# OCR Gateway GCSE Biology

## Draft Scheme of Work

*Student Book pages and accompanying Kerboodle resources for Chapters 1 and 2 will be available in Early Start Packs in September 2015.*

<table>
<thead>
<tr>
<th>Approx. no of lessons</th>
<th>Section and Chapters (and topics)</th>
<th>Opportunities for practical work and activities</th>
<th>Existing OUP textbook / Kerboodle references</th>
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<tbody>
<tr>
<td>1 term</td>
<td>Cell Level Systems:</td>
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<tr>
<td></td>
<td>• Cell Structures</td>
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<td></td>
<td>• light microscopes</td>
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<td>• cell sub-structure: eukaryotic and prokaryotic</td>
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<td>• electron microscopy</td>
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<td>• What Happens in Cells</td>
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<td>• DNA and protein synthesis</td>
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<td></td>
<td>Look at images of light micrographs and diagrams of a range of cells</td>
<td>Make 3D models of cells</td>
<td>OCR Gateway GCSE Biology Student Book (2011)</td>
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<tr>
<td></td>
<td>Prepare cheek-cell slides</td>
<td>Watch cytoplasmic streaming in Elodea spp</td>
<td>IB1.7.2 Lesson images</td>
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<tr>
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<td>Prepare onion epidermis cell slides</td>
<td>Look at images, micrographs (both light and electron), and diagrams of a range of cell and compare the visible structures</td>
<td>IB4.5.3 The leaf and photosynthesis</td>
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<tr>
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<td>Use light microscopes to view plant and animal cells</td>
<td>Make 3D models of the structure of DNA</td>
<td>AB4.5.2 Investigating the structure of a leaf</td>
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<td>Make 3D models of cells</td>
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<td>IB4.5.4 The leaf and photosynthesis</td>
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<td>Watch cytoplasmic streaming in Elodea spp</td>
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<td>IB3.1.4 Preparing the cheek cell slide for examination</td>
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<td>(OCR Gateway GCSE Biology OxBox resources (2011))</td>
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| o enzymes | (e.g., kiwi, leek, onion, wheat germ) Comparison of transcription and translation to the British Library Kinaesthetic activity to demonstrate transcription and translation Investigations into enzyme activity, including graphical and numerical analysis of results Baby rice demonstration Practical activity to investigate enzyme controlled reactions | DNA replication B3.8 p104 Protein synthesis B3.2 pp92 – 93 Enzymes B3.3 p95 B3.4 pp96 – 97 | IB3.8.5 DNA replication IB3.8.6 DNA replication IB3.8.7 Stages of mitosis IB3.8.8 Cell division: mitosis IB3.8.9 Cell division by mitosis IB3.8.10 Mitosis IB3.2.3 Protein synthesis IB3.2.4 DNA structure IB3.2.5 How genes code for proteins AB3.2.1 How genes code for proteins IB3.4.4 Enzyme action IB3.4.5 The lock and key hypothesis AB3.4.1 Enzymes |

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