



UK CENTRE FOR

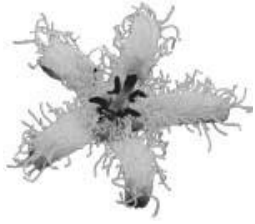
bioscience



UK Centre for Bioscience

Supporting teaching in higher
education to improve student
learning across the biosciences

Supporting teaching in higher education to improve student learning across the Biosciences



Subject Centres and the Higher Education Academy

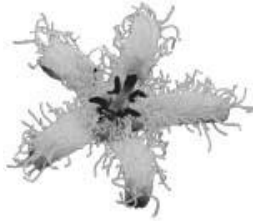
Supporting the Student Learning Experience

24 Subject Centres

- Bioscience
- Physical Sciences
- Medicine, Dentistry and Veterinary Medicine
- Geography Earth and Environmental Sciences
- Health Sciences and Practice

Based in universities across the UK

Higher Education Academy



UK Centre for Bioscience

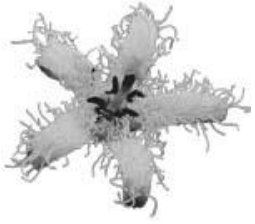
- Based at the University of Leeds
- 13 staff – about half full time
- Cover 26 Bioscience disciplines



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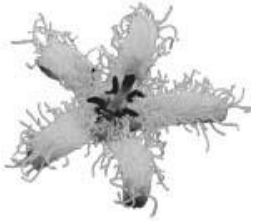
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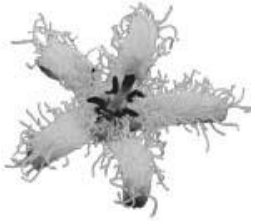
Post-Its!

- Write down one (or more) resources you've found useful in your teaching
- Turn to your neighbour – what is your resource and why was it useful
- Any volunteers to give some very brief feedback
- Keep your post-its! I'll collect them at the end



Supporting your teaching

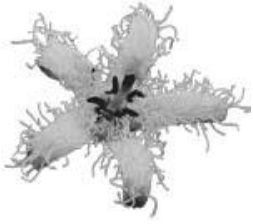
- Website
- Resources
 - ImageBank
 - To use in tutorials
 - For your students
- Student Award
- Networking and contacts



Website

- New lecturers
- Postgraduate Teachers and Demonstrators
- Practical work
- Fieldwork
- Disability and Accessible Curricula
- Ethics and Bioethics

www.bioscience.heacademy.ac.uk



Resources

- New Lecturers pack
- Short Guides
- Learning Guides
- Bulletin
- Assessment Briefing
- Teaching Guides



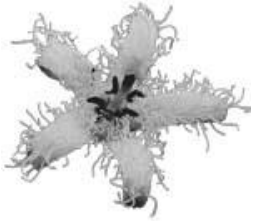
Short Guide

Postgraduate Demonstrators and Teachers

During your time as a postgraduate you may get the opportunity to demonstrate to, or teach, undergraduate students. Demonstrating or teaching can help you to fill in some of the gaps in your own knowledge, better understand your subject through teaching it, give you a break from your research, add something different to your CV and give you the chance to earn some extra cash. This guide focuses on demonstrating in practical sessions, but also briefly considers tutorials, lectures and demonstrating on field trips.

Top tips

- Think back to the teaching and support you received as an undergraduate and identify good and poor practice;
- Attend any and all briefing sessions or meetings before the practical;
- Talk to other demonstrators about their experiences;
- Ask for feedback on your demonstrating and reflect on how you could improve;
- Encourage questions and make sure students are aware they can ask for further explanations;
- Arrive early for any practicals and teaching sessions;
- Meet the deadlines for marking and returning work to students;
- If you have the opportunity, go on a training course, perhaps with your institution's graduate or staff training unit, before you start;
- Read up on the topic before you go to the practical and make sure you can explain the relevance and theory behind any practical work;
- Try to distribute your time equally between groups or individual students;
- Be confident enough to say that you don't know the answer to a student's question, but you can point them towards where they can find out; and
- Have a look through the Centre for Bioscience New Lecturers Resource Folder, it has hints and tips on tutorials, practicals, fieldtrips and lectures for new teaching staff.

