

Year Group: 7	Subject: Science	Term: Spring 2020
Topic	Key Learning points	Assessment
<b>Biology:</b> Reproduction	<p><i>End Point: To describe different methods of reproduction and focus specifically on human development and growth from birth to adolescence.</i></p> <ul style="list-style-type: none"> <li>• Know that all living organisms need to reproduce so that their species can continue to exist</li> <li>• Know that sex cells are called gametes and the human gametes are the sperm cell and the egg cell</li> <li>• Know that sexual reproduction involves the joining of two gametes and that this process is called fertilisation</li> <li>• Know that new organisms produced by reproduction are called offspring</li> <li>• Describe changes to males and females during puberty</li> <li>• Know the function of the male and female reproductive systems</li> <li>• Describe the stages of the menstrual cycle</li> <li>• Know about menstrual well-being, the range of products available and where to seek help</li> <li>• Understand what is meant by a 'healthy intimate relationship'</li> <li>• Describe the process of sexual intercourse and understand the term 'consent'</li> <li>• Describe the process of pregnancy and childbirth</li> </ul>	<p>Students will be formatively assessed during each topic by weekly multiple-choice tests in class:</p> <ul style="list-style-type: none"> <li>• Before each assessment students will complete a revision homework</li> <li>• After each assessment there will be an opportunity for students to review their understanding</li> <li>• Teachers will provide students with targeted feedback, based on their test performance</li> </ul>
<b>Chemistry:</b> Separating Mixtures	<p><i>End Point: Have a strong understanding of the particle model, describing particles in a solution. Describe and carry out a range of separation techniques, including filtration, evaporation, distillation and chromatography.</i></p> <ul style="list-style-type: none"> <li>• Know what is meant by the terms; atom, element, compound and mixture</li> <li>• Know that a pure substance contains only one type of particle (either an atom or a compound) and that an impure substance is a mixture</li> <li>• Describe the terms solute, solvent, solution and insoluble</li> <li>• Know that chromatography separates dissolved substances by their solubility</li> <li>• Know that filtration can be used to separate an insoluble solid from a liquid</li> <li>• Know that evaporation can be used to separate a soluble solid from a liquid</li> <li>• Know that distillation can be used to separate a soluble solid from a liquid</li> <li>• Know that distillation can be used to separate two liquid with different boiling points</li> <li>• Know that fractional distillation can be used to separate a liquid from a mixture of two or more liquids</li> <li>• Describe how fractional distillation is used to separate crude oil into pure substances</li> </ul>	<p>At the end of the term students will have a summative assessment. This will be a 45-mark exam paper (15 marks from each topic), which will be marked by their teacher</p>
<b>Physics:</b> Forces and Energy	<p><i>End Point: Have a foundation of understanding of simple forces, such as friction, air resistance, upthrust and weight. Apply knowledge of forces to explain scenarios such as objects floating. Understand how energy is transferred between stores of energy.</i></p> <ul style="list-style-type: none"> <li>• Identify simple forces and know what is meant by a contact and non-contact force</li> <li>• Describe forces as balanced or unbalanced and know that the resultant force is the total force when two or more forces are acting on a single object</li> <li>• Know how to draw accurate force diagrams</li> <li>• Describe whether an object will float or sink, using understanding of weight and upthrust</li> <li>• Investigate how elastic objects change shape when a force is applied (extension of a spring)</li> <li>• Describe the following stores of energy; kinetic, chemical, elastic, gravitational and thermal</li> <li>• Describe how energy is not produced or destroyed, it is instead transferred between stores</li> <li>• Know that power is the energy transferred per second and calculate power of domestic appliances</li> </ul>	