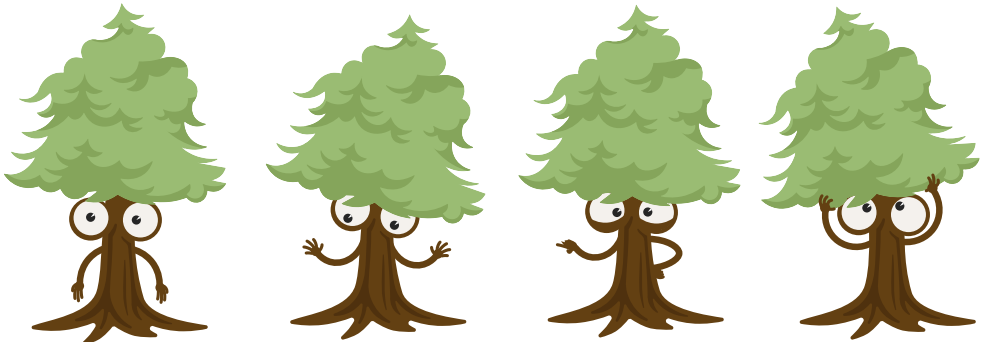


Trees
What do trees do for me?

Terrific Scientific Campaign

Investigation: Trees Additional Activities

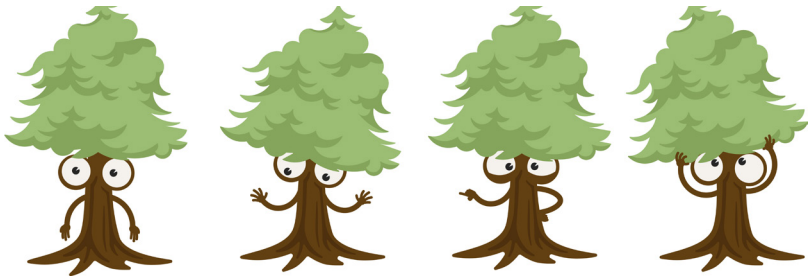
In this pack we've included some additional activities which you can use all year round to keep learning from your trees!

Adopt a tree

Some of the trees on your school site will change hugely across the course of the investigation as they come into full leaf. Why not choose a tree on your site to "adopt" and keep track of the changes as they happen? You could take photos of your class with the tree as it changes through the seasons.

The carbon cycle

In order to understand more about how carbon moves in the Environment, we have designed this stand-alone activity. Please refer to the Carbon Cycle PDF on our website: **LINK**



Tree Recording Files

Alongside the 4 main activities, children could investigate trees further using Tree Recording Files.

Title: _____

1.	3.

2.	4.

The “Title” space is the focus for the information. The focus could be the Tree itself, with the four box headings including:

1. A leaf. Children could draw, stick in a picture of a leaf or, with enlarged sheets, stick in an actual leaf of the tree they are focusing on.
2. A flower. Children could include a picture or drawing (if present).
3. A seed/fruit. Children could include a picture or drawing (if present).
4. A sketch of the tree shape.

Other examples of headings could be a bark rubbing, a twig showing buds, etc.

Another focus could be about who or what lives in or on the tree.
The four box headings could be:

1. An animal they have seen.
2. An animal’s home they have seen.
3. A sign of an animal they have seen.
4. A mini-beast or sign of a mini-beast.

Other examples of focus points could be signs of disease, invasive species or unknown plants or fungi around or on the tree which they like the look of.

Making a key to identify leaves/twigs

How can you tell the difference between different tree species in the classroom? Can you design and identification key for the trees you have found on your school grounds? You could design it to look like our Decision Tree in the teaching resource!

Summer activity

Children can construct a simple identification key by using leaves of the trees surveyed.

Questions you could use include:

- Is the leaf oval shaped?
- Does the leaf have smooth edges?
- Is the leaf symmetrical?

Winter activity

Children can construct a simple identification key based on twigs containing buds of the trees surveyed. For example Ash, Oak, Beech, Sycamore and Horse Chestnut all have very different buds.

Questions you could use include:

- Are the buds green/yellow/red/another colour?
- Are the buds in pairs along the twig?
- Are the buds long, thin and pointed?

Tip:

From having a closer look at your trees, you can estimate how many species call your tree home!

Investigating habitats in, on and around the tree

Trees are home to many weird and wonderful creatures! Why not investigate the other species that call trees home?

Children can observe the creatures they see in, on and around a tree over a period of time e.g. a week, by keeping a class diary. This could include different bird species, such as robins, magpies or pigeons, or creepy crawlies such as millipedes, woodlice or beetles.

You could then ask your class about the creatures they have recorded. Is there a pattern? This could lead onto really interesting discussions, for example:

- Are you seeing the same creatures at the same time every day?
- Are you only seeing these creatures on certain species of tree?
- Are you seeing any of these creatures at the same time as each other?

Trees can also be investigated for signs of other species e.g. a nest, a hole in the trunk or branch, fungi on the trunk, branches or roots, or other plants such as mistletoe or ivy that may be growing on the tree.

Are some of the species harder to find? You could discuss camouflage and why it is useful.

Are some of the species avoiding others? You could discuss predator/prey relationships and food chains.

Seasonal changes – investigate a tree in different seasons

This is a year round activity, looking at how a tree changes throughout the year.

Do you have a lovely, free standing, deciduous tree somewhere on your school grounds?

If yes, take a class photograph in front of a chosen tree at a specific time e.g. midday. This might be better on a sunny day as you could mark the tree's shadow on the ground using some chalk too.

A couple of months later on a similar sunny day and at the same time of day, take another class photo of in front of the same tree. Mark the shadow again.

Do this again a couple of months later. Make sure the children are dressed appropriately for the season!

After a few photos, you should have a record of the tree over the seasons. Print out the pictures for a wall display, and ask the children to compare the photos to each other.

- Has the tree changed from photo to photo?
- Were the clothes they needed to wear different depending on the season?
- Compare the length of the shadow in each picture, taken at the same time of the day, to understand the movement of the sun over the seasons.

Notes:

If this activity is repeated each year, you will eventually have a record of the tree's growth over time.

Other suggestions

There are countless things you could investigate about trees. Here are a few more starting points which could lead to great discussions and may help you to design your own activities in the classroom!

- How could your school improve its carbon value? How could your school community reduce its carbon output? If there is no room at your school, where else could you plant some trees or other plants?
- Are there food webs and chains, either on the tree or including the tree?
- Discuss seed dispersal. Are seeds from your tree dispersed by wind e.g. 'helicopters' from sycamore and maple trees? Are they eaten by animals such as birds and squirrels and dispersed in their droppings? Some trees are insect pollinated, so you could look at their flower structure too.
- Search for, and plant, some tree seeds. You could begin this activity in the classroom and move them outside if they begin to grow well. Can you look after a sapling as it grows?
- Investigate items made from wood. What can you see in your classroom that is made of wood? Why is it such a good material to use?
- You could make some bird boxes or bug hotels and hang them in your tree. What shapes make up a bird box? What creatures live in your box?
- Demonstrate how plants' roots reduce erosion by pouring water on an angled tray of soil and an identical angled tray of soil with plants established in the soil.
- Make a grid of the school site using a map with trees marked out on it to study co-ordinates.