

Science KS4 Biology Learning Journey

Ecology:
Triple: trophic levels, impact of environmental change, decomposition, food security, farming techniques
Exam lead in

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GCSE Exams: Triple or combined

Assessment

Ecology:
Levels or organisation
How materials are cycled
Biodiversity and waste management
Global warming
Revision
Triple: Environmental change, trophic levels, decay

Inheritance:
Inheritance and disorders
Variation and evolution
Selective breeding and genetic engineering
Classification
Triple:
DNA structure, cloning, understanding genetics, speciation, theory of evolution
Ecology:
Habitats, quadrats and adaptations

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Health check

Homeostasis:
Triple: plant hormones
Inheritance
Sexual and asexual reproduction
DNA and the genome

Assessment

Homeostasis:
Nervous system
Reaction time
Reflex arc
Endocrine system
Blood glucose concentration
Hormones and the menstrual cycle
Triple: The brain, eye, control of body temperature.

Bioenergetics:
Photosynthesis
Respiration

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Health check

Infection & Response:
Body defence systems
Vaccination
Drug development
Triple: plant diseases and monoclonal antibodies.

Assessment

Organisation cont:
Transpiration and translocation

Infection and response:
Communicable disease
Viral & Bacterial disease
Fungal and protist disease
Triple: microbiology

Organisation:
Coronary heart disease
Cancer
Food tests required practical
Enzymes
Spaced practice
Digestive System
Amylase required practical
Plants and active transport

Cell Biology:
Plant & Animal Cells
Microscopes & Calculations
Transport in cells
Organisation:
Cells, tissues and organs
The heart, blood vessels and blood
Respiratory system

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