



# SECONDARY SCIENCE LEARNING JOURNEY: BIOLOGY

## YEAR 11

**VARIATION AND EVOLUTION**  
CLONING

Theory of evolution, speciation, change over time  
Physical process and ethical considerations

**CLASSIFICATION ADAPTATION & INTERDEPENDENCE**

Linnaean classification and taxonomy  
interdependence of organisms within an ecosystem

**ORGANISATION OF AN ECOSYSTEM**  
TROPIC LEVELS

Levels of Organisation  
Biotic and Abiotic factors  
Waste management and cycles of materials

**BIODIVERSITY AND HUMAN EFFECTS**  
FOOD PRODUCTION

Positive and negative interactions between humans and the environment

Recycling and waste

**REVISION AND COMMUNICATION**

THE BRAIN  
THE EYE  
CONTROL OF BODY TEMP  
WATER AND NITROGEN BALANCE  
PLANT HORMONES  
REPRODUCTION

Endocrine system

**HORMONAL COORDINATION IN HUMANS**

Menstrual Cycle

Bodily function to maintain blood sugar etc

**HOMEOSTASIS THE NERVOUS SYSTEM**

Structure and function

**PHOTOSYNTHESIS RESPIRATION**

Anaerobic and aerobic

Chemical processes

**MONOCLONAL ANTIBODIES PLANT DISEASES**

How plants store food

How disease is spread

**COMMUNICABLE DISEASE**

Minimising infection, vaccination

## YEAR 10

Text in green is GCSE separate science Biology only and will not be covered by the combined science course

ANIMAL TISSUES → SYSTEMS

ORGANISATION

TRANSPORT IN CELLS

GCSE CONTENT BEGINS

Diffusion, osmosis and active transport

CELL DIVISION

CELL STRUCTURE

Mitosis and Meiosis

Structure and function of Organelles

## YEAR 9

**INHERITANCE**

Genetics and inherited disease

Cell structure and function overview

**CORE BIO**

Bioenergetics

**MATHS IN SCIENCE FOR GCSE**

Probability

Graph Skills

Calculating averages

**EVOLUTION**

Natural selection, extinction and Charles Darwin

**PHOTOSYNTHESIS**

Chemical process and its importance

**RESPIRATION**

Chemical process and the role it plays

**DIGESTION**

Chemical and physical processes

**BREATHING**

Physiological process of breathing and gas exchange

## YEAR 8

Organisms are composed of cells which are organised into tissues, organs and systems to carry out life processes

**HUMAN REPRODUCTION**

Reproductive system and development of the fetus

**CELLS**

**INTERDEPENDENCE**

investigate the impact of changes in a population of one organism on others in the ecosystem

**PLANT REPRODUCTION**

Evaluate the features of various types of pollination & seed dispersal

**VARIATION**

How variation, adaptation and survival are linked

**MOVEMENT**

The parts of the human skeleton

## YEAR 7

Schemes of learning are designed to ensure students progress based on their security of understanding and readiness for the next stage. STRETCH and CHALLENGE is at the heart of our curriculum

The scheme is designed with INTERLEAVING as a key element

Applying the scientific method, seeing the world analytically and using information learned to explain phenomena and make predictions

Curiosity about the world around us and an ability to communicate scientific concepts and solve problems.

Topic tests and termly assessments are designed to accurately assess knowledge and maximise progression.

