






## Year 7

Topic	Students develop a knowledge of
<p><b>1. Cells</b></p> 	<ul style="list-style-type: none"> <li>○ Cells, their structure and different types</li> <li>○ Diseases, pathogens and how to prevent them</li> <li>○ Tissues, organs and organ systems</li> <li>○ Breathing and respiration</li> <li>○ Muscles and the skeletal system</li> </ul>
<p><b>2. Energy</b></p> 	<ul style="list-style-type: none"> <li>○ Types of energy store and transfers</li> <li>○ Wasted energy and efficiency</li> <li>○ Renewable energy resources</li> <li>○ Generating electricity</li> <li>○ Drawing and using circuits</li> <li>○ Potential difference and current</li> <li>○ Electromagnetism</li> </ul>
<p><b>3. Particles and Mixtures</b></p> 	<ul style="list-style-type: none"> <li>○ The three states of matter and the changes of state</li> <li>○ Atoms, elements and compounds</li> <li>○ Forming mixtures and techniques used to separate them</li> <li>○ Solutions and dissolving</li> </ul>
<b>Assessment 1: Cells, Energy, Particles and Mixtures</b>	
<p><b>4. Interdependence</b></p> 	<ul style="list-style-type: none"> <li>○ Relationships between animals and plants within an ecosystem</li> <li>○ Plant growth and reproduction</li> <li>○ Adaptations in plants and animals</li> <li>○ Classification of living things</li> <li>○ Variation within and between species</li> <li>○ Promoting biodiversity and why it is important</li> <li>○ Natural selection and extinction</li> </ul>
<p><b>5. Forces</b></p> 	<ul style="list-style-type: none"> <li>○ Types of forces</li> <li>○ Balancing forces and using force diagrams</li> <li>○ Air resistance and aerodynamics</li> <li>○ Mass and weight</li> <li>○ Measuring speed</li> <li>○ Graphing motion</li> <li>○ Driving safely, stopping and thinking distances</li> </ul>





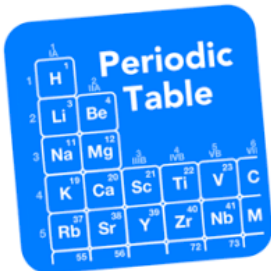
## 6. Human Impact






- Acids, bases and their properties
- Measuring acidity using the pH scale
- Neutralisation reactions
- Recycling and why it is important
- Life cycle assessments of products
- Global warming and the greenhouse effect
- History of Earth's atmosphere
- Sustainable farming

**Assessment 2: Interdependence, Forces and Human Impact**

## Year 8

Topic	Students develop a knowledge of
<p><b>1. Human Body</b></p> 	<ul style="list-style-type: none"> <li>○ Different parts that make up an organism</li> <li>○ Movement of particles into a cell</li> <li>○ Testing for nutrients from food</li> <li>○ Digestive system and digestion</li> <li>○ Circulatory system and circulation</li> <li>○ Respiratory system and breathing</li> <li>○ Lifestyle diseases</li> <li>○ Smoking and drugs</li> </ul>
<p><b>2. Heating and Cooling</b></p> 	<ul style="list-style-type: none"> <li>○ Changes of state</li> <li>○ Thermal energy and how it is transferred</li> <li>○ Cooling/Heating curves</li> <li>○ Insulation of thermal energy</li> <li>○ Conserving energy in the home</li> <li>○ Specific heat capacity</li> <li>○ Gas pressure</li> </ul>
<p><b>3. Periodic Table</b></p> 	<ul style="list-style-type: none"> <li>○ Atoms, elements and compounds</li> <li>○ Metals vs. Non-metals</li> <li>○ Groups and periods on the periodic table</li> <li>○ History of the atomic model</li> <li>○ Structure of the atom</li> <li>○ Flame tests and gas tests</li> <li>○ Collecting gases</li> <li>○ Density of solids and gases</li> </ul>

**Assessment 1: Human Body, Heating and Cooling and Periodic Table**

<p><b>4. Staying Alive</b></p> 	<ul style="list-style-type: none"> <li>○ Asexual and sexual reproduction</li> <li>○ Plant reproduction</li> <li>○ Puberty and hormones</li> <li>○ Female reproductive system and menstrual cycle</li> <li>○ Methods of contraception</li> <li>○ Development of a foetus</li> <li>○ DNA and inheritance</li> <li>○ Cell division</li> </ul>
<p><b>5. Waves</b></p> 	<ul style="list-style-type: none"> <li>○ Types of waves</li> <li>○ Properties of waves</li> <li>○ Calculating wave speed</li> <li>○ How the ears work</li> <li>○ Sound waves and speakers</li> <li>○ Light wave and the properties of light</li> <li>○ The Electromagnetic spectrum</li> <li>○ Coloured light and mixing</li> <li>○ Reflection and refraction</li> </ul>
<p><b>6. Chemical Reactions</b></p> 	<ul style="list-style-type: none"> <li>○ Physical and chemical changes</li> <li>○ Chemical reactions</li> <li>○ Writing chemical equations</li> <li>○ Conservation of mass</li> <li>○ Balancing chemical equations</li> <li>○ Reactions of metals</li> <li>○ Thermal decomposition</li> <li>○ Reactivity series and displacement</li> </ul>