END OF KEY STAGE 4

Practical Scientific skills, Scientific terms and keywords. Mathematical skills for Science.

 Biology - Cell Biology, Organisation, Infection and Response, Bioenergetics, Homeostasis and Response, Inheritance, Variation and Evolution, Ecology

- Unit 1 Biological Molecules Monomers and Polymers, Carbohydrates, Lipids, Proteins, DNA, RNA and ATP, inorganic ions and water
- Unit 2 Cells Eucaryotic and Procaryotic Cells, Cell Recognition and the Immune System

YEAR 12 AUTUMN

Alteration to the Sequences of bases in DNA,

Gene Expression, Transcription and Translation,

Cancer, Using Genome Projects, Recombinant

DNA Technology, Identification and Diagnosis

of Heritable Conditions, Genetic Fingerprinting

Unit 8 The Control of Gene Expression.

Exam preparation and revision

- Complete Unit 2 Cells Diffusion, osmosis, active transport, cell cycle, cancer, viruses, immunity and disease
- Unit 3 Organisms Exchange Substances with their Environment, Gas Exchange, Digestion and Absorption, Mass Transport
- Unit 4 Genetic Information, Variation and Relationships Between Organisms - DNA, Genes and Chromosomes, Protein Synthesis, Mutation and Adaptation, Species and Taxonomy, Biodiversity

- Complete Unit 6 Organisms respond to changes in their internal and external environments -Stimuli and Response, Receptors, Control of Heart Rate, Nerve Impulses, Synaptic Transmission, Stimulation of Skeletal Muscles, Homeostasis,
- Unit 7 Genetics, Populations, Evolution and Ecosystems - Inheritance, Populations, Speciation, Populations in Ecosystems.

- Unit 5 Energy Transfers Between Organisms Photosynthesis, Respiration, Energy and Ecosystems, Nutrient Cycles.
- Unit 6 Organisms respond to changes in their internal and external environments -Stimuli and Response, Receptors, Control of Heart Rate, Nerve Impulses, Synaptic Transmission, Stimulation of Skeletal Muscles, **Homeostasis**

BEYOND YEAR 13



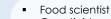


- University Degrees in biological (or other) sciences or a related degree such as psychology, sports science, pharmacy or medicine
- Careers such as doctor, vet, dentist, research scientist, teacher, nature conservation office

Practical sills developed during year 12, knowledge of fundamental biological ideas biological molecules etc...







- Geneticist
- Zoologist
- Molecular/Cell Biologist
- **Botanist**
- Doctor/Medical Professional
- **Immunologist**
- Pharmacologist

- Oncologist
- Virologist
- Immunologist
- Doctor/Medical Professional
- Respiratory Physiologist
- Botanist

QUEST

- Clinical laboratory scientist.
- Genetic councillor.
- Clinical research associate.
- Research scientist.
- Pharmacologist.
- Forensic scientist.
- **Epidemiologist**

YEAR IS AUTUMN

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- **Epidemiologist**
- **Ecologist**
- **Environmental Scientist**
- **Botanist**
- Zoologist
- Research Biologist
- Neuroscientist

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PLOYER ENGAGEMENT LINKS A LEVEL BIOLOGY

Q. What are the industry application(s) for this knowledge/concept(s)?



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YEAR IZ AUTUMN

Showbie Socrative Explain Everything Focus Education YEAR 12 SPRING

Showbie Socrative Explain Everything Focus Education YEAR 12 SUMMER

Showbie Socrative Explain Everything Focus Education

YEAR 13 SUMMER

YEAR 13 SPRING

YEAR 13 AUTUMN

A LEVEL BIOLOGY





AQA A-Level Biology 7402 https://www.aqa.org.uk/subjects/science/as-and-alevel/biology-7401-7402/

3.1 Biological molecules

3,2 Cells (3.2.1 - 3.2.2, 3.2.4)

CPAC is also assessed throughout the course

3.2 Cells (3.2.2 - 3.2.3, 3.2.4)

3.3 Organisms exchange substances with their environment.

QUEST

3.4 Genetic information, variation and relationships between organisms

YEAR IS AUTUMN

3.8 The Control of Gene Expression

- 3.6 Organisms respond to changes in their internal external environments
- 3.7 Genetics, populations, evolution and ecosystems

- 3.5 Energy transfers in and between organisms
- 3.6 Organisms respond to changes in their internal external environments

YEAR 13 AUTUMN

A LEVEL BIOLOGY