S2 Science BGE Plan – Classes will experience the following 3 topics in S2 (Aug-Dec):

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| **Subject** | **What will we learn?** | **What skills will we develop?** | **How will we be assessed?** | **What homework will we have?** | **What experiences /extracurricular clubs could be offered?** |
| Electricity (Physics) | * Properties of electricity * Dangers associated with electricity * How electricity moves * Conductors and insulators * To represent a circuit using circuit symbols * Series circuits and parallel circuits * Measuring current & voltage in a series & parallel circuit * Operation of a fuse as a safety device * Designing a simple cell and investigating the factors which effect voltage | Science skills  Drawing circuit diagrams and circuit symbols  Building circuits using circuit diagrams  Safety in electricity  Designing circuits using problem solving  Literacy  Writing descriptions  Writing explanations  Using evidence to justify results  Describing relationships  Describing a graph of results  Numeracy  Graph drawing  Analysing graphs  Reading and writing down measurements  Completing calculations  DYW  Problem solving  Thinking routines  Digital Skills  Describing and stating safety rules in when working with electricity  Working in group/pairs  Lfs  Importance of electricity as a form of energy | * Homework * End of topic assessment (KU and PS) * Teacher observation * Electrical Safety Poster | 2 homework exercises | Science Club  Industrial Cadets Project |
| Becoming a Chemist (Chemistry) | * Safety precautions which should be taken in a lab * The meaning of certain warning signs * The following terms: soluble, insoluble, solvent, solute & solution * How chromatography separates mixtures * Types of energy change that take place during chemical reactions * Safely carry out, describe, and evaluate a range of experiments | Science skills  Design and carry out experiments  Literacy  Writing descriptions  Writing explanations  Scientific write up  Numeracy  Graph drawing  Analysing graphs  Presentation of results – table/chart/diagram/graph  DYW  Diversity in Science-understanding the importance of diversity in science  Anticipate and apply safety measures to control all risks/hazards  Use equipment accurately | * Homework * End of topic assessment (KU and PS) * Mission Impossible Challenge * Research findings | 2 homework exercises  Research task | Science club  Industrial Cadets Project |
| Microbes (Biology) | * Definition and types of microbes * Useful microbes * Harmful microbes * How diseases spread and how they can be prevented * Hand hygiene * Respiratory hygiene | Science skills  Design and carry out experiments  Using a microscope  Literacy  Writing descriptions  Writing explanations  Using evidence to justify results  Numeracy  Graph drawing  Analysing graphs  Reading and writing down measurements  DYW  Problem solving  Digital Skills  Working in group/pairs  Lfs  Sanitation  Health & wellbeing | * Homework * End of unit assessment (KU and PS) * Research findings | 3 homework exercises  Research task | Science club  Industrial Cadets Project |