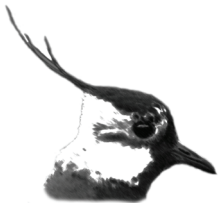

Teacher Resource Sheet Carrs Farm Hay Meadows

This aim of this fieldwork session is to introduce hay meadows as an important wildlife habitat and to carry out a practical fieldwork activity to compare the diversity of plants and animals in a pasture, a pasture in the process of enhancement to a hay meadow and in a species-rich hay meadow. The table below provides the information required for each fieldwork activity.

Resources required

Teacher Resource Sheet
Student Resource Sheet
2 x tape measures
6 x random numbers tables
6 x quadrats
6 x canes
6 x North Pennines Hay Meadow Identification Guides
Other flower guides
Bugs on Bushes identification guides
6 x Sweep nets
6 x white trays or pots

Location 1 - Farm Buildings

Fieldwork Information

Introduce the hay meadows. Using the Student Resource Sheet, introduce hay meadows and why they are important and discuss how they are created and how they are being restored.

Introduce the fieldwork. The aim of the fieldwork is to compare the diversity of plants and animals found in different fields at Carrs Farm. Use the inset map on the Student Resource Sheet to illustrate the fields that are to be compared – a pasture (field 1), a hay meadow that is being enhanced (field 2) and a species-rich hay meadow (fields 3 and 4).

Location 2 - Field 1 (as shown on inset map)

Fieldwork Information

Undertaking the fieldwork.

Plants.
Introduce the main plant species that can be found in this field.
Divide the class into groups of up to 6 students. Lay out two pairs of tape measures to form the two sides of two 10m x 10m squares. The two grids will form the areas where the random quadrat data will be collected.
Each group will collect data from 10 random quadrats. Use the random number tables to place the quadrat within the grid (each group can start on a different line of the table). For each quadrat use the random number table again to drop 10 canes into the quadrat. Name and record, with a tally mark on the Student Resource Sheet, each plant the cane touches as it is dropped to the ground. If the cane touches the same plant twice as it is lowered only record it once. Use the North Pennines Hay Meadow Identification Guides to identify the plants. If you cannot name the plant, describe it and give it a number. When 10 quadrats have been recorded total the number of plants seen for each species at this site (maximum of 100).

Location 2 - Field 1 (continued)

Animals.
Use the sweep nets to collect insects that are living amongst the plants. Empty the nets into white trays or pots and make a list of the animals you find. Use the Bugs on Bushes identification guides to help you.

Location 3 - Field 2 (as shown on inset map)

Fieldwork Information

Undertaking the fieldwork.

Plants.
Introduce the new plant species that can be found in this field.
Repeat the work undertaken in the pasture.

Animals.
Repeat the work undertaken in the pasture.

Location 4 - Field 3 and 4 (as shown on inset map)

Fieldwork Information

Undertaking the fieldwork.

Plants.
Introduce the new plant species that can be found in this field.
Repeat the work undertaken in the pasture.

Animals.
Repeat the work undertaken in the pasture.

Location 5 - Carrs Farm or school

Fieldwork Information

Follow-up work.

- Use your recording sheets to give you an initial impression of the differences for both plants and animals between the 3 fields recorded.
- What are your top 5 plant species for each field?
- How many different plant species does each field have?
- How do the numbers of different insect species compare between the 3 fields?
- Which of the fields is the most diverse?
- Which of the fields supports the best insect population?
- Present your data graphically?