Curriculum Overview: Triple Biology
Year group 11

- **What we are learning**: The topic or focus for the half term.
- **Key knowledge & skills**: What students should understand and be able to do.
- **How we assess learning**: knowledge checks, practical tasks, written responses and formal assessments.
- **Key words to know**: Vocabulary students will learn and use.

What your child will learn each half term
This overview shows the key topics, skills, and knowledge your child will be learning in Triple Biology in Year 11. It helps families understand what's being taught, how it builds on previous learning, and how you can support your child at home.

- **How science works skills**
- Link graphs and data to scientific models, drawing conclusions from evidence.
- Develop skills in planning, carrying out, and analysing required practicals.
- Apply practical skills: selecting equipment, measuring accurately, and identifying variables to control in an investigation.
- Communicate scientific ideas clearly in extended written answers, using correct terminology.

Half term	What we are learning	Key knowledge and skills	How we will assess learning in this unit	Homework	Key vocabulary for these units
HT 1 and 2	B5b Hormonal Coordination B5c Homeostasis in Action B6a Reproduction B6b Variation and Evolution	Hormonal coordination (B5b): The endocrine system, controlling blood glucose, diabetes, the hormones involved in puberty and the menstrual cycle, controlling fertility Homeostasis in action (B5c): Controlling body temperature, the kidneys, controlling water content of the blood, kidney failure Reproduction (B6a): Sexual and asexual reproduction, meiosis (type of cell division), genetic diagrams and predicting inheritance, inherited disorders, DNA structure and protein synthesis Variation and Evolution (B6b): Variation, evolution by natural selection, genetic engineering, selective breeding, cloning	Continuous formative assessment in lessons. End of topic tests. Question level analysis and feedback. Required practical assessment booklets.	Homework is set on a Monday and is due the following Sunday. Homework will be set online using a website 'Educake' which pupils will receive their login details for.	**Glands, thyroid, pituitary, adrenal, ovaries, testes, pancreas, insulin, diabetes, glucagon, oestrogen, menstrual cycle, hormones, adrenaline, thyroxine, metabolism, negative feedback** **Kidneys, ADH, homeostasis, dialysis, urine, body temperature, thermoregulatory centre, vasoconstriction, vasodilation** **Meiosis, gamete, chromosomes, alleles, genes, DNA,**

					genotype, phenotype, polydactyly, cystic fibrosis **Variation, natural selection, gene, vector, gene pool, clones**
HT 3 and 4	B6c Genetics and Evolution B7a Adaptations, interdependence and competition B7b Organising an ecosystem B7c Biodiversity and ecosystems	Genetics and Evolution (B6c): The history of genetics and the work of Gregor Mendel, different theories of evolution and why Darwin's theory was accepted, speciation, evidence for evolution, extinction, antibiotic resistance in bacteria, the basic principles of classification (both past and present day), binomial naming system, evolutionary trees. Adaptations, interdependence and competition (B7a): The relationship between communities and ecosystems, abiotic and biotic factors that affect communities, how to measure the distribution and abundance of living things in their environment, competition in animals and plants, adaptations of different organisms. Organising an ecosystem (B7b): Feeding relationships, how materials are recycled in a stable community, the carbon cycle, the importance of decay and factors that affect the rate of decay, Biodiversity and ecosystems (B7c): Biodiversity and why it is important, land and water pollution, air pollution, deforestation and peat destruction, global warming and the greenhouse effect, environmental changes and the effect on the distribution of organisms, ways to maintain biodiversity, trophic levels, constructing pyramids of biomass, the transfer	Continuous formative assessment in lessons. End of topic tests. Question level analysis and feedback. Required practical assessment booklets.	Homework is set on a Monday and is due the following Sunday. Homework will be set online using a website 'Educake' which pupils will receive their login details for.	**DNA, chromosomes, natural selection, evolution, evidence, speciation, fossil record, extinction, antibiotic, bacteria, mutation, Linnaeus, kingdom, genus species, domain, ancestor** **Ecosystem, community, interdependence, abiotic, biotic, competition, quadrat, transect, abundance, distribution, extremophiles, adaptations, predators** **Biomass, producers, primary consumers, secondary consumers, decomposers, decay**

		of biomass through trophic levels, factors affecting food security, making food production efficient and sustainable			**Biodiversity, eutrophication, bioaccumulation, acid rain, deforestation, peat, breeding programmes, recycling, trophic levels, incident energy, biotechnology**