

# A level Biology in Year 12

## Course Content

### **1. Biological molecules**

Monomers and polymers

Carbohydrates

Lipids

Proteins

Many proteins are enzymes

Nucleic acids are important information-carrying molecules

Structure of DNA and RNA

DNA replication

ATP

Water

Inorganic ions

### **2. Cells**

Cell structure

Transport across cell membranes

Cell recognition and the immune system

### **3. Organisms exchange substances with their environment**

#### **Exchange**

Surface area to volume ratio

Gas exchange

Digestion and absorption

#### **Mass transport**

Mass transport in animals

Mass transport in plants

### **4. Genetic information, variation and relationships between organisms**

DNA, genes and chromosomes

DNA and protein synthesis

Genetic diversity can arise as a result of mutation or during meiosis

Genetic diversity and adaptation

Species and taxonomy

Biodiversity within a community

Investigating diversity



<p><b>Assessment</b> Two 90 minute assessments covering any content from topics 1– 4, including relevant practical skills. Papers have equal weighting. Paper 1 has a 10 mark comprehension question and Paper 2 a 10 mark extended response question. Both paper contain 10% maths</p>	<p><b>Specification and Examination Board:</b> <b>Examination Board:</b> AQA <b>Specification Code:</b> 7401 <a href="http://www.aqa.org.uk/subjects/science/as-and-a-level/biology-7401-7402">http://www.aqa.org.uk/subjects/science/as-and-a-level/biology-7401-7402</a></p>	<p><b>Useful for undergraduate study in:</b> Biological Sciences, Medicine, Ecology, Industry, the caring professions and many more.</p>
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