

GCSE Combined Science

Module 1

Topic Title: Homeostasis and response, Using resources, Waves

Brief Summary of Content Studied:

Homeostasis, Nervous system and hormonal control, using resources and sustainable development, potable water, waste water treatment, life cycle assessments. electromagnetic waves.

[Knowledge Organiser](#)

Other resources and reading:

[CGP books](#)

[Freesciencelessons.org](#)

[bbc.bitesize](#)

Module 2

Topic Title: Ecology, Forces, Magnetism and electromagnetism

Brief Summary of Content Studied:

Adaptations, interdependence and competition, organisation of an ecosystem, biodiversity and the effect of human interactions on ecosystems. forces and motion, permanent and induced magnetism, magnetic forces and fields The motor effect.

[Knowledge Organiser](#)

Other resources and reading:

[CGP books](#)

[Freesciencelessons.org](#)

[bbc.bitesize](#)

Module 3

Topic Title: Revision and exam preparation

Brief Summary of Content Studied:

Paper 1 Biology - cells,enzymes, digestion, transport in plants and animals, microorganisms and diseases, photosynthesis, respiration and metabolism, connecting all the units together. Paper 1 Chemistry , atoms, ions, isotopes, structure and bonding, chemical reactions and how they actually happen, moles, and yields, metals and acids, salt formation, electrolysis - this all connect ions and ionic bonding. Also looks at how chemical substances can be separated, and the application of this. Paper 1 Physics - connecting energy to all units - types pf energy stores, systems and pathways. Looking at energy stores like GPE, KE and WD. Looking at internal energy stores and the particle model (linking to Chemistry),and looking at specific heat capacity of objects in specific latent heat. Focus on radiation (force pathway again linked to energy) looking at types of radiation, linking this to the atom (chemistry). Working scientifically is constantly revisited through required practical skill as well as mathematical skills being used throughout all three disciplines.

[Knowledge Organiser](#)

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Module 4

Topic Title: Revision and exam preparation

Brief Summary of Content Studied:

Paper 2 Biology links cells, transport and organ systems to homeostasis - endocrine and nervous system. Genetics (link to cells), genetic diseases, selective breeding and GMO. Plant transport systems and photosynthesis linked to Ecology (this all connects to paper 1 content) Paper 2 Chemistry connects atoms, particles bonding, calculations and chemical reactions to how chemical reactions can have their rates increased with links to energy level diagrams. Hydrocarbons-covalent bonding (alkenes and Alkanes) and fractional distillation. Testing for gases when chemical reactions take place and separation of substances linked to paper 1. Links to Paper 2 Ecology when looking at LCAs and other environmental issues. Fuels linked to earlier units and some Micro-organisms in terms of waste water treatment. Working scientifically is constantly revisited through required practical skill as well as mathematical skills being used throughout all three disciplines.

Other resources and reading:

[CGP books](#)

freesciencelessons.org

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Module 5

Topic Title: Exam preparation

Brief Summary of Content Studied:

Pupils will spend the remaining lessons revisiting key topics to prepare for the exam.

Other resources and reading:

[CGP books](#)

freesciencelessons.org

[bbc bitesize](#)

Module 6

Other resources and reading:

[CGP books](#)

freesciencelessons.org

[bbc bitesize](#)