

**BTEC SCIENCE CURRICULUM PLAN**

**Key Stage 4**

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|  | **AUTUMN 1** | **AUTUMN 2** | **SPRING 1** | **SPRING 2** | **SUMMER 1** | **SUMMER 2** |
| **GROUP 6**  **Scheme of Work** | Making useful Scientific Devices | Physic and our Universe | Physics and our Universe | The Study of Living Systems | The Study of Living Systems | Skills and Techniques for Chemistry Investigations |
| **Example of Tasks** | * Different types of balance and how they work * Design a balance and test its accuracy * Describe the components of a battery * Construct a battery out of available resources (lemons) whilst maintaining theirs and others safety * Describe how batteries harm the environment | * Find out about different types of energy stores * Produce flowcharts showing energy transfer * Measure energy transfer * Know how to work out the efficiency of an electrical product * Know the different types of ionising radiation * Know the different types of electromagnetic waves and their application * Look at the effects of a nuclear bomb | * Identify components of an electrical circuit * Understand the need for a complete circuit * Different types of circuit (parallel and series) * Use equipment successfully to take measurements * Know types of power supply * Describe the structure and dynamic nature of the universe * Identify methods used to investigate space | * Identify cells and how they are made up * The function of specialised cells * How the nervous system works * Describe the role of the nervous system in homeostasis * Define ecosystems including habitats, population, community, species, food webs * Look at the effect of humans on ecosystems | * How animals have adapted to survive in their environment * Predator and prey relationships * Study different environments * Describe the role of genes in inheritance * Human health and inherited diseases * Know the difference between dominant and recessive * Describe the role of genes in variation | * Identify elements in the periodic table * Classify elements of the periodic table * Compare simple ionic and covalent materials * Chemical changes and chemical equations * Chemical products and useful properties * Factors that affect chemical changes * Materials from natural resources * Identify fuels and their application * Chemical products |