



# TREES

All lessons are linked to the film trees



To view



Subtitled

# Learning for trees

## Overarching Learning Intentions

The aim of this package of lessons linked to Trees is to help young people understand how trees work and how much they do for our natural environment. The lessons will give young people an empathy and wonder about the magic and beauty of trees and also their role in supporting biodiversity, combatting climate change and contributing to their health and wellbeing.

## INTRODUCTION

'Trees' shows how the Threave Landscape Restoration Project is supporting the recovery of native woodland habitats on Threave Nature Reserve. This is achieved through planting a variety of native trees and removing densely planted commercial forestry, to allow a variety of trees and plants to regenerate.

Mixed mainly native woodland is vital to biodiversity and reducing climate change and its effects. There is just a tiny fraction of native woodland remaining in Scotland compared to several hundred years ago. Native woodland has been depleted by felling for wood and clearing land for livestock farming and commercial forestry – woodland regeneration is hampered by grazing, particularly by sheep and deer.

Planting and supporting the natural regeneration of varied, mainly native woodland is important because these woodland ecosystems have evolved

in Scotland over thousands of years. Large areas of single species or limited species woodland, such as conifers like Sitka spruce, cannot support a healthy ecosystem and are 'dead' in comparison to diverse woodlands. The planting at Threave is reconnecting smaller areas of woodland, ensuring connectivity.

Healthy woodlands include a variety of native trees, a good range of ages of trees and the ability for new trees to self-seed and mature. Dead and decaying wood is also necessary to feed the woodland floor and provide a home for other plants and animals. Even one tree can support hundreds of other life forms, and together they form a community that supports thousands more, including humans.

NB Commercial forestry is an important part of the Scottish economy – the practice of commercial forestry planting is changing to encompass requirements to include areas of native, mixed woodland. Finding the right balance is still a work in progress.

## POINTERS FOR TEACHERS

This series of interdisciplinary lessons/learning activities cover 2nd and 3rd level curriculum areas of Science, Outdoor Learning and The Expressive Arts. They are best presented to the learners after they have watched the 'Trees' film (link above) and participated and researched the science of trees. The lessons are suggestions and should be interpreted by teachers creatively and in relation to their learners' knowledge and needs. The lessons can be taught as part of a Learning for Sustainability/IDL topic or independently by subject.



## CURRICULUM LINKS

SCIENCE	SOCIAL STUDIES/RME	LITERACY	EXPRESSIVE ARTS/HWB
<p><b>SCN 2/3-01a</b> - I can identify and classify examples of living things, past and present, to help me appreciate their diversity. I can relate physical and behavioural characteristics to their survival or extinction.</p> <p>I can sample and identify living things from different habitats to compare their biodiversity and can suggest reasons for their distribution.</p>	<p><b>SOC2-08a</b> - I can discuss the environmental impact of human activity and suggest ways to be more responsible.</p>	<p><b>LIT 2-04a</b> - As I listen or watch, I can identify and discuss the purpose, main ideas and supporting detail contained within the text, and use this information for different purposes.</p>	<p><b>EXA 2-03a</b> - I can create and present work that shows developing skill in using the visual elements and concepts.</p>
<p><b>SCN2-02a</b> - I can use my knowledge of the interactions and energy flow between plants and animals in ecosystems, food chains and webs. I have contributed to the design or conservation of a wildlife area.</p>		<p><b>LIT 2-05a</b> - As I listen or watch I can organise these notes under suitable headings and use them to understand ideas and information and create new texts, using my own words as appropriate.</p>	
<p><b>SCN 2-02b</b> - Through carrying out practical activities and investigations, I can show how plants have benefited society.</p>	<p><b>RME 2-04c</b> - I can show understanding of the beliefs of world religions and explore the similarities and differences between these and my developing beliefs.</p>	<p><b>LIT 2-06a</b> - I can select ideas and relevant information, organise these in an appropriate way for my purpose and use suitable vocabulary for my audience.</p>	<p><b>EXA 2-05a</b> - Inspired by a range of stimuli, I can express and communicate my ideas, thoughts and feelings through activities within art and design.</p>
<p><b>SOC 2-08b</b> - I can consider the advantages and disadvantages of a proposed land use development and discuss the impact this may have on the community. RME 2-04c - I can show understanding of the beliefs of world religions and explore the similarities and differences between these and my developing beliefs.</p>	<p><b>RME 2-04c</b> - I can show understanding of the beliefs of world religions and explore the similarities and differences between these and my developing beliefs.</p>	<p><b>LIT 2-07a</b> - I can show my understanding of what I listen to or watch by responding to literal, inferential, evaluative and other types of questions, and by asking different kinds of questions of my own.</p>	<p><b>EXE 2-06a</b> - I can develop and communicate my ideas, demonstrating imagination and presenting at least one possible solution to a design problem.</p>

