

Session Outline

KS3, 4, 5: Fieldwork Skills and Techniques

This outline is a general guide for what to expect during your session with us. Activities and session structure may vary depending on weather conditions and other circumstances.

National Curriculum links:

KS3 Science - Select, plan and carry out the most appropriate types of scientific enquiries to test predictions, including identifying independent, dependent and control variables, where appropriate, use appropriate techniques, apparatus, and materials during fieldwork and laboratory work, paying attention to health and safety, make and record observations and measurements using a range of methods for different investigations; and evaluate the reliability of methods and suggest possible improvements, apply sampling techniques.

KS4 Science - Applying a knowledge of a range of techniques, apparatus, and materials to select those appropriate both for fieldwork and for experiments, carrying out experiments appropriately, having due regard to the correct manipulation of apparatus, the accuracy of measurements and health and safety considerations, recognising when to apply a knowledge of sampling techniques to ensure any samples collected are representative, making and recording observations and measurements using a range of apparatus and methods.

KS5 Science - know and understand how to use a wide range of experimental and practical instruments, equipment and techniques appropriate to the knowledge and understanding included in the specification, safely and correctly use a range of practical equipment and materials, follow instructions, make and record observations, keep appropriate records of experimental activities, present information and data in a scientific way

KS3 Geog - collect, analyse and communicate with a range of data gathered through experiences of fieldwork that deepen their understanding of geographical processes

KS4 Geog - Applying geographical knowledge, understanding, skills and approaches appropriately and creatively to real world contexts, including fieldwork, and to contemporary situations and issues;

Learning Objectives	Session outline	Evaluation of Learners progress
<p>Be able to explain and demonstrate techniques used by scientists and geographers to study the natural world.</p>	<p>Activities Introduction to The Parks Trust Introduction to the session and how to use the equipment, health and safety.</p> <p>Depending on group size, weather, time of year and your requirements, activities can include the following and could be used to complete an OPAL survey.</p> <ul style="list-style-type: none"> • OPAL water quality survey (pond diversity and quality tests) • OPAL earthworm survey • OPAL hedgerow survey (plant and insect species diversity) <p>Field work - Transect of flora and fauna - Quadrat study of flora and fauna</p>	<p>To include: Discussion with students before, during and after the visit. Completion of tasks, photographs which you may take for post visit discussions, displays and activities.</p>

	<ul style="list-style-type: none"> - Water quality testing - Moth surveying using the previous nights catch from a moth trap <p>Lab work Dissection of an owl pellet using microscopes Dissection of otter spraint using microscopes Pond water and soil studies using microscopes</p>	
Pre Visit activities	Post Visit activities	Relevant activity risk assessments
Consider why scientists/geographers need to survey flora and fauna and the different techniques used to do this.	Write up of methods used, evaluation of each technique. Survey school site for flora/fauna and compare with data gathered at reserve. Sharing knowledge gained with rest of school e.g display	<ul style="list-style-type: none"> • LLNR site risk assessment • TPT-OL-008 Guided Walks • TPT-OL-013 mammal surveys • TPT-OL-014 Owls and Otters