**Subject: \_\_\_\_\_\_\_\_\_\_SCIENCE\_\_\_Mr. Alan Parfitt\_\_\_\_\_\_ Annual Year Planning 2020-21**

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| **Group** | **Autumn Term** | | **Spring Term** | | **Summer Term** | |
| **Term 1** | **Term 2** | **Term 3** | **Term 4** | **Term 5** | **Term 6** |
| **Year 7** | *Big Idea 1 Biology Cellular basis of Life*  **Topic 1 cells**  **kc 1 CELLS LIVING/DEAD/NEVER ALIVE**  **kC2 CELLS AND CELL STRUCTURES**  **kc 3 CELL SIZE AND SHAPE**  **KC 4 DIFFUSION AND CELL MEMBRANE**  *BI1 Chemistry substances and properties*  **Topic 1 properties and materials**  **kc1 composite materials**  **kc2 classifying materials** | *BI 1 Chemistry*  *Substances and properties*  **Topic 2 substances and mixtures.**  **KC 1 Substance**  **KC 2 solutions**  **Kc 3 separating solutions.**  *Physics BI 1 Matter*  **Topic 1 heating and cooling**  **KC 1 temperature**  **KC 2 heating/ cooling**  **KC 3 Thermal conduction**  **KC 4 thermal store of energy** | *Physics BI 1 Matter*  **Topic 2 Floating and sinking**  **KC 1 floating/ sinking**  **KC 2 Floating/ sinking and density**  **KC 3 convection**  *Chemistry BI 1 Substances and properties*  **Topic 3 solubility**  **KC 1 comparing solubility** | *Biology BI 1 CELLULAR BASIS OF LIFE*  **Topic 2 cells to organ systems**  **KC 1 working together- cells**  **KC 2 supplying cells- circulatory system, digestive and gas exchange systems.**  **KC 3 human skeleton and muscles**  *Physics BI 2 forces and motion*  **Topic 1 Forces**  **KC 1 what forces do**  **KC 2 describing forces**  **KC 3 balanced and unbalanced forces** | *Chemistry BI 1 Substances and properties*  **Topic 3 acids and alkalis**  **KC 1 Ph scale**  **Topic 4 periodic table**  **KC 1 trends in the periodic table**  Biology BI 1 cellular basis of life  **Topic 3 Biochemistry**  **KC 1 plant nutrients and photosynthesis**  **Biology BI 2 heredity and life cycles**  **Topic 1 inheritance and the Genome**  **KC 1 heredity and genetic info**  **KC 2 structure and functions of genome** | *Biology BI 2 heredity and life cycles*  **Topic 2 Changes within an organism’s lifetime**  **KC 1 growth**  **Kc 2 Life cycles**  *BI 2 forces and motion*  **Topic 1 forces**  **KC 4 Friction**  **KC 5 Energy stores and transfers** |
| **Year 8** | *Biology BI 3 Organisms and their environment*  **Topic 1 Organisms and their environment**  **KC 1 Food chains**  **and food webs**  **KC 2 interdependence within ecosystems**  *Physics BI 1 Forces and motion*  **Topic 2 Moving by Force**  **KC1 describing speed**  **KC 2 motion graphs**  **Kc 3 changing motion**  **Kc 4 drag** | *Chemistry BI 2 particles and structure*  **Topic 1 substances and mixtures**  **KC 1 particle model for S/L/G**  **KC 2 particles in solutions**  **Topic 2 elements and compounds**  **KC 1 atoms and molecules**  **KC 2 symbols and formulae**  *Biology BI 3 Organisms and their environment*  **Topic 3 Biodiversity and human impacts**  **KC 1 Biodiversity, conservation and sustainability.