## CURRICULUM LINKS (CONTINUED)

SCIENCE	SOCIAL STUDIES/RME	LITERACY	EXPRESSIVE ARTS/HWB
<p><b>SCN 3-01a</b> - I can sample and identify living things from different habitats to compare their biodiversity and can suggest reasons for their distribution.</p>	<p><b>RME 2-09d</b> - I am developing my understanding of how my own and other people's beliefs and values affect their actions (in relation to nature/climate).</p>	<p><b>LIT 2-24a</b> - I consider the impact that layout and presentation will have and can combine lettering, graphics and other features to engage my reader.</p>	<p><b>EXA 2-07a</b> - I can respond to the work of artists and designers by discussing my thoughts and feelings. I can give and accept constructive comment on my own and others' work.</p>
<p><b>SCN 2-14a</b> - By investigating the lifecycles of plants and animals, I can recognise the different stages of their development.</p>		<p><b>LIT 2-26a</b> - By considering the type of text I am creating, I can select ideas and relevant information, organise these in an appropriate way for my purpose and use suitable vocabulary for my audience.</p>	<p><b>HWB 2-26a</b> - I am experiencing enjoyment and achievement on a daily basis by taking part in different kinds of energetic physical activities of my choosing, including sport and opportunities for outdoor learning, available at my place of learning and in the wider community.</p>
		<p><b>LIT 2-28a</b> - I can convey information, describe events, explain processes or combine ideas in different ways.</p>	



# Outdoor Learning

## LEARNING INTENTION

Young people gain an experiential first hand understanding of how woodlands work through observation, exploration and investigation. They develop their connection with trees and woodlands and can identify actions which might support or improve woodland habitats.

### Overview

The Outdoor Learning activities for 'Trees' are designed to give teachers and outdoor educators a starting point for successful learning in the outdoor environment. They can be adapted to suit the site you have available and the time of year, and also list useful equipment and resources to aid preparation. There is a link to a risk benefit assessment that covers the outdoor learning sessions which can be adapted if required. We hope all of these will be useful either directly or as inspiration and support for taking learners outdoors.

### Relevant Topic/IDL links include

Woods, Trees, Living Things, Habitats, Minibeasts, Life Cycles, Ecosystems

### Time of year

Any time - in winter, trees can be identified by twigs and bark, though this is a little more challenging. Visiting the same tree throughout the year is a great way to learn.

### Site

An area of woodland, or if this is unavailable an area where there are some trees, or even a single tree. Even if access to trees is limited, focusing on one tree or a few trees, for example in the school grounds, and returning to visit over time can help learners to really get to know the tree, and to discover the kind of life it supports. Remember to get the landowner's permission and check any environmental or wildlife conservation restrictions first (see Risk Benefit Assessment, side panel).

## WATCH TREES

All lessons are linked to the Trees Film



## LINKS

*Safety*

**Risk Benefit Assessment**

*Warm-up activity- settling into the outdoor environment*

**Journey stick Warm-up activity sheet**

# LEARNING ACTIVITY



## Info

Trees and woodlands are ecosystems that support a huge variety of life. They also lock carbon dioxide into the soil, and clean and cool the air. Being among trees is great for our wellbeing – encourage learners to rest and relax among trees, as well as investigate and explore.

## Aim

To get to know a tree or wider woodland and build up a picture of how healthy it is and the life it supports through making observations, recording findings and drawing conclusions.

## Activity

Place the learners into groups. If you are in a woodland or have several trees, give each group a tree to focus on – alternatively, if you have limited trees, you can give each group a different task.

**Task 1:** Identify the tree or trees – use tree ID sheets to identify the type of tree – look closely at the bark, leaf shape and/or twigs and buds

**Task 2:** Estimate the approximate age of the tree or trees (see resources) – different trees grow at different rates, so it's not just about size but also how gnarled and twisted a tree is

**Task 3:** Estimate how healthy the tree is – you can score this on a scale of one to five, with five being very healthy. Look for dead branches, wounds in the trunk, epicormic growth (where young shoots grow from the base of the tree, a sign of stress), spindly growth – is it getting enough light, or is it shaded by other trees?

