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 skillsDrawing circuit diagrams and circuit symbolsBuilding circuits using circuit diagramsSafety in electricity Designing circuits using problem solving Literacy Writing descriptions Writing explanations Using evidence to justify resultsDescribing relationshipsDescribing a graph of results NumeracyGraph drawing Analysing graphsReading and writing down measurements Completing calculationsDYWProblem solving Thinking routines Digital SkillsDescribing and stating safety rules in when working with electricityWorking in group/pairs LfsImportance of electricity as a form of energy | * Homework
* End of topic assessment (KU and PS)
* Teacher observation
* Electrical Safety Poster
 | 2 homework exercises | Science ClubIndustrial 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 skillsDesign and carry out experiments Literacy Writing descriptions Writing explanations Scientific write upNumeracyGraph drawing Analysing graphsPresentation of results – table/chart/diagram/graphDYWDiversity in Science-understanding the importance of diversity in science Anticipate and apply safety measures to control all risks/hazardsUse equipment accurately | * Homework
* End of topic assessment (KU and PS)
* Mission Impossible Challenge
* Research findings
 | 2 homework exercises Research task | Science clubIndustrial 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 skillsDesign and carry out experimentsUsing a microscopeLiteracy Writing descriptions Writing explanations Using evidence to justify resultsNumeracyGraph drawing Analysing graphsReading and writing down measurements DYWProblem solving Digital SkillsWorking in group/pairs LfsSanitationHealth & wellbeing | * Homework
* End of unit assessment (KU and PS)
* Research findings
 | 3 homework exercisesResearch task | Science clubIndustrial Cadets Project  |