** | *Chemistry BI 2 particles and structure*  **Topic 3**  **chemical change**  **kc 1 rearrangement of atoms**  **Topic 4**  **understanding chemical reactions**  **KC 1 representing reactions**  **KC 2 conservation of mass**  **Topic 5 Evaporation**  **KC 1 explaining evaporation**  **Topic 6 periodic table**  **KC 1 atomic model** | *Biology BI 4 variation/ adaptability/ evolution*  **Topic 1 variation**  **KC 1 differences within species**  **KC 2 changes in species over time- fossil evidence**  **Topic 2 classification**  **KC1 identifying and classifying organisms**  **Topic 3 Adaptation and evolution.**  *Big Idea 3 Physics*  *Sound and light waves*  **Topic 1 sound and light**  **KC 1 production and transmission of sound**  **KC 2 characteristics of light** | *Chemistry BI 3 chemical reactions*  **Topic 1 chemical change**  **KC 1 chemical change**  **KC 2 formation of new substances**  **Topic 2 Understanding chemical reactions**  **KC 1 Reactions in solution**  **KC 2 combustion**  **Topic 3 energy and reactions**  **KC 1 exothermic and endothermic reactions**  **Topic 4 acids and alkalis**  **KC 1 neutralisation** | *Physics*  *Big idea 3 Sound and light waves*  **Topic 2 how we see**  **KC 1 passive model of vision**  **KC 2 seeing in colour**  **Topic 3 Making images**  **KC 1 ray model of light to explain images**  **KC 2 refraction and lenses**  **Topic 4 waves**  **KC 1 waves on water and ropes**  **KC 2 wave model of sound.** |
| **Year 9** | *Biology Big idea 5 Health and disease*  **Topic 1 what are health and diseases**  **KC 1 good and ill health**  **KC 2 disease**  **Topic 2 Human lifestyles and health**  **KC 1 diet and exercise**  **Topic 3 Health and infectious disease**  **KC 1 Pathogens**  **KC 2 Preventing infection.**  *Physics Big Idea 4 Electricity and Magnetism*  **Topic 1 simple electric circuits**  **KC 1 electric circuits**  **KC 2 electric current** | *Physics Big Idea 4 electricity and Magnetism*  **Topic 1 making simple electric circuits**  **KC 3 Voltage**  **KC 4 static electricity**  **Topic 2 More electrical circuits**  **KC 1 resistance**  **KC 2 Parallel circuits**  **Topic 3 Magnets and electromagnets**  **KC 1 magnetic fields**  **KC 2 Electromagnets** | *Chemistry Big idea 4 Earth Chemistry*  **Topic 1 Air pollution**  **KC 1 Air quality**  **Topic 2 water cycle**  **KC 1 water cycle processes**  **Topic 3 acids/ alkalis**  **KC 1 Acid rain**  **Topic 4 weathering and erosion**  **KC 1 chemical weathering** | *Physics big idea 5 Earth in Space*  **Topic 1 Solar system and beyond**  **KC 1 Planets**  **KC 2 Gravity**  **KC 3 Night sky, stars and galaxies**  **Topic 2 Earth and Sun.**  **KC 1 Days and seasons**  **Review of Physics and biology Topics and assessment** | *Chemistry Big Idea 5 Dynamic earth*  **Topic 1 Earth’s resources**  **Kc 1 what’s in a rock?**  **KC 2 Inside the earth**  **KC 3 Making rocks by heating.**  **Topic 2 Physical weathering and erosion**  **Topic 3 Rock changes**  **KC 1 making rock by pressure and cementing**  **KC 2 making fossil fuels.**  **Topic 5 Periodic table**  **KC1 periodic trends and patterns** | **Review of all Chemistry topics and final KS 3 assessment.** |
| **Year 10** | **Atomic structure and the Periodic table** | **Bonding, structure and the properties of matter** | **Quantitative chemistry** | **Chemical changes** | **Energy Changes** | **Rate and extent of chemical change** |
| **Year 11** | **Chemistry of the Atmosphere** | **Energy Changes** | **Chemical analysis** | **Rate and extent of Chemical change** | **Review of syllabus and revision for GCSE papers.** |  |





