This course will evoke students' curiosity about science in the natural world as they explore one of our inspiring learning locations. Students will use real world learning as they are guided through a scientific enquiry working together to plan their method, use fieldwork techniques to collect data, analyse their data, present their findings to the rest of the group and evaluate their study. In addition to the working scientifically students will appreciate key biological concepts, develop personal/social skills and engage with the environment around them.
Key Stage 3 Science: The Appliance of Science
1 day
FSC’s Approach to Course Design and Delivery

Learning Goals

Why are your learners coming to FSC? This is the broad purpose of the course or session. It could involve specification requirements or learning outcomes.

FSC invest much time and effort to ensure our field teachers have an up to date understanding of the National Curriculum and Awarding Body specifications. Therefore, whether you choose a course to encourage academic progression or to improve personal/social skills, they will be able to help you develop learning goals that fit into your overall course structure as well as your wider goals.

Learning Objectives

The building blocks of the learning goals. Your students will develop knowledge, skills and understanding throughout the course, enabling them to meet their learning goals.

FSC staff will communicate with you before the course to establish how you wish to go about achieving the learning goals of your course. The course can then be tailored to your group and the individuals within it.

On the vast majority of our courses you will be assigned FSC field teacher(s) who will lead the group for the duration of the course. This enables them to get to know your group and continue to tailor the course to the needs of the students as they progress throughout the course.

Whilst our FSC field teachers deliver the course, you can play a different but equally important role; observing the group and giving specific attention to individual students. Most teachers that bring their students on an FSC course comment on how much more frequently students will approach them when they have questions about what is being taught. You can then liaise with FSC field teachers to further tailor the course to individual’s needs.

Assessment

This is how we all know that learning is taking place and that it’s the right learning to meet the goals.

FSC field teachers, your students and yourself will use a range of tasks, both formative and summative, throughout the course to closely monitor learning progress. If learning isn’t progressing as expected, the learning objectives can be changed. Each course description provides examples of the types of tasks that might be used, they will range from teacher lead to peer review and may involved grade criteria from specification documents if appropriate.

Learning Opportunities

These are the experiences and activities that FSC will provide to meet the purposes of the course and ensure learners meet their goals.

FSC tries to design course activities that inspire students, to engage with the subject being taught. Many visiting groups report back to us that as a result of their fieldwork experience at one of our Centres, some of their A-level students tear up their UCAs forms and reapply to study geography or biology.

FSC also continually seeks new ways to improve course activities: we recently held a hack day to explore how technology can aid fieldwork; we encourage innovative geography with our strategic partner, the Geographical Association through Worldwise and are working with the Institute of Physics to develop GCSE content.

Teaching

It is the same inside the classroom as it is outside the classroom; the teacher delivering the content plays a vital role in ensuring the learning goals are achieved.

Every FSC Centre has taken great care in developing a full-time, permanent team of gifted field teachers with a real passion for the environment and the subject being taught. FSC field teachers are fully trained to contextualise the learning opportunities and activities specifically to your group. They will change their pedagogy to match your groups’ needs, taking account of their different learning styles, culture and wider inclusion needs.

Please visit http://www.field-studies-council.org/outdoorclassroom/
For alternative Key Stage 3 courses
FSC’s approach to course design and delivery couldn’t happen without people and places.

People

FSC is an Investors In People charity, our staff are the reason why schools return year after year. Our trainee teaching staff spend more time in training than some spend in their entire employment at other organisations. They undergo three weeks of intensive training followed by a four week training period at one of our Centres. After completion of this they spend 9 months on placement before being able to become an FSC field teacher. The training doesn’t stop when they become a field teacher; FSC provides ongoing professional development including training from all the awarding bodies. Many of our teaching staff maintain close links to exam boards, becoming moderators etc.

Our non teaching staff are equally well trained, in addition to on the job training they can attend a staff conference each year to take time away from their role, reflect, share best practice with staff doing similar roles at other centres and consider how they can better do what they do.

Places

FSC believes the environment can really engage, motivate and inspire students; would you prefer to learn about succession from a textbook or see it stood on the shores of a National Nature Reserve. Is there a better place to teach urban regeneration than a classroom overlooking the Olympic stadium? Would you rather climb a mountain in the Lake District or an artificial wall? This is why FSC has carefully selected Centres across the UK to ensure access to a range of inspirational teaching sites.

