



## Year 8 Curriculum Guide

Subject: **Science**

Subject Leader: **Mr Singh**

### Method of assessment

Teachers will grade some tasks done in lesson and end of unit tests to assess progress and identify how students might improve. Intervention will be targeted where it is needed. In addition, at the end of unit tests there will be a set of lessons where students have an opportunity to practice these key skills through set practical investigations which can be separately assessed and progress measured across the year. The students will receive a grade on the new grading system for Science GCSE is 9-1 with 9 being the highest.

### Overview

	Autumn Term	Spring Term	Summer Term
<b>1st Half</b>	<b>Contact Force</b> <ul style="list-style-type: none"> <li>- Friction and turning forces</li> </ul> <b>Pressure</b> <ul style="list-style-type: none"> <li>- Pressure in gases and liquids</li> <li>- Stress of solids</li> </ul> <b>Electromagnets (part 2)</b> <ul style="list-style-type: none"> <li>- Magnetic Fields</li> <li>- Properties of electromagnets</li> <li>- Use of electromagnets</li> </ul>	<b>Matter</b> <ul style="list-style-type: none"> <li>- Elements, compounds, chemical formulae</li> <li>- Polymers</li> </ul> <b>Periodic table</b> <ul style="list-style-type: none"> <li>- the periodic table</li> <li>- properties of Groups 1, 0, 7 elements</li> </ul> <b>Chemical reactions</b> <ul style="list-style-type: none"> <li>- Atoms in chemical reactions</li> <li>- Combustion and decomposition</li> <li>- Conservation of mass</li> </ul>	<b>Breathing</b> <ul style="list-style-type: none"> <li>- Gas exchange</li> <li>- Breathing</li> <li>- Drugs, Alcohol, Smoking</li> </ul> <b>Digestion</b> <ul style="list-style-type: none"> <li>- Nutrients, Food tests</li> <li>- unhealthy diet</li> <li>- Digestive system and digestion</li> </ul> <b>Ecosystems</b> <ul style="list-style-type: none"> <li>- Interdependence: aerobic and anaerobic respiration</li> </ul>
<b>2<sup>nd</sup> Half</b>	<b>Energy</b> <ul style="list-style-type: none"> <li>- Work done and machines</li> <li>- Energy and temperature</li> <li>- Energy transfer: <b>particles</b></li> <li>- Energy transfer: radiation and insulation</li> </ul> <b>Waves</b> <ul style="list-style-type: none"> <li>- Types of waves</li> <li>- Radiation and energy</li> <li>- Modelling waves</li> </ul>	<b>Chemical energy</b> <ul style="list-style-type: none"> <li>- Exothermic and Endothermic reactions</li> <li>- Energy level diagrams and bonding energy</li> </ul> <b>Climate</b> <ul style="list-style-type: none"> <li>- Global warming, the carbon cycle, climate change</li> </ul> <b>Earth resources</b> <ul style="list-style-type: none"> <li>- Extracting metals, recycling</li> </ul>	<b>Photosynthesis</b> <ul style="list-style-type: none"> <li>- process of photosynthesis, structure of the leaf, investigation photosynthesis</li> </ul> <b>Genes</b> <ul style="list-style-type: none"> <li>- Variation: Natural selection, Charles Darwin, extinction</li> </ul> <b>Human reproduction</b> <ul style="list-style-type: none"> <li>- Inheritance, DNA, Genetics, Genetic modification</li> </ul>

### **Text Book/Reference/Resource guide:**

#### **Main resources:**

- Activate text book 2. ISBN – 9780198408253
- <https://www.kerboodle.com>

#### **Websites:**

<https://www.my-gcse-science.com>

<http://www.bbc.co.uk/education/subjects/zrkw2hv>

<http://www.planet-science.com/categories/parentsteachers/science-resources/2012/04/online-gcse-revision->