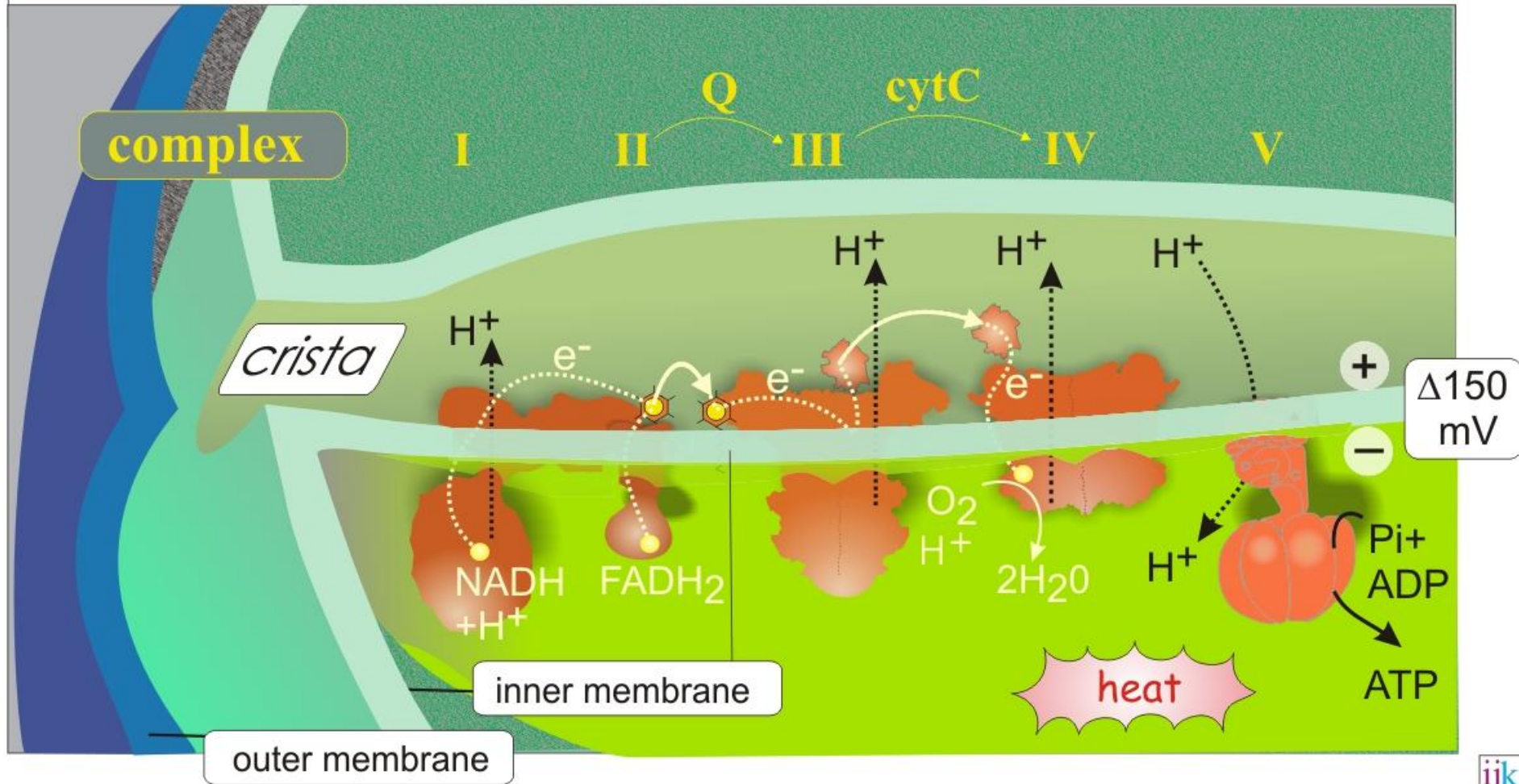


ImageBank

Online database of images for learning and teaching

- Illustrate handouts
- Practical schedules
- Resource to suggest to your students
- Use in your own dissertations, thesis reports...

