



Vertical features as habitats

Mapping vertical features and the plants they support is part of the *Mapping your site* activities, enabling you to explore and map the habitats your site currently offers for nature. Understanding your starting point is really important and will allow you to measure any nature gains you achieve when you start making enhancements to your site. Mapping vertical features is one of eight habitat mapping sessions in this unit of learning.

Before mapping any vertical features and the plants they support, these introductory activities have been designed to support learners in understanding or recapping the concepts of horizontal and vertical, exploring how plants can climb up vertical features like walls and fences, and considering how vertical features function as habitats. Completing these activities first will allow them to answer the questions in the *Vertical features flowchart* accurately.

These can also be used as standalone activities, promoting a positive connection with nature.

Teaching time

60 Minutes

Learning outcomes

To know the different strategies plants use to climb.

To know that fences and walls provide habitats for wildlife as well as being functional boundary features, and have the potential to both block or support the movement of wildlife around a site.

To understand their role and contribution to mapping the habitats on their site as part of the National Education Nature Park.

Step by step

1. Recap younger learners' knowledge of the concepts of vertical and horizontal. You could do this by playing a movement game where learners move around an indoor or outdoor space and when the teacher signals "vertical" or "horizontal", the learners make their body into the correct shape. Once learners are confident with the difference – they should run to objects within their environment that are either "vertical" or "horizontal".
2. Discuss with learners: Is there anything living on/in the outdoor vertical features? What do learners already know about plants that might grow in these places?
3. How plants climb activity. Three suggestions for how to run this activity are given on the activity worksheet. Select the option you prefer, or run them as a carousel activity.

Green Skills



Suitable for

Key Stage 1
Key Stage 2
Key Stage 3

Location

Outdoors

Season

Spring
Summer
Autum
Winter

What you'll need

A printed map of your site

A tablet, laptop or desktop PC to access the online Habitat Mapper tool

How plants climb and vertical feature cards

Key vocabulary

Vertical
Horizontal
Roots
Climbing plants
Living wall



Step by step (continued)

4. Vertical features card activity. Either add these to the *How plants climb* activity or use them as a basis for discussion. Which type of plants would grow best on each feature – why? Are some easier for plants to grip on to than others? Students should think carefully about the different strategies the plants use to climb, and whether they are self-supporting or will need to be tied/trained against the vertical feature. Ask how non-climbing plants can also be grown in vertical spaces (e.g., hanging baskets, living walls). Considering the things that plants need to survive (light, water, nutrients), what are the pros and cons of a climbing plant rooted in the ground vs a hanging basket or living wall?
5. After completing these activities, divide learners into small groups and ask them to find a vertical feature and determine what material it's made from using the three options on part one of the *vertical features flowchart*.
6. Educators can move around the groups, and using the learners' flowchart answers, work with learners to add the vertical features to your printed map, or (if you have internet connectivity outdoors) directly on to the online Nature Park map using the Habitat Mapper tool.
7. Then ask learners to find a plant living on a vertical feature. Use part two of the *vertical features flowchart* to identify what type of plants they are. Again, educators move around the groups and use the learners' flowchart answers to add the plants to your map.
8. Repeat this until you have mapped all the vertical features and plants growing on them, across your site.
9. Back indoors as a whole class, transfer the vertical structures and habitats on to the online Nature Park map using the Habitat Mapper tool, if you haven't already done so outdoors.

Reflection

We usually think of vertical features like fences and walls as boundaries to separate areas from one another. Fences and walls can stop some wildlife moving across a site e.g., hedgehogs that can't climb over them, but they can also connect distant parts of a site, especially if the fence or wall has plants that create cover for animals while they are moving. Reflect with learners on whether the fences or walls on your site help or block the movement of wildlife.

In small or built-up areas, where there isn't much space to create new habitats, vertical features provide a potentially untapped resource for wildlife. Reflect on how you could think upwards when planning new habitats for nature and create greener natural spaces on human-made vertical features as part of the National Education Nature Park.



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