

## Key Stage 5 Curriculum Map 2020-21

### Year 13 A level Biology

#### Term 1

Subject: Biology	Year: 13	
Focus/Topic	UAE Links	Home Learning / Reading
Induction, curriculum orientation and expectations		
<ul style="list-style-type: none"> <li>• Populations and ecosystems</li> <li>• Investigating populations</li> <li>• Variation in population size</li> <li>• Sensory reception</li> <li>• Role of receptors</li> </ul>	Research and outline what happened to the Arabian leopard population.	Guided reading
<ul style="list-style-type: none"> <li>• Interactions between organisms – competition</li> <li>• Interaction between organisms – predation</li> <li>• Succession</li> <li>• The nervous system and neurones</li> <li>• The nerve impulse</li> </ul>	Analyse data and outline the interdependence of organisms within the UAE.	Guided reading
<ul style="list-style-type: none"> <li>• Conservation of habitats</li> <li>• Required practical 9</li> <li>• Passage of an action potential</li> <li>• Speed of the nerve impulse</li> </ul>	Research and outline how the UAE is conserving its environment.	Guided reading
<ul style="list-style-type: none"> <li>• Populations end of topic test</li> <li>• Photosynthesis</li> <li>• Structure and function of synapses</li> <li>• Transmission across a synapse</li> </ul>	Outline how xerophytes are adapted to balance photosynthesis and water loss	Guided reading
<ul style="list-style-type: none"> <li>• The light dependent reaction</li> <li>• The light independent reaction</li> <li>• Factors affecting photosynthesis</li> <li>• Response to stimuli end of topic assessment</li> </ul>	Justify the importance of the UAE investing in neurological research.	Guided reading

<ul style="list-style-type: none"> <li>• Required practical 7</li> <li>• Glycolysis</li> <li>• Structure of skeletal muscles</li> <li>• Contraction of skeletal muscle</li> </ul>	Justify the importance of the UAE investing in research into skeletal muscles.	Guided reading
<b>Mid Term Break</b>		
<ul style="list-style-type: none"> <li>• Aerobic respiration</li> <li>• Link reaction and krebs cycle</li> <li>• Electron transfer chain</li> <li>• Tropisms and auxins</li> <li>• Ethene and abscisic acid</li> </ul>	Justify the importance of Kreb's research to the UAE.	Guided reading
<ul style="list-style-type: none"> <li>• Respiratory substrates</li> <li>• Required practical 8</li> <li>• Required practical 10</li> </ul>	Evaluate the storage of lipids in a camel's hump.	Guided reading
<ul style="list-style-type: none"> <li>• Photosynthesis and respiration end of topic test</li> <li>• Food chains and food webs</li> <li>• Skeletal muscles and control systems in plants end of topic test</li> </ul>	Create a food web of organisms within the UAE.	Guided reading
<ul style="list-style-type: none"> <li>• Energy transfer between trophic levels</li> <li>• Ecological pyramids</li> <li>• Energy transfer in agricultural ecosystems</li> <li>• The principles of homeostasis</li> </ul>	Compare a farm in the UAE with a farm in the UK.	Guided reading
<ul style="list-style-type: none"> <li>• Chemical and biological control of agricultural pests</li> <li>• Intensive rearing of domestic livestock</li> <li>• The principles of feedback mechanisms</li> </ul>	Evaluate the intensive rearing of domestic livestock in the UAE.	Guided reading
<ul style="list-style-type: none"> <li>• Energy and ecosystems end of topic test</li> <li>• The need to control blood glucose concentration</li> <li>• Hormones and the regulation of blood glucose</li> </ul>	Research and outline diabetes in the UAE.	Guided reading
<ul style="list-style-type: none"> <li>• Control of the heart</li> <li>• Homeostasis and negative feedback end of topic test</li> </ul>	Justify the importance of the UAE investing in research the heart,	Guided reading
<b>Winter Break</b>		