

Key Stage 5 Curriculum Map 2021-22

Year 13 A level Biology

Term 1

| Subject: Biology | Year: 13 | | |
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| Focus/Topic | UAE Links | HPL Links | Home Learning / Reading |
| Induction, curriculum orientation and expectations | | | |
| <ul style="list-style-type: none"> • Populations and ecosystems • Investigating populations • Variation in population size • Sensory reception • Role of receptors | Research and outline what happened to the Arabian leopard population. | VAA: Empathetic Collaborative: <i>The ability to seek out opportunities to receive responses to your work; present your own views and ideas clearly and concisely; listen to the views of others; be willing and able to work in teams; take a variety of roles and be able to evaluate your own ideas and contributions.</i> ACP: Analysing Critical thinking: <i>The ability to deduct, hypothesise, reason, seek supporting evidence</i> | Guided reading |
| <ul style="list-style-type: none"> • Interactions between organisms – competition • Interaction between organisms – predation • Succession • The nervous system and neurones • The nerve impulse | Analyse data and outline the interdependence of organisms within the UAE. | | Guided reading |
| <ul style="list-style-type: none"> • Conservation of habitats • Required practical 9 • Passage of an action potential • Speed of the nerve impulse | Research and outline how the UAE is conserving its environment. | | Guided reading |
| <ul style="list-style-type: none"> • Populations end of topic test • Photosynthesis • Structure and function of synapses • Transmission across a synapse | Outline how xerophytes are adapted to balance photosynthesis and water loss | | Guided reading |
| <ul style="list-style-type: none"> • The light dependent reaction • The light independent reaction • Factors affecting photosynthesis • Response to stimuli end of topic assessment | Justify the importance of the UAE investing in neurological research. | | Guided reading |

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| <ul style="list-style-type: none"> • Required practical 7 • Glycolysis • Structure of skeletal muscles • Contraction of skeletal muscle | Justify the importance of the UAE investing in research into skeletal muscles. | | Guided reading |
| Mid Term Break | | | |
| <ul style="list-style-type: none"> • Aerobic respiration • Link reaction and krebs cycle • Electron transfer chain • Tropisms and auxins • Ethene and abscisic acid | Justify the importance of Kreb's research to the UAE. | VAA: Agile Open minded: <i>The ability to take an objective view of different ideas and beliefs; become more receptive to other ideas and beliefs based on the arguments of others; change ideas should there be compelling evidence to do so.</i> ACP: Linking Connection finding: <i>The ability to use connections from past experiences to seek possible generalisations</i> | Guided reading |
| <ul style="list-style-type: none"> • Respiratory substrates • Required practical 8 • Required practical 10 | Evaluate the storage of lipids in a camel's hump. | | Guided reading |
| <ul style="list-style-type: none"> • Photosynthesis and respiration end of topic test • Food chains and food webs • Skeletal muscles and control systems in plants end of topic test | Create a food web of organisms within the UAE. | | Guided reading |
| <ul style="list-style-type: none"> • Energy transfer between trophic levels • Ecological pyramids • Energy transfer in agricultural ecosystems • The principles of homeostasis | Compare a farm in the UAE with a farm in the UK. | | Guided reading |
| <ul style="list-style-type: none"> • Chemical and biological control of agricultural pests • Intensive rearing of domestic livestock • The principles of feedback mechanisms | Evaluate the intensive rearing of domestic livestock in the UAE. | | Guided reading |
| <ul style="list-style-type: none"> • Energy and ecosystems end of topic test • The need to control blood glucose concentration • Hormones and the regulation of blood glucose | Research and outline diabetes in the UAE. | | Guided reading |
| <ul style="list-style-type: none"> • Control of the heart • Homeostasis and negative feedback end of topic test | Justify the importance of the UAE investing in research the heart, | | Guided reading |
| Winter Break | | | |