It’s not just the teaching sites that provide inspiration, each of our Centres has its own unique character; most are historic buildings that provide an interesting contrast to the school environment. They offer a safe, secure and caring atmosphere to help create the best conditions to encourage learning. They also house all the equipment needed for fieldwork and classroom based teaching. FSC is investing in new technology for the centres, we are working closely with ESRI to incorporate their GIS software into our fieldwork and also with the Open University to explore how smart devices such as tablets can help students collect, share and analyse the data they collect in the field where mobile signals are rare.

Protecting fieldwork opportunities for everybody

FSC is a vocal champion and advocate for outdoor education and fieldwork, we feel that fieldwork should be a vital element of an imaginative and contemporary education. The priorities for our campaigning work over the next couple of years include:

• Continuing to fight for high-quality field studies as part of a broad and balanced curriculum in schools and universities
• Striving to ensure that everybody has access to inspiring fieldwork and ensuring that the big changes in school exams, funding for poorer children and teacher training don’t prevent young people of all ages, abilities and backgrounds being able to experience the outside world
• Building innovative links between fieldwork, health and well-being

Visit http://www.field-studies-council.org/supporting-us/campaigns for more information

I worry that our children are growing up without the opportunity to learn and to grow towards out of doors.

Field Studies Council, over the last 70 years, has been such an important organisation...your work is literally irreplaceable.

Michael Gove MP, Secretary of State for Education
Learning Goals

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Learning Objectives

All students will:
- Develop an understanding of the environment including concepts such as interdependence of organisms, niches, food webs, energy flow and variation and use of appropriate vocabulary.
- Improve their interpersonal skills as they co-operate with others during tasks.
- Explore their creativity to come up with questions to help develop their understanding of an environment.
- Develop their knowledge of the scientific route to inquiry including making predictions, designing methods, analysing data, interpreting results, evaluating methods and identifying further questions.
- Carry out fieldwork and collect their own data (qualitative and quantitative).
- Understand the need to consider health and safety during investigations.
- Expand their communication skills as they feedback to others.

Most students will:
- Design a focused investigation within the environment.
- Identify independent, dependent and control variables.
- Interpret data by identifying patterns and linking their results to knowledge of the environment.
- Identify key limitations of their data collection methods.

Some students will:
- Understand how ecological processes have shaped the environment.
- Independently formulate a number of questions to help investigate the environment.
- Design equipment to help with their investigation.
- Suggest improvements to the investigation and identify sources of error.

Assessment

An initial assessment through pre-course liaison will help to gauge the students' level, prior knowledge and identify any specific learning requirements. Formative assessment will be used via a range of techniques to ensure that students have fully understood the tasks and have understood the key concepts. Students will be observed and questioned about their work so that their learning can be supported and objectives amended as necessary. More able students will be stretched to undertake more complex investigations. Summative assessment in the form of a peer review presentation at the end will indicate how much they have learned, and give the opportunity for self-reflection and feedback against agreed criteria.

Learning Opportunities

Students will explore a fascinating local environment where they will learn about important biological concepts such as interactions within ecosystems, niches, food webs, energy flow, variation and adaptation. From this understanding they will have the opportunity to devise questions that could be investigated to reveal more about the ecosystem. Students will be guided through the process of scientific enquiry as they design methods to answer their questions and use various pieces of fieldwork equipment, perhaps even creating their own!

They will develop key interpersonal and communication skills as they work collaboratively to collect and analyse data before presenting their findings to the rest of the group. This information will expand their knowledge of the environment and hopefully trigger new questions to investigate. Students will have the opportunity to self and peer review their work and think about how to improve in the future.

Teaching

The course will be delivered by enthusiastic FSC field teachers who will strive to promote inclusive learning opportunities and will tailor the course to meet specific learning needs. Students will be encouraged to explore their location to generate engagement with the environment, directly appealing to kinaesthetic learners. Aural learners identify with the more discussion-based elements of the day. A supportive atmosphere will be developed as students are guided through the scientific process, and a range of individual and group work activities will help to improve confidence. Differentiation will be used to ensure that all students are fully engaged with the course.

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For alternative Key Stage 3 courses
Key Stage 3 Science: The Appliance of Science 1 day

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To book this course, simply:
Choose the time of the year you would like to attend

1. Pick the centre(s) of interest

2. Check availability online, contact head office to check availability across multiple centres or contact the centre(s) of your choice directly

To book this course the minimum size of your group must be 12 students and one member of staff

Head Office contact details:
Tel: 01743 852100
Email: enquiries@field-studies-council.org

Centres that offer this course

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<tr>
<th>Centre</th>
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<td>Amersham</td>
<td>01494 721 054</td>
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<td>EF</td>
<td>Epping Forest</td>
<td>020 8502 8500</td>
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<td>LDN</td>
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FSC Centres