

## Year 7 Science Planning Outline – Spring Term

*These are the subjects covered in the Spring Term. The exact timing and order of them may be subject to change.*

Area of curriculum	Pupils should be taught
<b>Energy</b> (Physics)	<ul style="list-style-type: none"> <li>about the variety of energy resources, including oil, gas, coal, biomass, food, wind, waves and batteries, and the distinction between renewable and non-renewable resources</li> <li>about the Sun as the ultimate source of most of the Earth's energy resources and to relate this to how coal, oil and gas are formed</li> <li>that electricity is generated using a variety of energy resources</li> <li><i>KS3 Science Revision Guide pages: 99, 100, 101, 102</i></li> </ul>
<b>EXAMS</b>	<ul style="list-style-type: none"> <li><b>EXAMS</b></li> </ul>
<b>Going over exams</b>	<ul style="list-style-type: none"> <li>To gain a greater understanding of expectations in answering CE questions</li> <li>To understand errors in exam</li> <li>Finish any energy work from week 1</li> <li><i>KS3 Science Revision Guide pages:</i></li> </ul>
<b>Energy</b> (Physics)	<ul style="list-style-type: none"> <li>the distinction between temperature and heat, and that differences in temperature can lead to transfer of energy - <i>that thermal energy will flow from a body at one temperature to a body at a lower temperature</i></li> <li>ways in which energy can be usefully transferred and stored</li> <li>how energy is transferred by the movement of particles in conduction, convection and evaporation, and that energy is transferred by radiation</li> <li>that although energy is always conserved, it may be dissipated, reducing its availability as a resource.</li> <li><i>KS3 Science Revision Guide pages: 100, 42</i></li> </ul>
<b>Light</b> (Physics)	<ul style="list-style-type: none"> <li>that light travels in a straight line at a finite speed in a uniform medium</li> <li>that non-luminous objects are seen because light scattered from them enters the eye</li> <li>how light is reflected at plane surfaces</li> <li>how light is refracted at the boundary between two different materials</li> <li>that white light can be dispersed to give a range of colours</li> <li>the effect of colour filters on white light and how coloured objects appear in white light and in other colours of light</li> <li><i>KS3 Science Revision Guide pages: 89, 90, 91</i></li> </ul>
<b>Sound</b> (Physics)	<ul style="list-style-type: none"> <li>that sound causes the eardrum to vibrate and that different people have different audible ranges</li> <li>some effects of loud sounds on the ear [e.g. <i>temporary deafness</i>]</li> <li>that light can travel through a vacuum but sound cannot, and that light travels much faster than sound</li> <li>the relationship between the loudness of a sound and the amplitude of the vibration causing it</li> <li>the relationship between the pitch of a sound and the frequency of the vibration causing it.</li> <li><i>KS3 Science Revision Guide pages: 92, 93</i></li> </ul>
<b>Elements, compounds and mixtures</b> (Chemistry)	<ul style="list-style-type: none"> <li>that elements are shown in the periodic table and consist of atoms which can be represented by symbols</li> <li>how elements vary widely in their physical properties, including appearance, state at room temperature, magnetic properties and thermal and electrical conductivity, and to use these properties to classify elements as metals or non-metals</li> <li>how elements combine through chemical reactions to form compounds [e.g. <i>water, carbon dioxide, magnesium oxide, sodium chloride, most minerals</i>] with definite composition</li> <li>to represent compounds by formulae and to summarise reactions by word equations</li> <li><i>KS3 Science Revision Guide pages: 44, 45, 46</i></li> </ul>
<b>Elements, compounds and mixtures</b> (Chemistry)	<ul style="list-style-type: none"> <li>that mixtures [e.g. <i>air, sea water and most rocks</i>] are composed of constituents that are not combined</li> <li>how to separate mixtures into their constituents using distillation and chromatography and other appropriate methods.</li> <li><i>KS3 Science Revision Guide pages: 47, 48</i></li> </ul>
<b>Metals and non-metals</b> (Chemistry)	<ul style="list-style-type: none"> <li>how metals react with oxygen, water and acids and oxides of other metals, and what the products of these reactions are</li> <li><i>KS3 Science Revision Guide pages: 49, 50, 51, 52,</i></li> </ul>
<b>Metals and non-metals</b> (Chemistry)	<ul style="list-style-type: none"> <li>about the displacement reactions that take place between metals and solutions of salts of other metals</li> <li>how a reactivity series of metals can be determined by considering these reactions, and used to make predictions about other reactions</li> <li><i>KS3 Science Revision Guide pages: 64, 65</i></li> </ul>