Recommended Prior Knowledge
Since this syllabus involves a consideration of its topics very largely from first principles, very little prior knowledge is required. The course has been divided into 9 Units, with each Unit having a common thread and following the sequence presented in the syllabus. The order of topics as presented gives a logical order for teaching. Teachers may however wish to alter the suggested sequence, particularly in regions where marked seasonal variations restrict the availability of specimens at certain times of the year.

Recommended Resources

A) Online resources

Online resources directed specifically at the O Level examination are extremely rare. The suggested references are intended to provide support students and teachers following the course. Some resources directly support the suggested teaching activities whilst others provide more general reference, background and extension material. All resources have been checked to ensure their relevance and academic level is suitable for the O Level syllabus. All references are to specific web pages rather than to the general site URL and may be followed directly from the electronic scheme or work or typed directly into the address bar of any web browser. A number of animation and video resources rely on the correct plug-in software being installed on the user’s computer (e.g. Quicktime and Flash) – all of which are freely available for download via the internet.

B) Other resources

The text books referenced have been written to accommodate this O Level Biology syllabus (though it is advisable to check text book content with the syllabus before each Unit, since the text may also contain some material relevant to other CIE syllabuses). The three texts have been chosen since they each carry endorsement by CIE for use with the O Level syllabus. References are given at specific stages in each Unit which are then relevant to all subsequent learning objectives within that topic.

Details of the text books:


Also a CD of prepared microscope slides is produced by CIE, called **BIOSCOPE**, to which resource references appear in the scheme of work.

**Suggested proportion of teaching time to be spent on each Unit**

<table>
<thead>
<tr>
<th>Unit number</th>
<th>Topics</th>
<th>Content (syllabus reference)</th>
<th>% of Teaching Time</th>
</tr>
</thead>
</table>
| Unit 1      | Cells and Cell Processes              | 1. Cell Structure and Organisation  
1.1 Plant and animal cells  
1.2 Specialised cells, tissues and organs  
2. Diffusion and Osmosis  
2.1 Diffusion  
2.2 Osmosis  
2.3 Active transport  
3. Enzymes  
3.1 Enzyme action  
3.2 Effects of temperature and pH | 15 % |
| Unit 2      | Plant Nutrition and Transport         | 4. Plant Nutrition  
6. Transport in Flowering Plants | 15 % |
| Unit 3      | Animal Nutrition                      | 5. Animal Nutrition                                                                 | 15 % |
| Unit 4      | Human Transport and Respiration       | 7. Transport in Humans  
8. Respiration | 11 % |
| Unit 5      | Coordination, Response, Movement and Homeostasis | 9. Excretion  
10. Homeostasis  
11. Coordination and Response  
12. Support Movement and Locomotion | 11 % |
<table>
<thead>
<tr>
<th>Unit number</th>
<th>Topics</th>
<th>Content (syllabus reference)</th>
<th>% of Teaching Time</th>
</tr>
</thead>
</table>
| Unit 6     | Drugs, Microorganisms and Biotechnology | 13. The Use and Abuse of Drugs  
14. Microorganisms and Biotechnology                                      | 8 %               |
| Unit 7     | Organisms and the Environment      | 15. Relationships of Organisms with One Another and with the Environment | 8 %               |
| Unit 8     | The Continuity of Life: Reproduction | 16. Development of Organisms and Continuity of Life               | 9%                |
| Unit 9     | The Continuity of Life: Inheritance and Evolution | 17. Inheritance                                                | 8 %               |