Session Outline

KS3 Ecological Investigations and Sampling

National Curriculum links: **KS 3:** Experimental skills and investigations, Interactions and interdependencies

Learning objectives	Session structure	Assessment for learning
By the end of the session pupils will be able to: Investigate the relationship between organisms and their environment. Use appropriate fieldwork techniques to collect data. Understand the effects of abiotic factors on an ecosystem Assess the limitations of the techniques used. Understand where and when to apply the appropriate technique	**Introduction** Outline of the day and activities. Recap key concepts and sampling techniques. **Session Activities** **Plan and Predict -** students plan how they might measure the biotic and abiotic factors of the sampling site and the appropriate techniques to be used when sampling the organisms within an ecosystem. Choose from vegetation, invertebrate and freshwater sampling. Students compare the diversity in 2 different ecosystems, or the same ecosystem with different management regimes and investigate how the abiotic factors affect the distribution and type of organisms present. **Sampling -** Students use ecological sampling techniques to measure the percentage cover of species and sample biotic and abiotic factors. Students will measure a variety of abiotic factors e.g. soil pH, light intensity, moisture, temperature. **Plenary options** A discussion of findings against predictions, identifying trends in the data and suggesting reasons for these trends, identifying limitations of the techniques used and suggesting ways to improve.	RSPB Learning staff will use a variety of teacher and student led individual and group activities throughout the session to assess for learning.
Before your visit	**After your visit**	**Key terms**
Students will benefit from having an awareness of the key concept of the relationship between organisms and the environment and the principles of planning an investigation.	Data collected can be used for 'Analysis and Evaluation' in a real world context	Sampling, biotic, abiotic, Environment, diversity