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| *What will they be learning, why and in what order?* | | | | | |
|  | **Term 1** | **Term 2** | | | **Term 3** |
| **Bridge/ Foundation knowledge required** | Students have previously learned about the basic structure of cells and the function of their organelles. Students have not year looked at cell transport.  Students have good knowledge of AEC and SLG, but have not yet linked this information to describe changes of state to GCSE standard. | Students have not previously covered electricity content.  Students are familiar with the organ systems – particularly the heart and lungs – and can therefore identify the tissues affected by the diseases we will cover this year. | | | Students are able to read the periodic table independently, and will combine this knowledge with their ability to draw atom diagrams to produce accurate diagrams of the first twenty elements.  Students have previously covered renewable energy resources, and will link this knowledge with the effects of human activity on the Earth’s atmosphere. |
| **Key Learning Experience / Skills** | Cells and Microscopy – Students will learn the skills required to safely use a microscope to view a cell sample. Students will build on their knowledge of organelles and specialised cells, and discover how substances are transported in and out of a cell.  Further Atoms, Elements and Compounds – Students will refresh and build on their knowledge of elements and compounds, and writing word and symbol equations.  Particle Model – Students will use their knowledge of atoms, elements and compounds and solids, liquids and gases to accurately describe the changes in energy, movement and particle arrangement when changes are made to temperature, pressure and volume. | Electricity – Students will learn how to draw and build electrical circuits.  Lifestyle and Disease – Students will learn about the lifestyle factors which have either positive or negative effects on our health. Students will learn how lifestyle choices can lead to the development of non-communicable disease. | | | Further Periodic Table – Students will build on their knowledge of the properties of each group in the periodic table, and will learn to draw dot and cross diagrams to represent the first twenty elements.  The Earth – Students will learn how the Earth’s atmosphere was formed and how humans have negatively impacted it’s health. |
| **Assessment**  How will you assess the impact of teaching? | Students will complete plenary tasks in every lesson, mid-topic assessments at the halfway point in each topic, and end-of-topic tests once per topic | | | | |
| **CIAG Links** | Organisation, Genetics and Evolution – medicine, nursing, healthcare, teaching  Further AEC and Particle Model – higher education chemistry or physics, engineering, teaching | Electricity – electrician  Lifestyle and Disease - medicine, nursing, healthcare, teaching | | | Further Periodic Table - higher education chemistry or physics, teaching  The Earth – renewable energy scientist/engineer, green chemistry, teaching |
| **British Values** | Students will consider how scientific theories have not always been immediately accepted, and are impacted by the improper use of tolerance, respect and democracy.  Students will consider how rule of law and liberty play a role in the implementation of new scientific theories in areas such as medicine. | | | | |
| **Cross Curricular Link Numeracy** | Students will need to use basic arithmetic to calculate mass number and atomic number, and draw accurate dot and cross diagrams, and to balance symbol equations. | | **Cross Curricular Link- Literacy** | Students will use glossaries to aid with the high-demand vocabulary in the biology topics. Students will complete a range of assessment questions with mixed literacy demand.  Students will frequently be tested on vocabulary through spelling tests and games such as bingo.  Teachers will present key word lists in lessons | |
| |  | | --- | | ***The Hub Vision – A School that provides all students with exciting opportunities that build confidence, develop social skills and promote academic achievement*** | | | | | | |