Off Site Visit

1B Box and Biodiversity

Project Box Resources

- ✓ Power point '*Beginning with Box*' Slide 10-14
- ✓ *Box Detective work*sheets X 10
- ✓ Leaf ID dial x 10
- ✓ 1m tape measures
- ✓ Chilterns Trees List
- ✓ Example field recording sheet

Additional resources

- ✓ Clipboards, pencils and recording sheet
- ✓ Animal and plant ID sheets
- ✓ Magnifying glasses (optional)
- ✓ Large tape measures
- ✓ Quadrats

Activities(½ - 1 day)

Classroom preparation for the visit to a Box woodland: Power point **slide 10-14**. Pupils will need to consider the risks to themselves and the environment which they are investigating. Establish a class set of rules for working in the woodlands. Brainstorm what living organisms they expect to find in the woodland and how they can record their findings. Develop a field recording sheet and survey map for the visit.

Woodland connections activities

- ***Snap shot :*** The pupils use their hands to make a frame and find something Strange, Scientific and Spectacular. Discuss in pairs what was found. Class discussion on what they think Scientific means.
- ***Bio blitz activity***: In pairs with clipboards and their field record sheet and map, pupils gather as much information as possible about the living things /species found within the survey area. Allow 10 minutes.

Data Collecting: In groups, using ID resources and recording sheets carry out a closer investigation of a smaller area. Discuss ways of collecting data in a fair and systematic way. Develop ***field study skills*** by using quadrats. Place one quadrat under the Box woodland canopy, one at the woodland edge and one outside the woodland. What do they find in terms of percentage plant cover and variety of species? How could they make this more accurate?

Woodland Structure : Draw and annotate a field sketch of the structural layers in the woodland or use natural materials to represent the woodland layers in a natural art picture.

Extension / follow-up activities

- To extend the quadrat investigation carry out a biodiversity and ground coverage survey along a transect line from a dark area of woodland out into the open. Cover twenty metres taking quadrat readings every 2 metres.
- Repeat the Bio blitz activity in the school grounds and compare the biodiversity.
- Repeat the data collection activity over the seasons.
- Construct a food chain from the species identified in the woodland.

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1B Teacher's Notes

Learning Outcomes

•To identify trees using ID sheets and keys
•To understand its importance for the woodland ecology
•To understand the woodland structure
•To collect information about species in the woodland
•Use field study techniques

Curriculum Connections

Science: Working Scientifically; Classifying and food chains (yr 4); Classification; Evolution and adaptation (yr 6)
Mathematics: Collect and interpreting data; measuring; fractions and percentages.
Geography: Fieldwork using plans/maps.

Preparation / Key Notes (Activity ½ - 1 day)

This activity card builds on the skills developed in activity card 1A and includes an off-site visit to see Box trees. These activities can be combined with activities 1C on the same visit. The site visit and survey provides opportunities to learn about maps and use online map resources. Ensure the group has been briefed about the visit and you have followed the guidance around risk assessment etc.

Background Knowledge

Biodiversity is defined as the variety of different species within a habitat or ecosystem. To understand and protect biodiversity, it is necessary to gather and analyse information about species numbers and distribution. Semi-natural woodlands of Box (*Buxus sempervirens*) are rare in the UK. The largest native box woodland in the country lies in the Chilterns near Great Kimble, Buckinghamshire, and it is protected by law from damage or destruction . In the Chilterns, Box can be found growing as the understorey/shrub layer in beech woodlands and as scrub on chalk grassland. It creates a dense, sheltered micro-climate for small birds, mammals and invertebrates but shades out ground flora. It is favoured by bees as a pollen source.

Web-site links and further resources

When identifying species if you find something unusual take a photo and visit:
www.ispotnature.org/communities/uk-and-ireland
There are numerous websites providing maps, aerial photos and grid references for places in the Chilterns and beyond. Ordnance Survey provides free teaching resources and interactive online activities for children about maps and map reading -
https://www.ordnancesurvey.co.uk/education-research/teaching-resources/index.html
Explore OS maps and grid references in the Chilterns online at
http://www.bnhs.co.uk/focuson/grabagridref/html/

heritage lottery fund
LOTTERY FUNDED
The Chilterns Conservation Board
Chilterns Box Woodland Project