept:	Learning intentions:	Resources		
			Offline:	Online including links on how to access these:	
22/2/21	The digestive system	<p><u>You should be able to:</u></p> <p>Explain the terms cell, tissue, organ, organ system and organism, and be able to give examples of each.</p> <p>Describe the job of the digestive system</p> <p>Identify the positions of the main organs on a diagram of the digestive system.</p> <p>Describe the functions of the organs in the digestive system.</p> <p>Explain how the stomach and the small intestine is adapted for its function.</p>	<p>Work through pages 2 to 5 and answer questions from page 6 from Organisation home learning pack.</p> <p>Check your answers using slide 7</p>	<p>Watch lesson on digestion https://classroom.thenational.academy/lessons/digestion-cn66c?activity=video&step=1</p> <p>Adaptation organs https://classroom.thenational.academy/lessons/absorption-74v38e?activity=video&step=1</p>	
1 st March 2021	Enzymes in the digestive system	<p><u>You should be able to:</u></p> <p>Define the terms 'catalyst' and 'enzyme'.</p>	<p>Please read through slides 8 to 12. From each slide summaries the key points.</p> <p>Please complete the following questions,</p>	<p>Complete the lesson videos and the tasks given throughout:</p> <p>Digestive enzymes: https://classroom.thenational.academy/lessons/digestive-enzymes-6dqkqr</p>	

		<p>Describe the properties of enzymes.</p> <p>Explain why enzymes are specific and are denatured by high temperatures and extremes of pH.</p> <p>Use the lock and key theory and collision theory to explain enzyme action.</p> <p>Required practical: Describe the chemicals and colour changes in the food tests.</p>	<p>1) Which enzymes are present in the body and what do they do?</p> <p>2) Which part of the body are they produced?</p> <p>3) Describe the process by which enzymes breakdown substrates? (use slide 10)</p>	<p>Food tests: https://classroom.thenational.academy/lessons/food-tests-61h3cd</p> <p>Consolidate your learning and try some exam practice at: https://www.bbc.co.uk/bitesize/topics/zwtcng8</p>
<p>8th March 2021</p>	<p>Cardiovascular disease</p>	<p><u>You should be able to:</u></p> <p>Describe what coronary heart disease is and the role of statins and stents in treating it.</p> <p>Understand the consequences of faulty valves and evaluate their replacement with mechanical or biological valves.</p>	<p>Read slide 29 to 33. You need to summarise the key points from each slide.</p> <p>Please attempt the following questions:</p> <ol style="list-style-type: none"> 1) Can you describe what is meant by "Atherosclerosis"? 2) How can you treat Atherosclerosis? 3) How does a heart valve work and what does it do? 4) What are the conditions required for one to be 	<p>Complete the lesson videos and the tasks given throughout:</p> <p>Heart Disease: https://classroom.thenational.academy/lessons/heart-disease-61k68d</p> <p>Consolidate your learning and try some exam practice at: https://www.bbc.co.uk/bitesize/topics/zwtcng8</p>

		<p>Evaluate the treatment of heart failure with a heart transplant or an artificial heart</p>	<p>accepted for a heart transplant?</p>	
<p>15th March 2021</p>	<p>The Circulatory System</p>	<p><u>You should be able to:</u></p> <p>Compare the components of the blood.</p> <p>Relate blood vessel structure to the function of the vessel.</p> <p>Label a diagram of the heart.</p>	<p>Please read and make notes from slide 18 and 19.</p> <p>Attempt the questions on slide 20 – 25</p> <p>Check your response using slide 26</p>	<p>Complete the lesson videos and the tasks given throughout:</p> <p>Blood and vessels: https://classroom.thenational.academy/lessons/blood-and-blood-vessels-c8t62c</p> <p>The Heart: https://classroom.thenational.academy/lessons/the-heart-6ct3jd</p> <p>Consolidate your learning and try some exam practice at: https://www.bbc.co.uk/bitesize/topics/zwtcng8</p>
	<p>Health and risk factors</p>	<p><u>You should be able to:</u></p> <p>Define health.</p> <p>Describe risk factors that correlate with cancer and cardiovascular disease.</p>	<p>Read slide 34-37 and make notes from them. You need to ensure you summaries each slide.</p> <p>Please attempt the following questions:</p> <ol style="list-style-type: none"> 1) What is meant by communicable and non-communicable disease? 2) What are the human and financial costs of non-communicable diseases? 	<p>Complete the lesson videos and the tasks given throughout:</p> <p>Cancer: https://classroom.thenational.academy/lessons/cancer-c8rp8d</p> <p>Risk factors https://classroom.thenational.academy/lessons/non-communicable-disease-75jk6r</p>

		<p>Distinguish between correlation and causation and identify these from graphs [Maths skills].</p>	<p>3) Describe a hazard, the risk factor and the harm poor diet can do ?</p>	<p>Consolidate your learning and try some exam practice at:</p> <p>https://www.bbc.co.uk/bitesize/topics/zwtcng8</p>
<p>22 March 2021</p>	<p>Transpiration in plants</p>	<p><u>You should be able to:</u></p> <p>Describe the role of stomata and guard cells in controlling water loss in a plant.</p> <p>Describe how to investigate transpiration using a potometer.</p> <p>Explain the effect of changing temperature, humidity, light intensity and air movements on the rate of transpiration.</p>	<p>Read pages 47 – 49 You need to make notes from each slide you summarise the key message.</p> <p>Please attempt the following questions:</p> <ol style="list-style-type: none"> 1) Order these from the smallest to the largest. Human, Mitochondria, cell, heart, muscle tissue, circulatory system. 2) Describe how the structure of the leaf is adapted to its function(job)? 	<p>Complete the lesson videos and the tasks given throughout:</p> <p>Transport in plants: https://classroom.thenational.academy/lessons/transport-in-plants-6rr38c</p> <p>Investigating transpiration: https://classroom.thenational.academy/lessons/investigating-transpiration-6tjk0r</p> <p>Consolidate your learning and try some exam practice at:</p> <p>https://www.bbc.co.uk/bitesize/topics/zwtcng8</p>