



Biology A Level Year 12

Nothing in life is to be feared, it is only to be understood. Now is the time to understand more, so that we may fear less.

Autumn		Spring		Summer
Teacher 1	1 Biological Molecules	1 Biological Molecules	4 Genetic information, variation and relationships between organisms	4 Genetic information, variation and relationships between organisms
	<ul style="list-style-type: none"> •Monomers and polymers •Carbohydrates •Lipids •Proteins •Enzymes •<u>Required Practical 1</u> 	<ul style="list-style-type: none"> •Nucleic acids •DNA replication •ATP •Water & Ions •Unit 1 Assessment 	<ul style="list-style-type: none"> •Genes and chromosomes •DNA in prokaryotes •Transcription •Translation •Meiosis 	<ul style="list-style-type: none"> •Genetic diversity •Natural selection •Taxonomy •Biodiversity •Investigating diversity •Stats Tests
				<ul style="list-style-type: none"> •Inheritance •Dihybrid crosses •Sex linkage •Chi-squared •Hardy-Weinberg

Autumn		Spring		Summer
Teacher 2	2 Cells	2 Cells	3 Organisms exchange substances with their environment	3 Organisms exchange substances with their environment
	<ul style="list-style-type: none"> •Cell structure •Eukaryotic cells •Prokaryotic cells •Viruses •Microscopes •<u>Required Practical 2</u> •Cell division & mitosis 	<ul style="list-style-type: none"> •Diffusion •Osmosis •Active transport •<u>Required Practical 3</u> •<u>Required Practical 4</u> •Immunity •HIV •Unit 2 Assessment 	<ul style="list-style-type: none"> •Surface area to volume ratio •Gas exchange in: •Humans •Insects •Fish •Plants 	<ul style="list-style-type: none"> •Digestion •Absorption of nutrients •Mass transport in animals •<u>Required Practical 5</u> •Mass transport in plants •Unit 1-4 Assessment
				<ul style="list-style-type: none"> •Photosynthesis •<u>Required Practical 7</u> •<u>Required Practical 8</u> •Respiration •Glycolysis •Krebs cycle •Anaerobic respiration •<u>Required Practical 9</u>

Supporting at home

Homework is set regularly on Carousel to provide on going retrieval practice of key information. If you want to support further, we recommend using [Seneca](#) to provide a broad overview.

Our curriculum is supported by [work booklets](#) that can be used in cases of absence or for extra revision and you can access the most relevant links to BBC bitesize and Oak Academy videos here.



Biology A Level Year 13

Nothing in life is to be feared, it is only to be understood. Now is the time to understand more, so that we may fear less.

	Autumn	Spring	Summer
Teacher 1	7 Genetics, populations, evolution and ecosystems	8 The control of gene expression	8 The control of gene expression
	<ul style="list-style-type: none"> •Speciation •Ecology •Factors that affect communities •Sampling techniques •Succession •Conflicts •Required Practical 12 •Unit 7 Assessment 	<ul style="list-style-type: none"> •Mutations •Stem cells •Regulation of transcription •Epigenetics •RNAi •Cancer 	<ul style="list-style-type: none"> •Recombinant DNA technology •Required Practical 6 •PCR •DNA probes •Gene therapy •Genetic fingerprinting •Genome projects

	Autumn	Spring	Summer
Teacher 2	5 Energy transfers in and between organisms	6 Organisms respond to changes in their internal and external environments	6 Organisms respond to changes in their internal and external environments
	<ul style="list-style-type: none"> •Ecosystems •Production •Nutrient cycles •Nitrogen cycle •Phosphorus cycle •Unit 5 Assessment 	<ul style="list-style-type: none"> •Response •Required Practical 10 •Sense receptors •Eye •Control of heart rate •Nerve impulses •Synapses 	<ul style="list-style-type: none"> •Muscle contraction •Homeostasis – Temperature regulation •Negative feedback •Blood sugar control •Required Practical 11 •Control of blood water potential •Unit 5-8 Assessment

Supporting at home

Homework is set regularly on Carousel to provide on going retrieval practice of key information. If you want to support further, we recommend using [Seneca](#) to provide a broad overview.

Our curriculum is supported by [work booklets](#) that can be used in cases of absence or for extra revision and you can access the most relevant links to BBC bitesize and Oak Academy videos here.