

AUTUMN 1

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| Topic 1 Biological molecules 1.1 Proteins, and protein structure 1.2 Carbohydrates 1.3 Lipids | Topic 2 Cells and cell division 2.1 Eukaryotic /Prokaryotic cell structure (organelles, structure and function) 2.2 Viruses (HIV, Ebola, treatment and prevention) | Prior Learning Food tests from GCSE (Unit 2 Biology) Cell structure and use of microscope (GCSE unit 1). |
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AUTUMN 2

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| Topic 1 Biological molecules 1.4 DNA and Protein Synthesis 1.6 Inorganic ions 1.7 Water | Topic 2 Cells and cell division 2.3 Eukaryotic cell division- mitosis and meiosis 2.4 Sexual repro in mammals (spermatogenesis and oogenesis) 2.5 sexual reproduction in plants (anatomy and double fertilisation) | Prior Learning Structure of DNA (Unit 6 Biology), Protein synthesis (Unit 6 Biology). Structure, function and names of some enzymes (Unit 2 Science-Biology). |
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SPRING 1

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| Topic 1 Biological molecules 1.5 Enzymes (denature, lock and key, inhibitors) | Topic 3 Biodiversity and Natural selection 3.1 Classification/ Binominal naming | Topic 4 Exchange and transport 4.1 surface area to volume ratio 4.2 cell transport (osmosis, diffusion, active transport) | Prior Learning Classification hierarchy, definition of a species (Unit 6 Science-Biology). |
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SPRING 2

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| Topic 3 Biodiversity and Natural selection Biodiversity, classification, natural selection, genetics | Topic 4 Exchange and transport 4.3 Gas Exchange in mammals, fish, insects and plants 4.4 Circulation (heart, blood, blood clotting) | Prior Learning Evolution by natural selection (Unit 6 Science-Biology). Definition of biodiversity and awareness of processes that affect it (Unit 7 Science-Biology). |
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SUMMER 1

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| Topic 1 Biological molecules | Topic 2 Cells and cell division | Topic 4 Exchange and transport 4.5 Transport of gases (Haemoglobin, myoglobin Bohr shift) 4.6 Transfer of materials (tissue fluid, lymph) 4.7 Mass transport in plants (xylem, phloem, potometer). | Prior Learning Year 9 plant biology, GCSE xylem and phloem. |
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SUMMER 2

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| Topic 1 Biological molecules | Topic 2 Cells and cell division | Topic 3 Biodiversity and Natural selection | Topic 4 Exchange and transport | Prior Learning All areas of year 12. |
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CAREERS LINKS

Virologist, cardiologist, agriculturist, agro-botanist, immunologist, medicine, vet, dentistry. Microbiology, pharmacology.

CHARACTER LINKS

-Resilience, pupils are encouraged to work on their independence and work out problems, learning from mistakes (performance virtues).
 -Empathy and compassion- pupils will come across many difficult situations such as genetic defects and ethical issues of genetic screening or use of stem cells (moral virtues).

KEY ASSESSMENT DATES

Pupils complete assessments in line with the KS5 assessment calendar. There are also extra end of topic assessments and end of year 12 assessments.