Teaching Rivers and Hydrology with GIS (GCSE and A level Geography)

This course offers teachers the opportunity to improve their skills in providing high quality ‘first hand’ outdoor fieldwork and identification courses for GCSE and A level students. Throughout the course, participants will gain practical experience of planning and carrying out Geography fieldwork research and investigations, designed to support the learning taking place in school.

Who is this course for?

These courses are for anyone involved in teaching fieldwork to GCSE, AS or A level students and wish to improve their fieldwork and GIS skills: teachers, education officers, field tutors.

Course overview

FSC delivers CPD to over 700 teachers a year and fieldwork to 1 in 2 A level Geography students.

The water cycle is one of ‘Earth’s life support systems’, it is fundamental to all living systems and plays a key role in shaping the ever changing landscapes in which we live. Understanding the interconnections, feedbacks and processes occurring on spatial scales from individual plants to vast ecosystems and temporal scales of seconds to millions of years is the starting point for placing ourselves in this watery web of life on Earth. The focus of this practical and outdoor course will be:

- A systems approach to water: exploring field methods for measuring and calculating the inputs, stores and transfers through the drainage basin, such as discharge, precipitation measurements, infiltration rates and interception rates. To support GCSE and AS enquiry and A level independent investigations.
- GCSE river catchment characteristics fieldwork.
- Mathematical, statistical and GIS skills: how to build students competence and confidence.
- To recognise the importance to the route to enquiry and how it forms the back-bone of geographical understanding.
- Consider the progression between GCSE and A level fieldwork.

The course will provide opportunities for teachers to:

- Build confidence and skills in the identification of common plants and animals
- Use a range of basic and professional fieldwork equipment and research facilities
- Improve knowledge of the different sampling and surveying techniques
- Network with other professionals
- Use innovative and inspiring ICT to enhance the learning experience
- Develop understanding and abilities in statistical investigations
- Share ways to inspire students about the science of the natural world
- Collect resources, ideas and materials to enrich the specifications in the classroom
Course Length

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<tr>
<th>Saturday</th>
<th>Sunday</th>
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<tr>
<td>Arrival for coffee. Start at 11:30am. Evening session.</td>
<td>Morning session and lunch. Depart 3pm.</td>
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Course Timetable

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<th>Saturday</th>
<th>Sunday</th>
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<td>A systems approach to fieldwork measuring inputs, stores and transfers here at Preston Montford Estate. Looking at how GCSE, AS and A level fieldwork approaches differ and how they can be delivered as an enquiry from planning to GIS analysis opportunities and evaluation.</td>
<td>A field trip to National Trust’s Carding Mill Valley to see how a small catchment can be measured for GCSE and A level fieldwork enquiries. GIS will be used to analyse the data.</td>
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Who is running the course?

Our Education Team Leader, Angela Munn will be your Course Director. With a BSc (Hons) in Geography, Angela has been living the geography dream in the outdoor education sector for 15 years. 8 of these years have been delivering hydrology fieldwork here at with the Field Studies Council. She has taught all the key stages and is responsible for developing geography courses for the new specifications within the Field Studies Council and in ensuring quality of learning at Preston Montford. She loves helping others to discover Geography for themselves.

Course Fees

The course is subsidised by the FSC. Sole occupancy accommodation: £50. Non-resident: £30

Included within the fee:

- Up to 13 hours of tuition.
- Computers / laptops / tablets and all accompanying ICT requirements can be provided.
- Full board accommodation including a cooked breakfast, picnic lunch, homemade cakes and an evening meal. Vegetarian and other option available.
- Use of FSC resources including library, workrooms, equipment and the Centre grounds.
- Rigorous and proven health and safety procedures including 24 hour emergency cover.

What to bring

- Laptop if you have one.
- Smartphone if you have one.
- Outdoor clothes, warm and waterproof. Hiking boots (waterproofs and wellingtons can be hired from Preston Montford)
- Resources you would like to share with others.