## INVESTIGATING WOODLAND HEALTH: MAPPING THE WOODLAND COMMUNITY

**Task 4:** look around the tree – what is on the ground, for example leaf litter, grass, pavement – how far do its roots go, do you think?

The class can record the observations on a large piece of paper as a rough map of your woodland area, with the names, health score and other observations.

Alternatively, learners could make a ‘fact file’ for their tree, including drawing leaf shapes, taking bark rubbings, etc.

### Questions to ask

- What do you think would improve the health of this tree/woodland?
- What would you change?
- How do you think this tree/woodland came to be here (planted by people, grown naturally bit of both) and why?

### Plenary

Write a note of thanks or a wish for the tree with string made of natural materials you have been focusing on – this can be done on (ideally) recycled card and tied to the branches of the tree. Or just ask each participant to verbally thank their tree or find a word to describe their tree.

### Extension

Tree planting at school or in the community; there are lots of local tree-planting initiatives across the country, and you may also find help to purchase trees through the Woodland Trust. You can research the best types and placements of trees using some of the knowledge the class have gained from investigating trees and woodlands. The best time of year for tree planting is October – March. Tree seeds such as acorns and ash keys can also be gathered and planted in pots in Autumn / Winter.

Track a tree through the seasons. follow through the seasons, for example by drawing, photographing or filming the tree.’

The ‘Tree Tools for Schools’ website (see resources) has lots of tree related films and activities.

### Resources:

Woodland Trust Tree Tools for Schools – includes ID sheets  
<https://www.treetoolsforschools.org.uk/menu/>

How to Estimate the Age of an Oak PDF – Woodland Trust

Measuring Trees (height and age) PDF – Newport.gov.uk

### Equipment

- magnifying glasses
- ID sheets (see resources)
- Tape measure and/ or string and metre stick



LEARNING  
ACTIVITY

## 2

DEADWOOD SURVEY - MICRO  
HABITS AND LIFE CYCLES  
*Info*

The TCV Deadwood survey is a comprehensive survey you can use in full, or you can adapt it to suit your class, woodland area and timetable.

Deadwood - dead standing trees, fallen branches, logs and stumps - is an important part of the woodland environment. Deadwood is a micro habitat for invertebrates (minibeasts), mammals, birds and fungi, plays a key part in healthy rivers, streams and ponds.

Deadwood provides nutrients for the soil, stores carbon and helps prevent erosion. A healthy woodland area has deadwood at different ages and stages of decay. This activity needs a patch of woodland.

*Aim*

To investigate and record the deadwood in a woodland area, getting a deeper understanding of tree life cycles and woodland ecosystems.

*Activity*

Place the learners into groups or pairs and look at your area of woodland or nature area for deadwood. Ask the learners to explore deadwood through the following tasks:

**Task 1:** Identify the types of deadwood

**Task 2:** Investigate the surface of the deadwood - what is growing on the outside? What invertebrates or other animals can you see?

**Task 3:** Investigate inside the deadwood - how soft is it? How far can you push a pencil into it? What is living inside the deadwood?

### Questions to ask

- When a living thing dies, is it still part of the life cycle?
- Why might it be important to let deadwood stay on the ground?
- What do you think happens to the deadwood eventually – what does it become?
- What kind of habitat do the woodland invertebrates need (e.g. cool, damp, dark)?
- How have the invertebrates adapted to suit this habitat (e.g. brown/black for camouflage, feelers to find their way in the dark)?

### Plenary

Compare findings and discuss. It can be fun to act out the characteristics of invertebrates that live in deadwood, for example to walk like a centipede or curl up like a millipede.

Take a minute together to look up at the trees and listen to the woodland – stretch your arms up high to the tree-tops and imagine your ‘roots’ going deep into the ground, connecting with all the other people and the trees in the wood.

### Extension

Creating a deadwood habitat at school, for example by making a pile of branches or small logs in a suitable corner of the school grounds. Use wood from close by – don’t bring wood in from elsewhere to avoid spreading diseases.