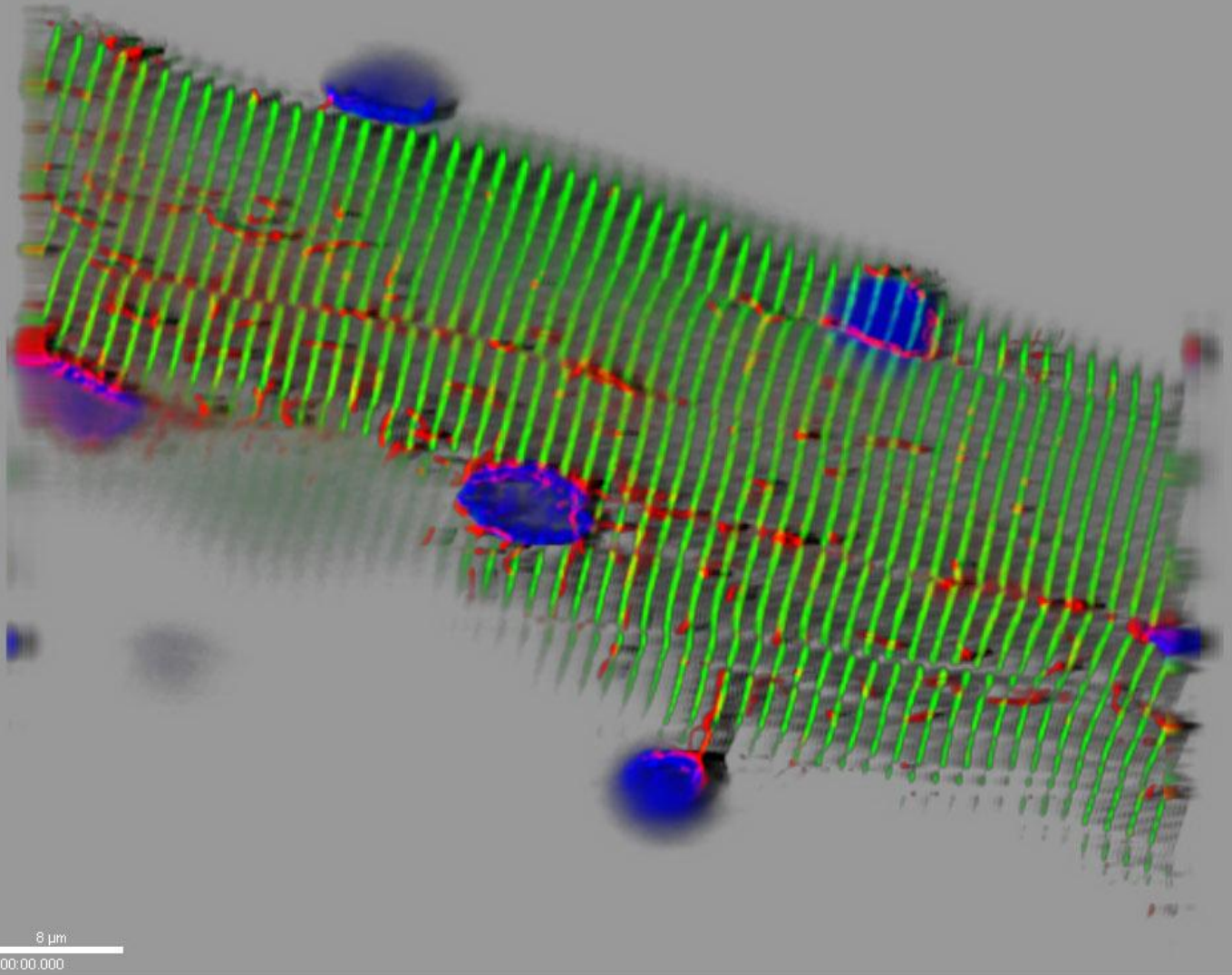
components of the mitochondrial electron transport chain





Muscle Stripes

The white stripes are the repeating elements (sarcomeres) of the muscle fibre. Nuclei are in blue, and microtubules are in yellow/green. The microtubules ramify throughout the muscle, acting as tracks for molecular motors to transport cargo from A to B. the image was taken on an Olympus microscope using Softworx acquisition software. the image was deconvolved, and 4 sequential Z-sections were combined to make a maximum intensity projection using Imaris. the image was then rotated and cropped using Adobe Photoshop CS3. Scale Bar (white) is 10 microns.

