



# Subject - Year 8



## AUTUMN 1

Respiratory system and gas exchange  
Effect of exercise on breathing  
Lifestyle and COPDs

## PRIOR LEARNING

Diffusion

## Summative Assessment 1

Key Knowledge and skills from a broad range of content from HT1,2, and 3.

Mixture of multiple choice, short answer and extended answer questions.

## AUTUMN 2

Respiration  
Investigating yeast and respiration

Photosynthesis  
Investigating photosynthesis

Animal and plant cells

## SPRING 1

Limiting factors of photosynthesis  
Leaf structure and adaptation  
Testing leaves for starch

## PRIOR LEARNING

Plant cells

## SPRING 2

DNA structure  
Inherited and environmental characteristics

Continuous and discontinuous variation  
Darwin and evolution

Fertilisation; genes and DNA

## Summative Assessment 2

Key Knowledge and skills from a broad range of content from HT1,2,3,4 and 5.

Mixture of multiple choice, short answer and extended answer questions.

## SUMMER 1

Selective breeding  
Food chains and food webs

Predator and prey relationships  
Population dynamics

## PRIOR LEARNING

Ecosystems

## SUMMER 2

Biodiversity, deforestation and global warming  
Investigating ecosystems with quadrats

Ecosystems



# Subject - Year 9



## AUTUMN 1

Cell structure; eukaryotic and prokaryotic cells  
Specialised cells  
Microscopy

## PRIOR LEARNING

Animal and plant cells  
Specialised cells

### Summative Assessment 1

Key Knowledge and skills from a broad range of content from HT1,2, and 3.

Mixture of multiple choice, short answer and extended answer questions.

## AUTUMN 2

Diffusion  
Osmosis  
Active Transport

Simple molecules  
Specialised cells

## SPRING 1

Aerobic respiration  
Anaerobic respiration

Aerobic respiration  
Anaerobic respiration

## PRIOR LEARNING

Chemical formula  
Muscles cells  
Cell structure

## SPRING 2

Communicable diseases  
Primary defence against infection

Secondary defence against infection - the immune system  
Vaccination and herd immunity

White blood cells

### Summative Assessment 2

Key Knowledge and skills from a broad range of content from HT1,2,3,4 and 5.

Mixture of multiple choice, short answer and extended answer questions.

## SUMMER 1

Food tests  
Digestive system  
How enzymes work

## PRIOR LEARNING

Balanced diet

## SUMMER 2

Enzymes in digestion  
Effect of pH and temperature on enzymes

Digestion



# Subject - Year 10



## AUTUMN 1

Photosynthesis  
Circulatory system

Heart disease and treatment  
Respiratory system and gas exchange

## PRIOR LEARNING

Cells structure  
Blood cells  
Respiratory system

### Summative Assessment 1

Key Knowledge and skills from a broad range of content from HT1,2, and 3 plus key Biology principles from 9 (Cell Biology). GCSE Style Questions

## AUTUMN 2

Respiration and exercise  
Leaf structure and gas exchange in plants

Transpiration and translocation Osmosis required practical

Osmosis  
Diffusion  
Respiration

## SPRING 1

Mitosis and cancer  
Risk factors of non-communicable disease Stem cells and therapeutic cloning  
Testing new drugs

Antibiotics required practical  
Plant diseases  
Monoclonal antibodies

## PRIOR LEARNING

Cell structure  
Specialised cells

## SPRING 2

Nervous system  
Brain structure  
Homeostasis and controlling body temperature

Secondary defence against infection - the immune system  
Vaccination and herd immunity

Cell structure  
Specialised cells

### Summative Assessment 2

Y10 PPE (GCSE exam style paper based on AQA Biology paper 1 content)

## SUMMER 1

DNA structure  
Meiosis and mitosis  
Punnett squares

Genetic disorders and family trees  
Embryo screening

## PRIOR LEARNING

Mitosis  
Cell structure

## SUMMER 2

Food chains, food webs and pyramids of biomass  
Adaptations, competition and interdependence  
Quadrats and population sampling

Food chains  
Ecosystems



# Subject - Year 11



## AUTUMN 1

Adaptations, competition and interdependence  
Quadrats and population sampling

Biotic and abiotic factors  
Carbon and water cycle  
Endocrine glands and control of blood glucose

Menstrual cycle and IVF Contraception

## PRIOR LEARNING

Ecosystems  
Hormones  
Puberty

Summative Assessment 1  
Key Knowledge and skills from a broad range of content from Year 9 and 10 and HT 1-2 Year 11. GCSE Style Questions

## AUTUMN 2

Kidneys and control of blood water potential Tropisms and plant hormones  
Fossilisation, evolution and natural selection

Osmosis  
Hormones  
Evolution

Y11 PPE 1 (GCSE exam style paper based on AQA Physics paper 1 content)

## SPRING 1

Selective breeding and types of cloning Genetic engineering

Speciation and classification  
Decay

## PRIOR LEARNING

Reproduction  
Bacteria

## SPRING 2

Deforestation, global warming and biodiversity Food security and biodiversity

Ecosystems

Summative Assessment 2  
Y11 PPE 2 (GCSE exam style paper based on AQA Physics paper 2 content)

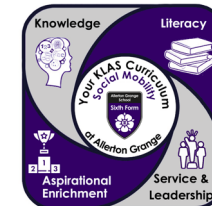
## SUMMER 1

GCSE examination

## PRIOR LEARNING



# Biology - Year 12



## AUTUMN 1

Biological Molecules  
Microstructure of cells

## PRIOR LEARNING

All prior knowledge at GCSE level

Simple biological molecules  
Cell structure

Summative Assessment 1

## AUTUMN 2

Enzymes  
Transport across cells

All prior knowledge at GCSE level

Enzymes  
Osmosis, diffusion & active transport

## SPRING 1

Inorganic Ions  
Mitosis

## PRIOR LEARNING

Ions  
Mitosis

## SPRING 2

Transcription and Translation  
Immunity

Simple DNA replication  
WBC & Immunity

Summative Assessment 2

## SUMMER 1

Classification  
Transport Systems 1

## PRIOR LEARNING

Classification  
Transport Systems

## SUMMER 2

Transport Systems 2  
Evolution and Selection

Darwin and Lamarck's theory of evolution



# Biology - Year 13



## AUTUMN 1

Genetics - mono and dihybrids  
Photosynthesis  
Respiration

## PRIOR LEARNING

Punnet squares  
Photosynthesis  
Respiration

## Summative Assessment 1

## AUTUMN 2

Populations and Ecosystems  
Nutrient Cycles  
Nervous System

Population sampling  
Carbon and water cycles  
Nervous system

## SPRING 1

Muscle contraction  
Mutations and Epigenetics  
Homeostasis - Glucose concentration & Kidneys  
Gene technologies

## PRIOR LEARNING

Mutations  
Homeostasis  
DNA structure

## SPRING 2

Preparation for A level examination

Year 12 and Year 13 syllabus

## Summative Assessment 2

## SUMMER 1

A level examination

## PRIOR LEARNING

## SUMMER 2