### Resources:

CV Dead Good Deadwood survey resources – includes tree ID sheet  
<https://www.tcv.org.uk/scotland/dead-good-deadwood-survey/>

Woodland Trust Tree Tools for Schools – includes ID sheets  
<https://www.treetoolsforschools.org.uk/menu/>

OPAL invertebrate ID guide PDF

### Equipment

- TCV Deadwood survey sheets, if using (see resources)
- tree and Invertebrate ID sheets (see resources)
- Pencils, clipboards
- Magnifying glasses

## LEARNING INTENTION

To give young people a good scientific understanding of how trees function and how important they are to the climate and biodiversity. This includes investigative science skills such as different ways to explore and identify different species and conservation.

### Overview

Within the Science section of our Learning for Trees Learning Materials there are three Learning Activities. These activities take learners on a journey of appreciating the biodiversity found in a single tree or group of trees, what that means for nature and our forests' resilience, and also why it is important to have commercial forestry.

**Learning Activity 1** asks learners to investigate a single tree and create a thorough list of species that live on, around, or in the tree. This is an opportunity for learners to expand their knowledge of local wildlife by using identification guides at a level appropriate for them.

**Learning Activity 2** is a short activity demonstrating the importance of biodiversity and its impact on resilience. Learners will use groups of items such as coloured pencils to visualise how native and commercial woodlands can be affected by disease or climate change. This can be an opportunity to start increasing the biodiversity of the school grounds.

**Learning Activity 3** asks learners to consider what benefits native and commercial forestry give to us, nature, and the country. This is a subjective task and is suited to group discussions where learners can appreciate both forest types, with an understanding that commercial forestry must not be created at the expense of our native forests.

## WATCH TREES

All lessons are linked to the Trees Film



### POINTERS FOR TEACHERS:

We use both the terms 'woodland' and 'forestry' here. A forest has a higher density of trees and less natural light, whereas a woodland is more spacious. You may wish to share these definitions with your pupils, but explain that both terms are talking about areas with lots of trees.



# LEARNING ACTIVITY



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**TREES AND LIFE:  
SPRING TO LATE AUTUMN**



## Info

One tree can support a huge number of living things including invertebrates (including pollinating insects), birds, plants, lichens and fungi. Although we will only see a small fraction of these at any one time, we still want to give our learners an understanding of how important our trees are in terms of biodiversity.

## Activity

The learners will count and note how many living things they can find around a tree. Three groups are best for this activity; they should have at least 10 minutes for each activity and to report back. You can count and identify species at the level appropriate to the group – this activity can be done with younger and older learners. See ID resources to support identification. At the end, explain what biodiversity is and relate it to what they have found.

**Task 1:** In the Tree – Look into any holes the tree may have, and also give tree beating a go: <https://www.rspb.org.uk/fun-and-learning/for-families/family-wild-challenge/activities/shake-a-tree/>.

**Task 2:** Around the Tree – How many different living things can the learners count/identify around the tree, both on the ground (anything within arm's reach of the tree will count), within leaf litter or under stones, or even any minibeasts which are flying around the tree?

**Task 3:** On the Tree – How many living things, touching the tree, can the learners count/identify? This will include moss, lichens, climbing plants (ivy or honeysuckle), birds, and minibeasts.

**Extensions:** Repeat the activity around a man-made object (lamppost or fence), or a non-native conifer tree.

# LEARNING ACTIVITY

# 2

## RESILIENCE AND BIODIVERSITY



### Info

A woodland which is more biodiverse will be able to withstand disease, changing climates and invasive species better than woodlands which are less biodiverse. Typically, our native woodlands have a large mix of species, whereas commercial forestry (conifer plantations) have very few species. This has implications for the resilience of those forests, and subsequently also the plants and animals which live there.

### Materials

Multiples of the same item in different colours or shapes – for example: lego or coloured pencils. You should have at least five or six different colours/shapes, with three to five in each colour/shape.

**Task 1:** Explain what biodiversity is by using the definition above and pointing out how your resource is diverse (“Can you see how we have lots of different colours of pencils, with many of each colour? This is a diverse collection of pencils. Imagine that each one is a tree in a woodland, where each blue pencil is one type of tree, and each red pencil is another type, and so on.”)

The learners may want to count and note how many individuals (e.g. pencils), and groups (e.g. colours) they have.



→ *Step 1*

Tell your learners that a disease like ash dieback has removed all of one group of your resource (e.g. all blue pencils). They must collect them and put them aside. How many individuals are left, and how many are gone?

→ *Step 2*

Tell your learners that warmer weather means some of your species are struggling. They have to remove half of their two endangered species (the two groups, e.g. colours, which have the fewest numbers), rounding up. They may want to count how many numbers, and colours, they have left.

