

## YEAR EIGHT SCIENCE 2018-2019

UNIT TITLES	LEARNING OBJECTIVES	ASSESSMENT ASSIGNMENTS
<b>Waves</b> <ul style="list-style-type: none"> <li>– Sound as Energy</li> <li>– Pitch, Loudness, How Sound Travels</li> <li>– The Ear and Hearing</li> <li>– Light as Energy</li> <li>– How Light Travels</li> <li>– Reflection, Refraction, Dispersion of White Light</li> </ul>	<ul style="list-style-type: none"> <li>• Understand that sound and light travel as different types of waves</li> <li>• Understand the characteristics of light and sound waves</li> <li>• To be able to explain how sound is detected by the ear</li> <li>• Types of energy</li> </ul>	End of topic test
<b>Atoms and the Periodic Table</b> <ul style="list-style-type: none"> <li>– Elements, Classification of Elements, Metals, Non-metals</li> <li>– Making Compounds and Mixtures</li> <li>– Word Equations</li> </ul>	<ul style="list-style-type: none"> <li>• To be able to define what an element is</li> <li>• To be able to identify metals and non-metals</li> <li>• To understand the difference between mixtures and compounds</li> <li>• To be able to understand simple work equations</li> <li>• Conservation of mass in chemical reactions</li> </ul>	End of topic test
<b>Rocks</b> <ul style="list-style-type: none"> <li>– Igneous, Sedimentary and Metamorphic Rocks</li> <li>– Rock Cycle</li> <li>– Weathering of Rocks</li> </ul>	<ul style="list-style-type: none"> <li>• Understand the differences and formation of the three classes of rocks</li> <li>• Understand how rocks can be turned from one type to another</li> </ul>	-
<b>Plants, reproduction and Photosynthesis</b> <ul style="list-style-type: none"> <li>– Parts of a plant</li> <li>– Photosynthesis</li> <li>– Plant growth</li> <li>– Controlling growth</li> </ul>	<ul style="list-style-type: none"> <li>• Recall the parts of a plant</li> <li>• Investigate the factors required for photosynthesis to occur</li> <li>• Explain what is required for plant growth</li> </ul>	-
<b>Materials</b> <ul style="list-style-type: none"> <li>– Chemical changes</li> <li>– Properties of metals</li> <li>– Reactivity</li> <li>– Extraction of metals</li> </ul>	<ul style="list-style-type: none"> <li>• Understand chemical reactions as rearrangements of atoms</li> <li>• Justify uses of materials for specific functions</li> <li>• Understand how chemistry is used to extract metals</li> </ul>	-
<b>Microbes and disease</b> <ul style="list-style-type: none"> <li>– Micro-organisms: Useful and Not So Useful</li> <li>– Spread of Diseases</li> <li>– Methods of Preventing Diseases – Inoculation</li> <li>– White Blood Cells</li> </ul>	<ul style="list-style-type: none"> <li>• To understand that micro-organisms can be useful as well as cause disease</li> <li>• To understand that the body has its own natural defense</li> </ul>	-
<b>Fuels and Energy</b> <ul style="list-style-type: none"> <li>– Carbon cycle</li> <li>– Fossil fuels</li> </ul>	<ul style="list-style-type: none"> <li>• To be able to understand and identify different energy sources</li> <li>• Recall the carbon cycle</li> </ul>	End of topic test

– Energy types		
<b>Nutrition and Digestion and Cellular Respiration</b> – Food Groups – Balanced Diet – Digestion of Food – Enzymes – How Glucose is Used in Respiration – Blood Circulation – Lungs – Inhaled and Exhaled Air – Keeping fit	<ul style="list-style-type: none"> <li>• Understand the foods needed for a balanced diet</li> <li>• Understand how food is digested by enzymes</li> <li>• Understand how glucose is needed to produce energy</li> <li>• Understand how lungs and circulatory system are needed for respiration to occur</li> <li>• Smoking and drugs effect on respiration</li> </ul>	End of topic test in Nutrition and Digestion and Cellular Respiration
<b>Space</b> – Mass and weight – Stars and galaxies – Star formation	<ul style="list-style-type: none"> <li>• Understand the differences between mass and weight and how weight is affected by gravity</li> <li>• Understand how stars are formed</li> </ul>	-
<b>Magnetism</b> – Magnetic poles – Magnetic field – Electromagnetic field	<ul style="list-style-type: none"> <li>• Understand how magnets work and produce a magnetic field</li> <li>• Understand how a compass works</li> <li>• Understand how an electromagnet works</li> </ul>	End of topic test