

Tree survey

Learning objectives:

- To survey trees in a section of the school grounds
- To identify trees from leaves, shape and seeds/fruit
- To measure/estimate height and girth and calculate age
- To consider surrounding vegetation and location i.e. exposure to elements, ground type.
- To record tree position and species on map of grounds

Resources required:

- Each group of children will need an A4 map of the grounds with their section for surveying highlighted
- Clipboard and pencil, tape measure, crayons and paper for bark rubbings
- Tree identification guide

<http://www.naturedetectives.org.uk/find/spot/leaves.htm> (print out for leaf identification)

- Plastic bags to collect leaves for identification later
- A large map of the grounds to be placed on the wall to record all the data collected
- A tree profile sheet: for each species of tree within the survey plot

Lesson plan:

1. Begin in the classroom with the large map of the Bawdsey on the board
2. Discuss the different features of the grounds and where the majority of the trees are.
3. Why are trees important? Habitat for animals, produces oxygen and uses carbon dioxide, they look pretty, provide shade, prevent erosion.
4. Outside locate two trees from two different species. Get the children to identify the differences by examining leaves, twigs and bark rubbings (also refer to the questions on the tree profile sheet).
5. Distribute A4 maps on clipboards to pairs or groups with their survey plot highlighted. Try to represent different species i.e. pine, oak, trees by the stream.
6. They have to locate their survey plot and record the number and position of trees in this area on the map.
7. Using the tree profile sheet they will record the information for each species found within the plot.
8. Leaves and seeds can be collected from each species to identify in the classroom afterwards using the identification guides and leaf sheet.

Interpretation:

- Back in the classroom get the children to mark on the big map the species they have identified and their location.
- Silhouettes of tree shapes can be cut out and used to annotate the map
- Prints can be done of the back of leaves by a rubbing crayon over paper and added to the board along with bark rubbings.
- How old are the trees. Divide the girth by 2.5cm (average growth per year) to get an approximate age of the tree.

Tree profile sheet

Complete for one tree of each species within your survey plot, circle the answer that is most appropriate. Collect a leaf and seed or fruit from each species to help with identification back in the classroom.

Survey plot number: _____ **Species name (if known):** _____

How many trees of this species are there in your plot?

What is the surrounding vegetation?

cut grass other trees long grass bare ground

What is the approximate height of the tree? (How tall are you and how many times taller is the tree?)

What is the girth/circumference of the tree at 1.5m above the ground?

are the branches positioned on the trunk? Right angles pointing up pointing down

Describe the leaves (if a broadleaf tree): circle the word that is most appropriate

Arrangement on stem: opposite alternate spiral other

Shape: oval round narrow heart-shaped feather-shaped

Hand-shaped triangular

Edge: smooth toothed

The tip of the leaf: pointed rounded indented

How does it feel? Smooth rough hairy glossy

Describe the needles (for conifer trees):

Needles: needle-like scale-like

Number of needles per cluster: single 2 3 5 >5

Length of needles (cm):

Seeds and fruit: Describe any seeds or fruit that are on the tree:

Draw a silhouette/an outline of the trees shape on the back of this piece of paper.

