



Learning in your forest

Free downloadable lesson plan: Terrific Trees

For more learning resources from the Forestry Commission, visit www.forestry.gov.uk/england-learning

The Forestry Commission (FC) looks after more than 1500 woods and forests in England – together they make up the public forest estate. Forests are the perfect place to learn about trees and how important they are for people and wildlife, so print out this lesson plan and bring your class or group to your local FC woodland to learn more about the terrific world of trees.

Curriculum links:

Science (Year 1 – 3) – Plants; Animals including humans; Seasonal changes; Living things and their habitats; Working scientifically

Before your visit:

Find out how much the children already know about trees.

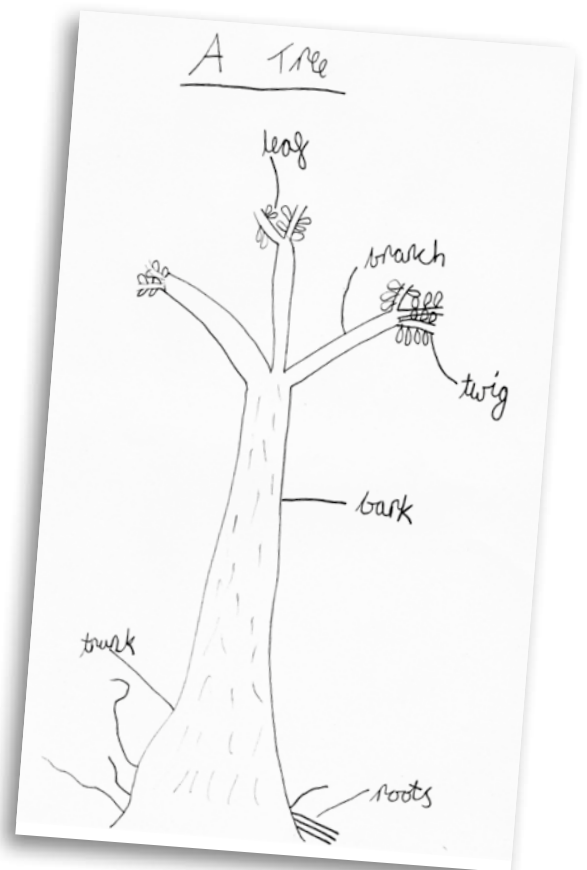
- Do they know the names of any tree species?
- Do they know anything about how a tree grows / what it grows from?
- Do they know why we grow trees?
- Do they know how a deciduous tree changes throughout the year?

Ask the children to draw a picture of a tree, showing (and labelling if appropriate) the different parts e.g. trunk, bark, branch

For a great introduction to the forest and how it is cared for by the Forestry Commission, visit www.forestry.gov.uk/england-learning and look at the downloads page, where you will find an informative, child-friendly photo show, with notes and discussion questions. You will also find some useful health and safety advice for your visit.

You will need to bring:

- whistle
- 'be a seed' cards (see page 7)
- mobile phone (real or pretend)
- 'shrinking forest' tree pictures
- blindfolds
- collecting bags



Forest Lesson Plan

Starter activity

Encourage the children to spend a few minutes looking at the trees around them, then discuss some of the following questions:

- **Are all the trees the same size?**
Same colour? Same species?
- **How does the bark feel?**
- **Can you identify the different parts of a tree?**

Look at the pictures they drew at school – do the trees look as they expected them to?

'Be a seed' game

Discuss seeds with the children:

- **What is a seed?**
- **Do you know where seeds come from?**
- **Do you know the names of any seeds**
(e.g. conker, acorn)?



Explain that the Forestry Commission collects seeds from the forest to grow into new trees in a nursery, but in nature, seeds fall from the parent tree and grow into trees by themselves, on the forest floor.

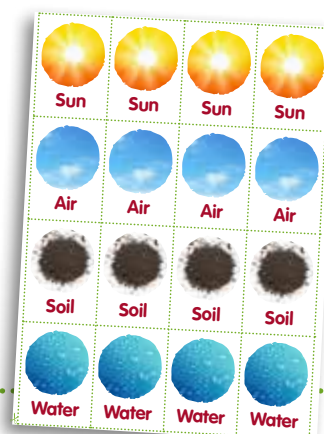
Look around for seeds on the ground, or for brand new tiny trees that are just beginning to grow.

Tell the children that they are going to be seeds. They have travelled from their parent tree with the help of an animal or the wind (depending on what type of seed they are), and have landed somewhere on the forest floor.

The children need to crouch down and they are then not allowed to walk away from their chosen place.

Tell them it has rained a little, and it is now the correct temperature for them to germinate, so they can 'grow' into a small seedling – wiggling their toes as roots, and stretching to become seedlings, standing up with their first two leaves.

Now they are seedlings and still cannot move around (because real seedlings don't walk), but they can lean from side to side. Sprinkle the **seed cards** on the floor among the children, and tell them they need to lean over to collect as many seed cards as they can reach. The seed cards can be found at the end of this lesson plan. They show sun, air, soil and water - four things that small trees will need in order to grow. In order to survive, they will need to collect at least one of each.



'Be a seed' game (Continued)

Discuss which seedlings survived – only the ones who managed to collect sun, water, soil and air will continue to grow.

