



BIOLOGY



FINAL
GCSE
EXAM

EXAM
REVISION

Biodiversity and the effect of human interaction on ecosystems - biodiversity, waste management, land use, deforestation, global warming, maintaining biodiversity.

Organisation of an ecosystem - levels or organisation, RP sampling techniques, how materials are cycled.

Adaptations, interdependence and competition - communities, abiotic factors, biotic factors, adaptations.

ECOLOGY

YEAR
11

Genetics and evolution - evidence for evolution, fossils, extinction, resistant bacteria.

Classification of living organisms.

Variation and evolution - selective breeding, genetic engineering.

INHERITANCE,
VARIATION
AND
EVOLUTION

Reproduction - sexual and asexual, meiosis, DNA and the genome, genetic inheritance, inherited disorders, sex determination.

Cell Division - chromosomes, mitosis and the cell cycle, stem cells.

Cell structure - eukaryotes and prokaryotes, animal and plant cells, RP Microscopes, Cell specialisation, cell differentiation, microscopy.

KS4



ORGANISATION

Human digestive system - RP Testing food groups, enzymes, RP effect of pH on amylase.

Circulatory System - the heart and blood vessels, blood.

Non-communicable disease - coronary heart disease, health issues, the effect of lifestyle, cancer.

Plant organisation - plant tissues, plant organs systems.

INFECTION
AND
RESPONSE

Respiration - aerobic and anaerobic respiration, equation, fermentation.

Principles of Organisation - Animal tissues, organs and organ systems

Transport in Cells - diffusion, osmosis, RP Osmosis, active transport.

CELL
BIOLOGY

YEAR
9

Photosynthesis - Importance of photosynthesis, the equation for photosynthesis, adaptations of plants.

ECOSYSTEMS
2

DNA - chromosomes, development of DNA model.

GENES 2

Gas exchange and respiration - structure and function of the lungs, mechanisms of breathing, role of exercise, effect of drugs.

Nutrition and digestion - role of diffusion, healthy diet, deficiency disorders, structure and function of the digestive system, process of digestion.

ORGANISMS
2



Plant reproduction - structure and function of flowers, pollination, seed dispersal.

Inheritance - how information is passed on, variation - continuous and discontinuous, natural selection.

Reproduction in Humans - structure and function of the reproductive organs, menstrual cycle, fertilisation, gestation and birth.

GENES 1

Skeleton and muscles - structure and function of skeleton, antagonistic muscles.

ORGANISMS
1

Working like a scientist - variables, COSHH symbols, equipment, handling data, investigation skills.

INTRODUCTION
TO SCIENCE



Health and Safety in the Science Lab.



YEAR
7

KS3

Health - effect of drugs on the body.

Cells and organisation - microscopes, structure of cells, diffusion, multi-cellular organisation.

