

Phase overview Year 1 - Castledon Sixth Form College

Year 1	Autumn – Topic title	Spring – Topic title	Summer– Topic title
<p>Science – Gateway Level 1 Award in Applied Science The Study of Living Systems M Module 1 Year</p> <p>Internal ref: QU002824 Regulator ref: K/505/5223 Unit level: Level 1 Owner acronym: Gateway Qualifications Credit value: 3 Guided learning hours: 30</p>	<p>1- Know about cells and their functions.</p> <p>1.1 Identify the structure of a cell.</p> <ul style="list-style-type: none"> • Unicellular and Multicellular Cells • Ultrastructure of animal, fungal, bacteria and plant cells <p>1.2. Identify the functions of different cells and link their structure to their function.</p> <ul style="list-style-type: none"> • Cell wall • Cell membrane • Cytoplasm • Mitochondria • Chloroplasts • Vacuole • Ribosomes • Plasmids • Nucleus <p>1.3. Describe homeostasis and its role in the nervous and endocrine systems.</p> <ul style="list-style-type: none"> • Understanding homeostasis and the importance of maintaining the body's internal environment. • Internal conditions that are controlled. • The nervous system and its role on controlling body temperature. • The endocrine system and its role in the body. • The role of homeostasis and hormones – Controlling blood sugar levels. <p>Experiments – Cells animal, bacterial, fungus and plant. Body temperatures experiment, Blood sugar levels experiment. Trips – Swimming centre with sauna Diabetes centre</p>	<p>2. Know about ecosystems.</p> <p>The following common terms can be used to describe living things in their environment:</p> <ul style="list-style-type: none"> • environment - all the conditions that surround a living organism • habitat - the place where an organism lives • population - all the members of a single species that live in a habitat • community - all the populations of different organisms that live together in a habitat • ecosystem - a community and the habitat in which it lives <p>2.1. Describe components of an ecosystem.</p> <ul style="list-style-type: none"> • ABIOTIC COMPONENTS • PRODUCERS AT THE BASE • CONSUMERS IN THE CHAIN • DECOMPOSERS AND NUTRIENT CYCLING <p>2.2. Describe adaptations of organisms in an ecosystem.</p> <ul style="list-style-type: none"> • Variation; environmental or genetic causes • Darwin's theory • Continuous and discontinuous variation • Causes of variation <p>2.3. Describe the effects of humans on an ecosystems, e.g. deforestation, desertification.</p> <p>Waste –</p> <ul style="list-style-type: none"> • Household waste • Industrial waste • Agricultural waste • Gases produced when fossil fuels are burned <p>Harvest</p> <p>Trip – Recycle centre, Zoo/wildlife centre</p>	<p>3. Know the role of genes in inheritance and variation.</p> <p>3.1. Describe the role of genes in inheritance.</p> <p>examples of inherited variation in humans:</p> <p>eye colour hair colour skin colour lobed or lobeless ears.</p> <p>3.2. Describe the role of genes in variation.</p> <p>Genotype and phenotype</p> <p>3.3. Identify phenotypic features caused by genetic variation.</p> <p>3.4. Identify phenotypic features caused by environmental variation.</p> <p>climate diet physical accidents culture lifestyle</p> <p>Trips – Science Museum</p>