






This half term: Skills, Knowledge and Understanding to be developed:

- **Skills (students WILL BE ABLE to by the end of the Learning Programme):** state the word equation for aerobic and anaerobic respiration; describe aerobic respiration; evaluate data from an investigation into respiration in germinating peas; draw and label red and white blood cells; label the interior and exterior view of the heart; describe the passage of blood through the heart.
- **Knowledge (students WILL KNOW by the end of the Learning Programme):** respiration as a series of enzyme-controlled reactions within the cell, that use glucose and oxygen to release energy and produce carbon dioxide and water; **energy is released in the form of ATP**; the structure of white and red blood cells; the functions of the four main parts of the blood: red cells, platelets, plasma and white cells; the structure of the heart; that the heart is made of muscle, which contracts to pump blood around the body; the role of the coronary vessels in supplying the heart muscle with blood; that blood flows to the organs through arteries and returns to the heart through veins; that a double circulatory system involves one system for the lungs (pulmonary) and one for the other organs of the body (systemic); the function and adaptations of capillaries in organs and the structure of arteries, veins and capillaries.
- **Understanding (students WILL DEMONSTRATE their understanding):** that aerobic respiration is a process that occurs in cells when oxygen is available and that anaerobic respiration is a process that occurs in the absence of oxygen; the role of the valves in preventing backflow of blood; the risk factors and the effects of cardiovascular disease.

Key Terms / Words: Respiration Aerobic respiration Anaerobic respiration	Oxygen debt Red blood cells Platelets Plasma	Atria Ventricles Valves Arteries	Veins Capillaries Cardiovascular disease Statins	Exam command words Name, Describe, Explain, Discuss
<p>LP 3 – Week 1 Learning Outcomes: Students will be able to:</p> <ul style="list-style-type: none"> • Describe what respiration is. • Recall the word equation for aerobic respiration. • Evaluate data from an investigation into respiration in germinating peas. <p><i>Higher Tier Students will also recall that energy is released in the form of ATP.</i></p>			<p>Success criteria: Students will show their understanding of aerobic respiration by answering GCSE questions.</p> <p>Students will analyse and evaluate data from experiments into respiration in germinating peas.</p>	<p>Homework LP 3 1/4 Answer GCSE question on an investigation into respiring peas.</p> <p>Homework LP 3 2/4 Revise for APP1.</p>
<p>LP 3 – Week 2 Learning Outcomes: Students will be able to:</p> <ul style="list-style-type: none"> • Describe anaerobic respiration. • Write out the word equation for anaerobic respiration • Describe what leads to the need for anaerobic respiration <p>Higher Tier Students will also be able to recall that anaerobic respiration is a less efficient process than aerobic respiration</p> <p>Students will be able to:</p> <ul style="list-style-type: none"> • compare anaerobic and aerobic respiration. <p>Students will apply and demonstrate new knowledge and skills in APP1 assessment</p> <p>Students will be able to:</p> <ul style="list-style-type: none"> • Draw and label a phagocyte and a red blood cell • Recognise the four main parts of the blood: red cells, platelets, plasma, white cells. • Describe the functions of the four main parts of the blood. 		 <div style="border: 2px solid blue; padding: 2px; display: inline-block;">APP1</div> <div style="border: 2px solid red; padding: 2px; display: inline-block; margin-top: 5px;">Mark</div>	<p>Success criteria: Students will show their understanding of the differences between aerobic and anaerobic respiration by answering GCSE question</p> <p>APP1 (~10 marks)</p> <p>Students will name, label and describe the components of blood on a diagram.</p>	<p>Homework LP 3 3/4 Answer a GCSE question on anaerobic and aerobic respiration.</p>
<p>LP 3 – Week 3 Learning Outcomes: Students will know:</p> <ul style="list-style-type: none"> • that the heart is made of muscle which contracts to pump blood around the body. <p>Students will be able to:</p> <ul style="list-style-type: none"> • Recognise and describe the structure of the heart. • Describe the role of the coronary vessels. <p>Students will be able to:</p> <ul style="list-style-type: none"> • Describe the flow of blood through the heart and to the organs through arteries and return to the heart through veins. • Describe the function of the valves. 			<p>Success criteria: Students will identify and label the exterior and interior view of the heart on a diagram.</p> <p>Students will describe the journey of blood through the heart.</p> <p>Students will demonstrate their understanding of a double circulatory system</p>	



<p>Students will be able to:</p> <ul style="list-style-type: none">Describe the circulatory system as a double circularoty system.Describe the flow of blood through the body.		by showing on a diagram where oxygenated and deoxygenated blood flow.	
<p>LP 3 – Week 4 Learning Outcomes:</p> <p>Students will be able to:</p> <ul style="list-style-type: none">Describe the danger and effects of cardiovascular diseaseDiscuss the advantages and disadvantages of treatments for cardiovascular disease.		<p>Success criteria:</p> <p>Students will produce an information leaflet which describes the casues, dangers and effects of cardiovascular disease.</p>	<p>Homework LP 3 4/4</p> <p>Revise the work of the half term for the Summative assessment. Prepare a revision aid e.g. topic summary / mind map</p>
<p>LP 3 – Week 5 Learning Outcomes:</p> <p>Students will apply and demonstrate new skills, knowledge and understanding in an end of unit Summative Assessment.</p>	 <div data-bbox="786 645 911 701" style="border: 2px solid blue; padding: 2px; display: inline-block;">SA</div> <div data-bbox="786 719 911 797" style="border: 2px solid red; padding: 2px; display: inline-block;">Mark</div>	<p>Success criteria:</p> <p>SA (~30 mark)</p>	