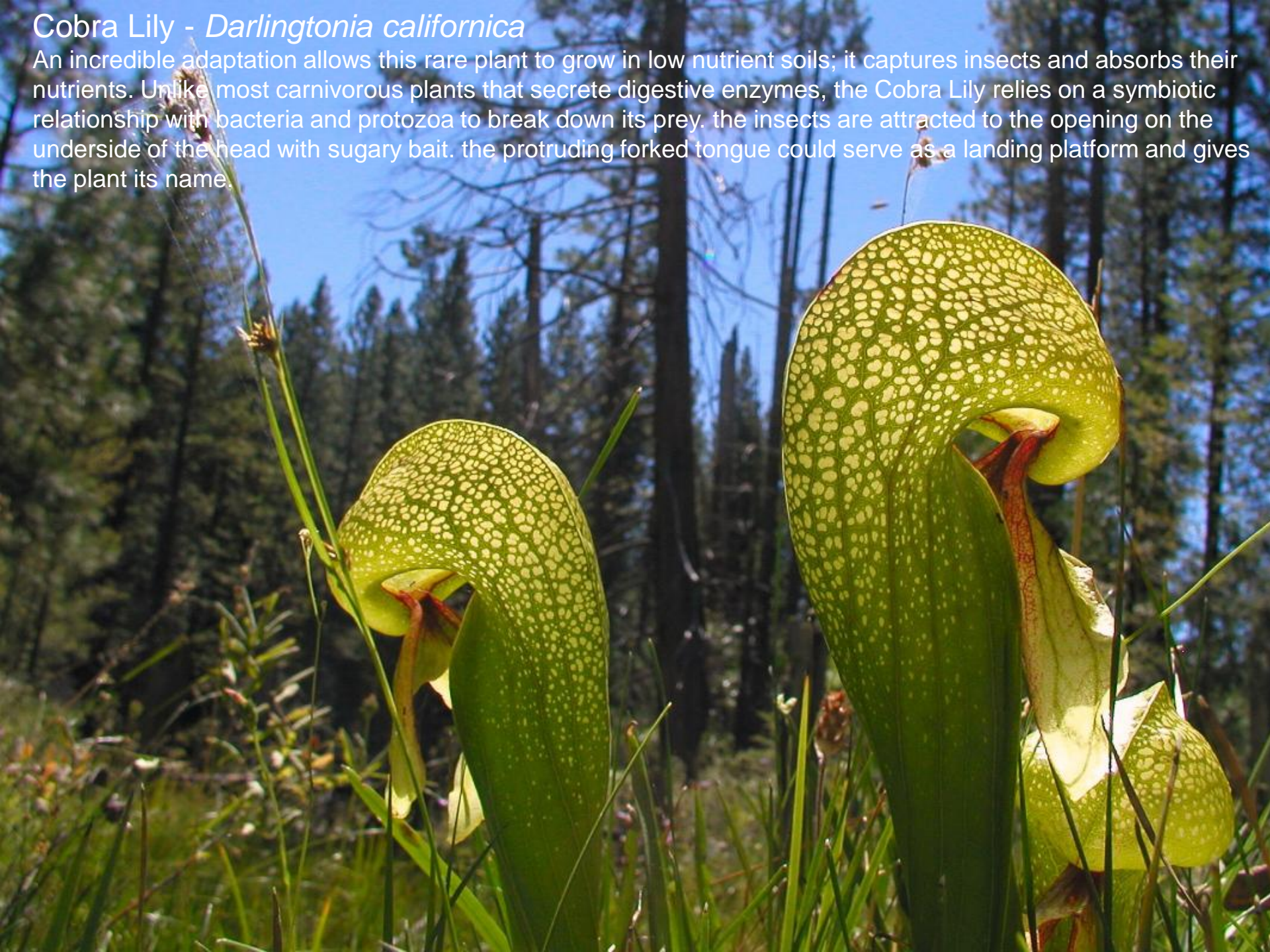


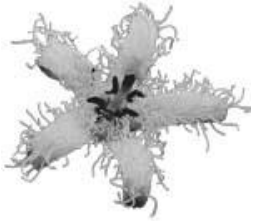
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Cobra Lily - *Darlingtonia californica*

An incredible adaptation allows this rare plant to grow in low nutrient soils; it captures insects and absorbs their nutrients. Unlike most carnivorous plants that secrete digestive enzymes, the Cobra Lily relies on a symbiotic relationship with bacteria and protozoa to break down its prey. The insects are attracted to the opening on the underside of the head with sugary bait. The protruding forked tongue could serve as a landing platform and gives the plant its name.





Resources to use in tutorials

- Employability materials
- Bioethics Briefings
- Student Award





Resources for your students

- Employability materials
- Short Guides
- Student web page
- Links to external projects and resources

Short Guide
A Bioscience Degree - Why and What Next?

Thinking about a bioscience degree? Doing a bioscience degree and wondering where it might take you? Trying to articulate to potential employers what your degree and time in higher education has given you? This guide brings together some ideas on what a bioscience course can give you, where it might take you and should help to get you thinking about the skills you could develop during your time in higher education.