→ *Step 3*

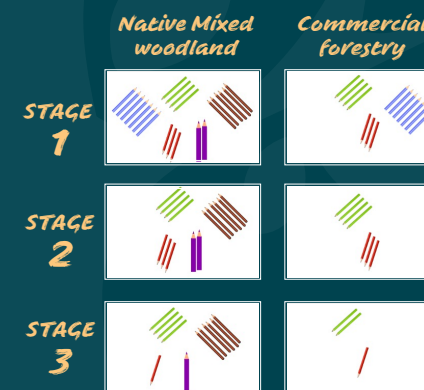
Explain how this could be the same as a woodland which is suffering from disease and a changing climate, but that because we had good biodiversity, the woodland as a whole (i.e. all of your resources as a group) will survive and still provide homes and food to other living things – you can remind the learners of the plants and animals they found in the previous activity.

**Task 2:** Now explain that you will play this game again, except that they can only have three different colours or shapes. You can explain that this is more like commercial forestry, which is often a monoculture (a single species in an area).

Go through the two steps again, counting how many your group start with and finish with and compare the two results. You may find that you lost more individuals from the first round, but there will be more species left overall. You can ask the learners what might happen if another disease or threat were to affect the commercial forestry – would it have many trees left?

**POINTERS FOR TEACHERS:**

You may wish to mention how there will be more threats to our wildlife as climate change progresses, emphasising that a more biodiverse ecosystem will be more able to survive this. You can use this to encourage learners to increase the biodiversity in the school grounds, their gardens, or green spaces in their communities by giving nature space to thrive (bird boxes, bug hotels, native wildflowers, garden ponds, tree planting, etc).





# LEARNING ACTIVITY

## 3

### WHAT DID COMMERCIAL FORESTRY EVER DO FOR US?

#### Info

Although the previous activity demonstrates how vulnerable our commercial forestry is, it is good for learners to understand why Scotland has so much of it and the impact it has on our rural economy. However, the importance of commercial forestry being planted in the right place, and that it should not replace mixed, native woodland or other key natural habitats, should be highlighted.

**Task:** As a class or in groups learners can list things that commercial forests and mixed native forests provides us in two columns. Before the groups get stuck-in, show pictures of a plantation forestry and a mixed broadleaf forest, and identifying local examples if possible.

To help, ask the learners:

- Do you visit nearby woodlands? What do you do there?
- How do you feel when you go to the woods?
- Does anyone know an adult who works with trees? What sort of trees do they work with?
- Will the trees be cut down? What might the trees be made into or used for once cut down?
- What do trees give us while alive?

Some answers you may receive include:

COMMERCIAL FOREST	MIXED NATIVE FOREST
<b>Healthy living:</b> Walking, biking, running, playing, den-building, etc.	<b>Healthy living:</b> Walking, biking, running, playing, den-building, etc.
<b>Wellbeing:</b> Feeling happy, peaceful, playful.	<b>Wellbeing:</b> Feeling happy, peaceful, playful.
<b>Economy:</b> Jobs.	Oxygen, clean air.
Building material or fuel (for fires or biomass boilers).	A lot of nature (these forests are often more established and native).
Oxygen, clean air.	Clean water, flooding prevention.

**Extension:** Get involved with a tree-planting scheme, take a class trip to a local forest, or ask someone who manages or is involved with a local woodland to speak to your class.

### POINTERS FOR TEACHERS:

You may have other suggestions from the learners. What is important to emphasise is that there is more nature found in mixed, native forests, but that the commercial forests are planted to be harvested, so provide jobs and therefore contribute to the economy. There is space for both in Scotland, but commercial forestry covers far more of Scotland than mixed, native forests, which have declined significantly over Scotland's history, and this presents a problem for our natural habitats.

## LEARNING INTENTION

To give young people an understanding of and to fire their curiosity about how trees have been important over time for different cultures and across the world and throughout history, as well today, and their role in the future. To share this research and new knowledge through various methods linked to the literacy skills.

### Overview

The following Interdisciplinary Learning (IDL) Activities are research-based, where learners are encouraged to reflect on their learning so far on trees.

Following this, learners are asked to work in teams to carry out further research about how trees are viewed in different cultures, including spiritual beliefs, across the world, emphasising the Tree of Life.

There is information that can be shared with learners within the IDL Learning for Trees section. Learners are then asked to present their research in the form of either a poster about trees, a news report style roleplay, or a Powerpoint presentation.

