

Tree-mendous Trees

This is ECO₂ COP30 Lesson 1 aimed at children aged 9-11.



What is a Tree?

Slide 3

What is a tree? Ask the children to share anything that they already know about trees. Explain that trees grow all around the world in lots of different places.

Find a tree in your school grounds or local area. Look and listen; what can you see and hear? Split the children into pairs and ask them to come up with a question that they would like to find out about this tree or trees in general. For example, what lives in a tree? Write down each pairs' question and explain that over the next three lessons we will be learning all about trees.

Meet a Tree

This is a lovely game, if you have access to a couple of trees or more. Split the children into pairs and ask one child from each pair to either close their eyes or wear a blindfold. The child who has not closed or covered their eyes, carefully leads their partner to a tree to explore by touch. Once they have explored the tree, their partner leads them back to where they started and spins them round a couple of times. They then open their eyes or remove their blindfold; can they guess which tree their partner took them too? Encourage them to think about how the tree felt to help them make their choice, such as whether the bark was rough or smooth, whether they could feel the shape of the trunk, etc.



Parts of a Tree

Slide 4

Split the children into groups and give each group a set of labels (Appendix 1). The labels each detail a job that part of the tree does. Ask each group to either; draw a



tree on the ground with chalk and place the labels next to it, create a tree using natural materials and place the labels on it or hang/place the labels on a tree. Can the children match them to the correct parts of the tree?

- **Leaves and needles** – where photosynthesis takes place.
- **Roots** – collect nutrients and water; anchors the tree; communicates with other trees.
- **Trunk** – stores carbon; transports materials such as water and nutrients.
- **Branches and twigs** – support structure for leaves, flowers and fruit.
- **Flowers** – reproduction.



Tree ID

Slides 5-6

There are lots of different species (types) of trees. Each species of tree has a name, such as 'oak tree' or 'teak tree.' Each species of tree is suited to living in certain climates, such as a place where it is warm throughout the year or a place that gets lots of rain, so different trees grow around the world. For example, the Baobab tree needs warm, dry conditions to grow, so it grows in countries such as Botswana, South Africa, Madagascar and Australia. It wouldn't survive in a much colder countries such as Norway or Canada. Look at some examples of tree species that are found in different countries around the world on slide 5.

Use slide 6 to explain that we can identify what species a tree is by looking at its leaves, seeds, fruit, flowers and bark.

Introduce what classification keys are on slide 6 and look at the example on slide 7. Take the children outside. Split them into small groups or pairs and ask them to collect a couple of different types of leaves. Give each pair/ group a piece of chalk and ask them to create their own classification key for the leaves that they have collected, drawing it on the school playground.

A local or national charity or organisation, such as The Woodland Trust in the UK, might have free ID sheets that you can download to help you identify the trees. For example: www.woodlandtrust.org.uk/media/48345/leaf-id-sheet.pdf



Forests

Slides 9 – 12

Some trees grow alone or in small groups, such as on city streets and in gardens, but other trees grow in forests. Forests are large areas that mostly contain trees. Forests are also home to other plants and animals. Do you have any forests in your local area? Have any of the children been to a forest before? What do you think it feels like and sounds like in a forest?

Different countries around the world have different climates. A climate is the long term weather patterns in an area, and different trees and forests grow in each one. There are three types of forest; temperate, tropical and boreal. Learn more about each one:

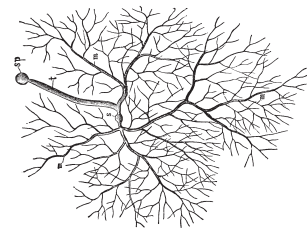
- **Temperate Forest** – temperate forests are found in areas of the world where it's not extremely hot or cold. Temperatures change throughout the seasons, its warm in summer, cooler in spring and autumn and cold in winter. The tallest trees grow in temperate forests; Coastal Redwood trees can grow to be over 100m tall!
- **Tropical Forest** – common to areas nearer the equator, they are the warmest, and often wettest, forests on the planet. They include tropical rainforests and mangrove forests. They cover less than 10% of the world but are home to over half the world's animal and plant species! The Amazon Rainforest is the world's largest tropical rainforest at over 2.7 million square miles!
- **Boreal Forest** – boreal forests are found across Siberia, Scandinavia and North America. They cover large, remote areas and temperatures are often below freezing. Boreal forests store huge amounts of carbon.

Use slide 14 to explain that animals are adapted to live in their habitat. Place the three forest backgrounds (Appendix 2) on different tables around the classroom. Put the children into pairs and give each pair two animal adaptation cards (Appendix 3). Can they decide which forest habitat their animals are adapted to live in? Underneath each animal card there is a space for the children to write down an adaptation they think that animal has that makes it suitable to live in its forest environment; a clue to this adaptation is given on the card. Once the children have written an adaptation on their



animal cards they can go and place them in the forest habitats (temperate, tropical or boreal) that they think their animals live in.

After the children have placed their cards down, ask each pair to go and collect two different animal cards. Using the prompts on the PowerPoint slides, each pair should discuss how the trees in the forest provide for their animals. Do they provide shelter? Do they provide food? Do they provide camouflage?



Forest Connections

Slide 13

Recent scientific discoveries have found that trees communicate with each other. Their roots fuse with fungi forming interconnected root systems. Scientists have discovered that these root systems connect nearly every tree in a forest, even trees of different species.

To demonstrate this, mark out an area with cones then ask the children to stand in that area. Explain that they are the trees so they cannot move from their spot. Explain that unlike us, trees cannot communicate through sound so they have found another way. Ask the children to all reach out and hold hands with two other children, one with their right hand and one with their left hand; the children are now all connected in a network of hands. This represents the root and fungi networks that link all the trees together. Tell the children that just like the trees and fungi, they can communicate across this web using hand signals. Choose one child to start; they squeeze the hand of one of their classmate's hands that they are holding. That child then squeezes one of their classmate's hands that they are holding, who then squeezes one of their classmate's hands that they are holding. The process then continues until after a period of time you ask all the children who have had their hands squeezed to put their hand up. How far did the message travel?



Tree-mendous Trees

Slides 16 – 26

Why are trees important? Learn about some fascinating tree facts and use slides 20 – 25 to learn about some interesting trees around the world and who they are special to.

Do you have a favourite tree or a tree that is special to your school? Take a picture of it and share it with us on [Padlet](#), telling us why it is special e.g. it is our favourite tree to read books under, it provides us with shade on hot, summer days. You could also ask the children to bring in a picture or a drawing of a tree that is special to them and make a display.