Extension: Ask the children to look around the area and decide where they would like to land if they were a seed. They need somewhere that they will get sunlight and water from the rain, as well as not being too close to other larger trees which would take all the water and nutrients from the ground.

Discuss why or when seedlings might struggle to get enough light (in shaded areas), water (in a hot, dry summer), air (under water) or soil (on concrete).

Think about the forest timber cycle – the Forestry Commission plant lots of small trees in an area, and a few years later, they cut some down (thinning) to give the remaining trees room to grow.



Shrinking forest game

Version 1 – trees for animals and people

1. Choose five people to be trees. Give each of them one of the **five tree pictures** (pine, lime, ash, Douglas fir, oak).
2. The remaining children will be animals (ask for suggestions about which animals and birds live in UK forests e.g. fox, badger, owl).
3. Ask the 'animals' to stand by a 'tree' – spreading themselves out among all five trees.
4. When you blow the whistle, the animals move to a different tree. Do this a few times.
5. Next, ask the animals to shelter under their tree from the rain.
6. Pretend someone has called you on the mobile phone – it's a carpenter, who needs a pine tree to make a table, so you cut down the wood from a pine tree, and the animals move to shelter under a different tree.
7. Next, the animals drink some raindrops dripping from the trees, when you get another call – this time it is a famous singer, who needs a lime tree to make a guitar. Cut down the wood from a lime tree, and the animals move to a different tree.
8. Now, the animals breathe in oxygen produced by the trees' leaves, and you get a call from a lady who wants some ash wood for her log burner, so you cut down the ash tree.
9. The animals are now (pretending carefully!) eating leaves and seeds from the remaining trees, when your phone rings again and it's the caretaker at school who says that they have run out of toilet roll, and he needs some paper made from the wood of the Douglas fir tree.
10. All the animals are now at the oak tree.



Discuss:

- Who can remember all the things that the animals and the people needed trees for?
- What would happen to the animals if all the trees were cut down?
- What does the Forestry Commission need to do to ensure that we don't run out of trees? (plant new ones – this is called sustainable forestry)
- Trees are important for people to make things – why else are trees and forests good for people? (places to do activities, shade, prevention of flooding and erosion)

Please see the back of this document for the supporting five tree images.

Shrinking forest game

Version 2 – trees for oxygen

Repeat steps 1-4 on page 4.

5. Next time you blow the whistle, ask the 'animals' to hold their breath while moving between trees (suggest that children with asthma or breathing problems pretend to hold their breath). When they arrive at a new tree, they can start breathing again.
6. Do this a few times, then choose a tree to cut down.
7. Blow the whistle so that the animals move between trees, holding their breath each time.
8. Cut down another tree, then another, until there is only one left, with all the animals standing next to it.
9. Ask what will happen to the animals if you cut the last tree down. They will die because they can't breathe. Explain that trees take in carbon dioxide (the gas in the air that we don't want) and breathe out oxygen (which is what people and animals need).
10. Cut down the final tree, to demonstrate that the animals would have to hold their breath forever if there were no trees. Finally, ensure that everyone is breathing normally again.

Please see the back of this document for the supporting five tree images.

Meet a tree

Ask the children to get into pairs. One person in each pair will be the seeing one, and the other will be the blindfolded one.



The seeing one guides their blind partner to a tree - carefully and safely, with hands outstretched, so that hands meet the tree first, and not heads! The blind person is encouraged to 'meet' the tree and get to know it, by feeling it with their hands (is it rough, smooth, mossy?), reaching up (can they feel any branches?), reaching down (can they feel any roots?), putting their hands or arms around it (can they reach all the way round?).

The seeing one then takes the blind one back to the starting place, turns them around three times and removes the blindfold. The one who was blindfolded then tries to find the tree that they met – checking it is the right one by feeling it again.

The pair then swap roles.

Extension: Discuss how it felt to be blindfolded. Did the children trust their partners to keep them safe? How do animals find their way around the forest at night? (good eyesight and sense of smell)

Tree parts artwork

Go on a collecting walk, asking the children to pick up fallen parts of trees (e.g. sticks, bark, seeds).



Please remind children that if something is attached to a tree, it is because the tree still needs it – they should only collect things from the floor.

Choose a clear area in which to stop and look at what has been collected. Ask the children what parts of trees they found and what those parts do for the tree. Remember to discuss the parts that were not found e.g. roots.

Ask the children to work in small groups to make a ground picture of a tree showing all its parts. They will have to choose other woodland materials to represent the parts of the tree they didn't find.

Extension: Add extra features to the ground pictures e.g. nests, animals, birds – all made from natural materials found on the ground.

Follow up work - back at school

Produce posters to show the life of a tree – how it grows from a seed, to a seedling, to a mature tree, then how it is felled and turned into something useful.

Find out about the value of different sorts of trees – to people and to wildlife.

Choose a tree in your school grounds or in a local wood, and visit it in each season – record how it grows and changes throughout the year, using drawing, painting, video etc.

Collect seeds and plant a tree.

**Tell us
what you think...**

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Please visit www.forestry.gov.uk/learning and follow the link to our online questionnaire.

Many thanks for your help.



Sun



Sun



Sun



Sun



Air



Air



Air



Air



Soil



Soil



Soil



Soil



Water



Water



Water



Water

Oak



**Scots
Pine**



Lime



**Douglas
Fir**



Ash