"When you work in a field that is static, it is far too easy to switch off and stop caring about what you are doing. The constant updates to research, methods and technology found in the biosciences allow us to learn throughout our careers and thus stay interested in what we are doing." *Claire Cumming (Lancaster University)*

"Most importantly though I've been able to write consent forms, import embryos, harvest embryos, and I have the resiliency to deal with the data that has been collected."

"I love the freedom and reservoir of varied abilities and knowledge."

Employability Profile: Agriculture, Forestry, Agricultural Sciences, Food Sciences and Consumer Sciences

What is employability?

Employability can be defined as: "a set of achievements – skills, understandings and personal attributes – that make graduates more likely to gain employment and be successful in their chosen occupations". You may also hear employability skills referred to as transferrable skills.

What is an employability profile?

An employability profile highlights the skills and qualities employers value and that you would be likely to gain during your degree.

How can I use it?

Studying a profile gives you the opportunity to tailor your CV or an application form to a specific job or simply consider the range of subject-specific and transferrable skills you have developed, or could develop, during your degree.

What could I study in an Agriculture, Forestry, Agricultural Science, Food Science or Consumer Science degree?

Study in these areas focuses on land-based industries, applied biology, rural studies and sciences, and consumer studies and sciences. They are practically orientated, broad-based subjects and require study across a range of disciplines from physics and chemistry through biology to the social sciences, economics and management sciences, and consumer behaviour.

- Agriculture and horticulture apply fundamental physical, biological, economic and sociological principles to sustainable production in the countryside and consider the social and environmental impacts of these management systems. Some degrees will focus on the management of companion animals, working animals and animals kept for their athletic abilities or the recreational and sporting interests of their owners.
- Agricultural sciences are the fundamental sciences of plants, animals, micro organisms and global processes which underpin the use of natural resources, including the production or management of animals, crops, forest and horticultural products and the management of productive resources for economic or social value.
- Food science and technology is the understanding and application of a range of sciences to satisfy the need for sustainable food security, quality and safety.
- Rural studies apply biological, economic and sociological principles to the sustainable management of the countryside.
- Forestry applies physical, biological, economic and sociological principles to tree and forest management.
- Consumer science and studies are interdisciplinary subjects which seek to understand the relationships between the consumer and the economic, technical, social and environmental forces which influence the development and consumption of goods and services.

What could I expect to gain from a degree in this area?

You could develop a wide range of both subject specific and more general employability skills. Discipline specific skills could include:

- Knowledge of a wide range of subject-specific facts and principles as well as an awareness of the current limits of theory and applied knowledge within your subject.
- An understanding of the provisional nature of information and the competing and alternative explanations within your subject.

What does your CV say about you?

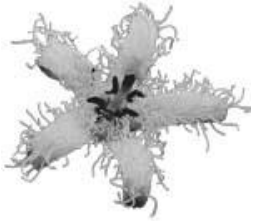
This annotated CV aims to give you some hints and tips on setting out your CV and selling yourself to potential employers. CVs are very personal things. What you include, what you exclude, how you present them and how you choose to evidence what you put in tell an employer something about you.

CVs can be written in two basically different ways:

1. using a "skills" approach (i.e. evidencing the skills and attitudes you have and showing how you acquired or have used them); or
2. using an "experience" approach (i.e. detailing the experiences you have had, jobs, employment, hobbies) from which an employer might infer what knowledge, skills, attitudes and aptitudes you have.

There are of course a range of approaches between these two extremes which utilise aspects of both approaches. The example shown here sits in the middle of this range.

A CV should be tailored to the needs of the job to bring out what you have which is particularly important for the employment you are applying for. This means you need to analyse what is needed in the job and what strengths you have which are particularly relevant.

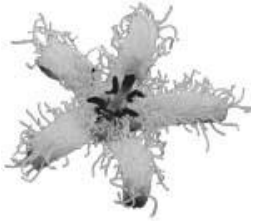


Student Award

- Annual competition
- Open to both U/G and P/G
- Tell us about your experiences of teaching and learning
- Win up to £250



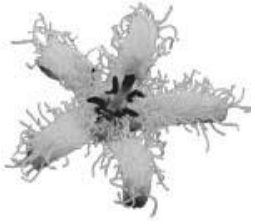
www.bioscience.heacademy.ac.uk/funding/essay/



You are not alone!

- Enquiries service
- Events
- Representatives
- Join the network





Any questions?

- Katherine – k.a.clark@leeds.ac.uk
- Centre – heabioscience@leeds.ac.uk
- Or phone us on 0113 343 3001

Event report:

www.bioscience.heacademy.ac.uk/events/reports.aspx