

O Level Agriculture (5038)

How many lessons per week will I need to cover the syllabus?

This partly depends on what your students have done before they begin their O Level course. If they have been in your Centre for some years beforehand, then you may have been able to begin building up their knowledge and skills already. If they come to you from many different backgrounds, then you may need to do more work with them to prepare them for the O Level. As a rough guideline, many Centres teach their O Level Agriculture students for about 2 hours 30 minutes per week over a 2-year period, but it is not unusual for the time allocated to be significantly more or less than this. You should try to have one relatively long session each week, so that your students can carry out practical work.

Is there an option available which doesn't involve any assessment of practical skills?

No. Practical skills are an integral part of the applied science subject of Agriculture. Key practical skills are investigatory 'scientific' skills associated with finding out information about agricultural organisms and situations. This is reflected in the syllabus and in the assessment for O Level Agriculture. In preparing your candidates for the assessment of practical skills, and in giving them an appropriate experience of O Level Agriculture, you are expected to provide a range of practical work for them to do, so that they can develop the skills necessary for success. An Agriculture qualification without a practical component would be a second-rate assessment of the subject, and CIE aims to provide valid qualifications acceptable in all areas of the world. Practical work does not have to be expensive or complicated and many experiments can be very much run as 'kitchen sink' style ones using only household chemicals.

Agriculture is a field-based industry, so why does the course involve scientific practical work?

Actually, to quote the syllabus, Agriculture is an 'applied science' as well as a field-based industry. That is, it is a subject in which scientific research and the scientific method are used to advance the production of agricultural products. This means that it is essential that the syllabus and course demands that scientific practical work be part of the programme of work and part of the assessment through the Practical Test (component 3). Students find practical work motivating, and it also helps them to understand the theory of the course. In this course other Agriculture skills in areas such as cultivation of crops or animal husbandry are assessed through appropriate contextual questions in the Theory Paper (Component 1).

Can my candidates enter for Teacher Assessed Coursework (Component 2) rather than the Practical Test (component 3)?

If you are in a country where a prior arrangement has been made between the Ministry of Education and CIE, then, with the permission of your Ministry of Education, the answer may be yes. The Ministry will supply you with the necessary training, instructions and forms to ensure that the complex assessment process is carried through rigorously and fairly. If there is no such arrangement, then your candidates must enter the Practical Test (Component 3) through entry option B.

What equipment should we have in our laboratories?

Information is given in the syllabus in the sections:

- Scheme of Assessment, paper 3;
- Subject content 2. Soil, wet tests for the presence of ions;
- Subject Content 7. Livestock Production and Health, food tests.

Much additional information is given in Cambridge International Examination's booklet '*Planning for Practical Science in Secondary Schools*', (New Edition June 2002) available free from our publications department. This will give you a scientist's view of what equipment is required for scientific practical work in O Level Agriculture.

What help and advice can you give me about health and safety in the laboratory?

The most important point of first contact is with the organisation responsible for health and safety in schools locally; they must be consulted if you are in any doubt and will advise on any local legal requirements. In addition, there are several useful guides available and many are listed in the booklet 'Planning Science in Secondary Schools'. Most chemical suppliers' catalogues have details of safety requirements for specific chemicals, and 'Hazcards' (published by CLEAPSS Development Group, Brunel University, Uxbridge) and 'Hazard Data Sheets' (published by BDH Laboratory Supplies) are excellent reference points. An on-line resource is located at: <http://www.labsafety.org/freedocs.htm> .

I am in the middle of setting up the practical examination, and I need to look at the question. Am I allowed to look at a copy of the question paper?

No. You should have preparing the examination using the Confidential Instructions, which are issued to Centres in confidence well in advance of the examination. These instructions tell you all you need to know about the apparatus requirements, how the apparatus is to be arranged, and what it will be used for. If you have a problem which cannot be resolved using the Confidential Instructions, please telephone our Customer services line on +44 1223 553554 or e-mail International@ucles.org.uk .

I haven't got the exact equipment specified in the Confidential Instructions, but I do have something similar. Am I allowed to adapt the experiment at all?

Yes, you are allowed to make minor adaptations to the apparatus, providing that the apparatus still works as specified in the Confidential Instructions. You do not need to seek our approval for these minor adaptations. However, you must report the adaptations in detail to the examiners, by completing the Supervisor's Report form on the back of the Confidential Instructions, which should be enclosed with the candidates' completed scripts. More substantial adaptations, which require changes to the experiment or which cause the apparatus to work in a different way from that described in the Confidential Instructions, are not allowed.

Which is the correct textbook for the course?

We don't require Centres to use any one particular textbook for our courses, and we would hope that wherever possible teachers would make use of a variety of different resources. It is good practice for students to get into the habit of using more than one book, and this also has the advantage that if they do not understand an explanation in one book, they may find a different explanation more helpful to them. We do provide a list of books and websites that we believe teachers may find helpful in the back of the syllabus. You can also find this on our website at <http://www.cie.org.uk>. (You will need to click on 'Qualifications and Awards', 'O Level' button and 'Agriculture' then follow the instructions to locate the resource list.)

Do I need to teach the course in the order given in the syllabus?

No, the order in which you teach the course is entirely up to you. The curriculum content within the syllabus outlines the facts and concepts that will be assessed in the examination, but most teachers construct their own scheme of work based on the curriculum content.

Some of the topics in the syllabus do not appear to be relevant in my country. Why do I have to teach these?

Of course, countries differ widely in the relative importance of different agricultural practices. In this syllabus great care has been taken to ensure that you can use local or regional examples where possible. Where the syllabus demands that your students study agricultural processes that are not used at all in your region it is still important that these be studied. Apart from the obvious point that they may appear on the examination, it is also important to give candidates a balanced and broad experience of agriculture. This enables them to apply their knowledge, skills and understanding in their later life even if they move to a new region, or if local agricultural practices change.

Where can I find out about the terminology and units relevant to O Level Agriculture?

The Institute of Biology publishes an excellent booklet entitled *Biological Nomenclature - Standard terms and expressions used in the teaching of Biology*. This is now in its third edition. Cambridge International Examinations follow the recommendations in this booklet when setting examination papers. You will find it to be a valuable reference, containing further guidance on best practice in recording results and graph construction and many other issues. It can be obtained directly from the Institute of Biology, 20 Queensberry Place, London, SW7 2DZ, England. Alternatively, you can order a copy from the Institute of Biology's web site at [http:// www.iob.org](http://www.iob.org) .