

**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
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