Key Stage 3 Curriculum Map 2020-21
Term 2

Year Group: 8	Subject: Physics		
Focus/Topic	**Objectives**	**Key Skills/ UAE Links**	**Home Learning/ Recommended Reading**
<u>Biology:</u> **<u>Disease</u>** 1) Prokaryotic Cells	• Use your knowledge to identify prokaryotic cells • Draw and label a prokaryotic cell • Compare prokaryotic cells and eukaryotic cell	• Recall, working scientifically • Diseases caused by prokaryotic cells and eukaryotic cells in the UAE.	Guided reading and physics and BBC Bitesize.
2) Communicable Diseases	• Use your knowledge to define key terms • Interpret information to identify what causes the spread of communicable diseases • Outline Semmelweis findings.	• Working scientifically, application • Common communicable diseases in the UAE. • Is Coronavirus a communicable disease? Why are the precautions put in place in school and around UAE to protect you.	Guided reading and physics and BBC Bitesize. Guided reading and physics and BBC Bitesize.
3) Stopping the spread of pathogens investigation	• Use your knowledge to identify variables. • Construct a scientific table. • Collect results from a scientific investigation	• Working scientifically, application • How are common diseases in the UAE stopped from spreading?	

4) Stopping the spread of pathogens analysis	• Calculate resistance • Collect data for an investigation • Plot data onto a graph	• Working scientifically, calculate, analyse, evaluate	Guided reading and physics and BBC Bitesize.
5) Treating communicable diseases	• Justify the type of graph for a set of results. • Draw a graph of your results. • Interpret the graph you have drawn.	• Working scientifically, application • Treatments in the UAE	Guided reading and physics and BBC Bitesize.
6) Test	• Evaluate your knowledge. • Recognise areas of improvement and what went well. • Reflect on your knowledge.	• Revise and reflect	Guided reading and physics and BBC Bitesize.
7) Feedback	• Evaluate your knowledge. • Recognise areas of improvement and what went well. • Reflect on your knowledge.	• Revise and reflect	Guided reading and physics and BBC Bitesize.
B) Digestion 1) Food Groups	• Use your knowledge to recall different food groups • Relate the food group to the body's need • Design a diet plan for people with different needs	• Working scientifically, application • Common foods in the UAE. How different people who live in the UAE need different diets etc. teacher, construction worker, personal trainer	Guided reading and physics and BBC Bitesize.
2) Energy in Food Investigation	• Use your knowledge to identify variables. • Construct a scientific table.	• Recall, working scientifically	Guided reading and physics and BBC Bitesize.

	• Collect results from a scientific investigation.		
3) Energy in Food Analysis	• Justify the type of graph for a set of results. • Draw a graph of your results. • Interpret the graph you have drawn.	• Recall, apply and evaluate • Energy of common/typical foods in the UAE	Guided reading and physics and BBC Bitesize.
4) The Digestive System	• Use your knowledge to define digestion • Interpret a diagram to label the digestive system. • Write a story about the journey of a cheese sandwich	• Working scientifically, application, analysis.	
5) Helping our Digestion	• Interpret information to define an enzyme. • Relate the structure of an enzyme to it's function. • Justify the importance of bacteria in digestive system.	• Working scientifically, application, analysis. • Which foods in the UAE can help aid digestion?	Guided reading and physics and BBC Bitesize.
6) Test	• Use your knowledge to list the components of a generator • Investigate where generators are used • Evaluate factors that affect the output of a generator	• Revise and reflect	Guided reading and physics and BBC Bitesize.
7) Feedback	• Evaluate your knowledge. • Recognise areas of improvement and what went well. • Reflect on your knowledge.	• Revise and reflect	Guided reading and physics and BBC Bitesize.
C) Staying Alive 1) Levels of Organisation	• Use your knowledge to define key terms. • Interpret information to identify cells, tissues, organs, organ systems and organisms. • Create a diagram to illustrate the levels of organisation.	• Working scientifically, application • Recall, working scientifically	Guided reading and physics and BBC Bitesize.

2) Breathing	• Apply your knowledge to label the respiratory system. • Outline how gases move into and out of the lungs. • Create a leaflet to explain how smoking affects the body.	• Working scientifically, application, recall. • Effects of Shisha on the body.	Guided reading and physics and BBC Bitesize.
3) Respiration	• Distinguish between respiration and breathing. • Write the word equations for aerobic and anaerobic respiration. • Justify when we respire aerobically or anaerobically.	• Working scientifically, application • Athletes in the UAE and effects of exercise on respiration.	Guided reading and physics and BBC Bitesize.
4) Photosynthesis	• Use your knowledge to define photosynthesis • Write the word equation for photosynthesis • Design an investigation into photosynthesis	• Recall, application and working scientifically • Effects of sunlight on crops on the UAE compared to Iceland.	Guided reading and physics and BBC Bitesize.
5) Photosynthesis Analysis	• Justify the type of graph for a set of results. • Draw a graph of your results. • Interpret the graph you have drawn.	• Working scientifically, application	Guided reading and physics and BBC Bitesize.
6) Test	• Evaluate your knowledge. • Recognise areas of improvement and what went well. • Reflect on your knowledge.	• Revise and reflect	Guided reading and physics and BBC Bitesize.
7) Feedback	• Evaluate your knowledge. • Recognise areas of improvement and what went well. • Reflect on your knowledge.	• Revise and reflect	Guided reading and physics and BBC Bitesize.
<u>Human Impacts on the Environment</u> 1) Evolution	• Use your knowledge to define evolution • Interpret information to explain Darwin's theory of evolution	• Recall, apply and evaluate	Guided reading and physics and BBC Bitesize.

	• Evaluate the use of fossils as evidence of evolution		
2) Speciation	• Use your knowledge to define adaptation and competition • Outline how speciation occurs • Interpret information to define species.	• Recall, working scientifically • Species of animal in UAE.	Guided reading and physics and BBC Bitesize.
3) Human Population	• Interpret a graph on human population growth. • Outline how humans are sustaining such a large population and their impact on the environment. • Justify how farming could be made more ethical and environmentally friendly	• Working scientifically, application. • How could we make farming more sustainable in the UAE.	Guided reading and physics and BBC Bitesize.
4) Global Warming	• Create a diagram to explain global warming • Distinguish between global warming and the greenhouse effect. • Argue how we can combat global warming.	• Recall, working scientifically • What is the UAE doing to reduce global warming.	Guided reading and physics and BBC Bitesize.
5) Test	• Use your knowledge to describe the Bernoulli Principle • Use your knowledge to describe the Magnus Effect • Evaluate how the Magnus effect is used in sports	• Working scientifically, application, evaluate	Guided reading and physics and BBC Bitesize.
7) Feedback	• Evaluate your knowledge. • Recognise areas of improvement and what went well. • Reflect on your knowledge.	• Revise and reflect	Guided reading and physics and BBC Bitesize.
End of term			