The learning materials are designed to be delivered directly to learners with advice for teachers in the section Pointers for Teachers.

### Info

#### Trees are truly remarkable, aren't they?

In many cultures across the world trees were worshipped and respected as life-giving for centuries before science discovered the way in which they relate to our environment. We now know that they are, indeed, life-giving through their ability to absorb carbon dioxide and emit oxygen, and we know they do this through the process of photosynthesising the sun's rays through their leaves and drawing up the earth's water through their roots. People knew that trees were special and they prayed to them, worshipped them, thanked them and meditated under them. People knew trees were good for wellbeing, they knew they were life givers, not just to humans, but to thousands of insects, birds and animals throughout the trees' lifetime, which for native trees can be over a thousand years. Even after they die, they fall back into the earth and continue to provide habitats, representing the cycles of life, death, regeneration and life again.

## WATCH TREES

All lessons are linked to the Trees Film



## POINTERS FOR TEACHERS:

Through these activities it will become clear how much information and knowledge about trees the learners have gleaned from the science lessons. The activities aims to be fun and accessible to all learners and their learning styles. However, skills may need to be scaffolded in order to achieve these outcomes for instance how to create a powerpoint, empowering the learners to have the confidence to perform in front of an audience, project their voice and work collaboratively.





In ancient times and even today in some cultures, trees have been given different meanings. These meanings relate to the nature of the tree; what it looks like, how it grows, the biodiversity it supports and its special characteristics. See below for some of the meanings:

**Ash Tree** – Known in Norse mythology as Yggdrasil, or 'Tree of the World', as their mythology held that a giant ash tree linked and sheltered all the worlds. Today we understand through science about the different habitats created by these trees, with many varieties of insects, birds and animals supported by the ash tree; it is indeed the Tree of the World or Tree of Life.

**Silver Birch** – As the glaciers of the last ice age receded it was the birch tree that was first to re-establish itself. This is why ecologists refer to birch trees as a pioneer species. In Celtic mythology the birch with its silver bark, is seen as a tree of purification and new beginnings. It was also celebrated at the Celtic festival of Samhain.

**Aspen Tree** - In Celtic mythology, the visual effect of an aspen trembling in the wind was said to be the tree communicating between this world and the next.

**Rowan Tree** – The rowan tree is also talked about as The Tree of Life, and was often planted outside houses as it was believed to protect places and people from evil spirits.

**Oak Tree** - Oak trees are important in many cultures and spiritual practices. In Scotland, Ireland, areas of England and France, the druids (wise

man and women of Celtic society in times gone by) believed that oak trees were sacred and came directly from heaven. They performed religious rituals under them, climbed them to collect their leaves and fruits for medicines, and believed these trees had healing powers. In England the oak tree is associated with the Green Man stories.

In Baltic and Slavic mythology it was believed that some of the gods they worshipped lived in oak trees and they had holy places in oak Forests. For them oak Trees symbolised the living world, while the root system symbolised the underworld.

**The Banyan Tree** - Another tree known as the Tree of Life, the banyan tree is highly revered in Hinduism. In this religion trees are viewed as living beings which experience emotions such as happiness and sorrow. As Scientists undertake research into how trees communicate they are catching up with some of these old belief systems discovering that in fact this is actually true. Hindus also believe each tree has a tree deity (god or goddess) who is worshipped and people would bring offerings to.

**Nearly every culture has some folklore or mythology about the 'Tree of Life'.** The stories may vary slightly, but the meaning is the same; trees should be appreciated, looked after and we should be grateful to them. Most trees given the cultural label of 'Tree of Life' are trees native to that country as they are most at home and flourish in the soil and climate. Therefore the 'Tree of Life' is always a native tree.

## THE TREE OF LIFE



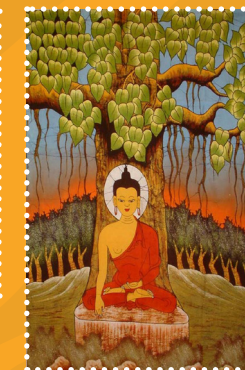
Celtic Tree of Life



Norse Yggdrasil depiction from 1847



16th century Tree of Life, South India



Buddhist depiction of the Tree of Life

# LEARNING ACTIVITY

# 3

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**RESEARCH MORE ABOUT  
TREES IN DIFFERENT  
CULTURES ACROSS THE  
WORLD**

## Activity

Research more about the different trees mentioned in the film and share your research with the class through one of the following methods/outcomes:

**Task 1:** A poster all about trees - use drawing and your very best handwriting to share with others what you have found out about all the different trees you have been researching.

