

"Biology is the study of complicated things that have the appearance of having been designed with a purpose."  
Richard Dawkins

# Science - Biology

## LEARNING JOURNEY



AQA GCSE Combined/Separate science biology paper 1 and paper 2 revision and mastery



Food security, sustainable fishing and farming techniques

Peat bogs, deforestation and global warming

### Revision & mastery: Biology exam technique practice and PPE question breakdown

GCSE Combined Science Exams  
GCSE Separate Science exams

Biology paper 2 Targeted feedback and revision guidance

Biology paper 2

Biology paper 1 Targeted feedback and revision guidance

Biology paper 1

Measuring population distributions

Biodiversity and maintaining it

Water, carbon and decomposition cycles



YEAR 11

### B6 Inheritance, Variation & Evolution

Asexual and sexual reproduction

Explaining genetic inheritance and how proteins are synthesised in cells

Genetic engineering, cloning and selective breeding

Speciation

What causes extinctions?

Classification of species and structures of ecosystems

Contraceptives

Fertility treatments and contraceptives

Treatment of diabetes

Hormonal coordination with a focus on the control of blood glucose and the roles of reproductive hormones

Describing the structure of plant and animal cells and the functions of organelles

Using microscopes to study cells

B5 Homeostasis & response

Kidneys and dialysis (triple)

Describe how cells divide by mitosis and meiosis

Inherited genetic disorders and research advances in treatments

Describing evolution and the theory of natural selection and other theories. Explaining the evidence for.

The body's response to exercise

Explaining what photosynthesis is and how we can measure its rate and prove it is occurring

YEAR 10

### B4 Bioenergetics

The brain, the eye and control of body temperature (triple)

Explaining what homeostasis is

Metabolism

Aerobic and anaerobic respiration

Limiting factors of photosynthesis

Drug development and monoclonal antibodies

Defence mechanisms, antibiotics and vaccines

### B1 Cells

Explaining the differences between eukaryotic and prokaryotic cells

Chromosomes and how cells divide by mitosis

Explaining how animals are organised with a focus on the digestive system, breathing system, the heart and blood

B3 Infection & Response

Types of pathogens: viruses, bacteria, protists and fungi

YEAR 9

### Evolution and Inheritance

What are mutations and their effects?

Explaining what biodiversity is

What affects the rate of photosynthesis?

Describe how green plants make glucose through photosynthesis

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Explaining genetic inheritance via genes on chromosomes

Explaining why species may become extinct

Describing natural selection and how it explains how species evolve

Adaptations for photosynthesis

Anaerobic respiration

Explaining the difference between respiration and breathing

Aerobic respiration

Describe what the menstrual cycle is and how it prepares the female for pregnancy

Labelling a diagram of the breathing system

Label a diagram of the digestive system

What is respiration?

ENLPOY

### Variation & Human Reproduction

YEAR 8

### Breathing and digestion

Explain the differences between inherited and environmental variation

Describing the main stages of the development of a foetus

Describing how gases move in and out of the lungs and what gas exchange is

Describe why and how food is digested

Adaptations for seed dispersal

Describe how the organisms in a food web depend on each other.

Explaining how the skeletal system and muscular system work together to cause movement

What are cells and how are multicellular organisms organised?

welcome

### Interdependence & Plant Reproduction

Describing the main steps in sexual reproduction in plants

Explain the effects of environmental changes on a species' population

What is a food web?

Describing the functions of the human skeleton

Describing and giving examples of specialised cells

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Describing and giving examples of specialised cells

YEAR 7

### Cells and Movement