**Task 1:** Role play - working as a team create a performance or short live news report about trees; this could be about the tree's personality or the science behind trees and how they work. You could have some of your group being trees or each person reporting on different tree types.

**Task 3:** Powerpoint presentation - working in teams, present your research to the class with film clips, images, diagrams, sound and facts; remember to include the tree stories and the science behind how trees work. You might have different members of your group researching different trees. (Scaffolding skills: How to create a Powerpoint, how to present information in images and words.)

## LEARNING INTENTIONS

To use drawing and the expressive arts to share what young people are learning about trees and how they work. The idea is that learners use their imagination to celebrate the beauty, functionality and power of trees.

### Overview

Within the Expressive Arts section of our Learning for Trees Learning Materials there are three Learning Activities. The activities relate to previous learning about trees in Outdoor Learning, Science and IDL - RME/Literacy. The learning materials are written to speak directly to learners with 'Pointers for Teachers' section to offer advice to teachers.

**The 1st Learning Activity** is to design a tree (including the root structure). After learners have designed their tree, they can use annotated notes to show how much they have already learned about the science of trees and how trees function.

**The 2nd Learning Activity** explores how other artists have been inspired by trees and shows examples of famous paintings of trees. Then the learners are asked to create an expressive, imaginative painting of their own of the 'Tree of Life'.

**The 3rd Learning Activity** is to research the ephemeral (temporary) artworks made from autumn leaves by artist Andy Goldsworthy. Then learners are asked to create their own leaf artworks in an outdoor learning area or community woodland.

## WATCH TREES

All lessons are linked to the Trees Film



## POINTERS FOR TEACHERS

You may want to show the 'Trees' film at the beginning of the Design a Tree Challenge or show images of how the 'Tree of Life' is portrayed in different cultures, etc. To get the best results, encourage learners to embed their learning about trees into their design but also encourage them to be imaginative. If the tree is a rainbow-coloured tree then that's fine, or if it talks or sings that's also fine. It should be playful and fun but also embed the learning so far. Ideally, everyone's trees will be different, just like each learner is unique and different from each other. No tree is the same (I sometimes say this at the end of the lesson).

# LEARNING ACTIVITY

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## DESIGN A TREE FOR THE FUTURE



### Info

Remember all the amazing things you have already learned about trees? Now you know about trees combatting climate change and creating a healthy environment for all life on earth. You know the things trees need in order to help support many different lifeforms, as well as each other. Your teacher will show you some images of how trees and particularly the 'Tree of Life' are important in different cultures and spiritual beliefs around the world and how they appear in those cultures.

**Task 1:** Working individually or as part of a team, on an A3 sheet and using pencils and coloured pencils or felt tips, create a 'tree for the future'. First discuss all the amazing things trees do and then work on A2/A1 paperwork together to design a 'tree for the future'.

**Task 2:** When designing the tree try to include all the incredible things trees do such as taking in carbon dioxide and releasing oxygen into the environment. Fill the paper with your tree and remember to include the trees root system so your drawing shows how the whole of the tree works. What life/biodiversity will your tree support? You can show this in your drawing? Also, you or your group might use notes to describe how your tree works and how it connects to the environment through sunlight and water.

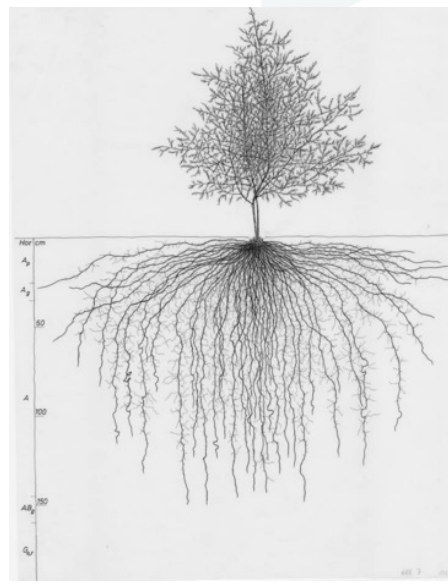
**Task 3:** Does your tree have a personality and feelings? Can you communicate this through the way you draw it, the type of lines and colours you use? Be as imaginative as you can - there are no rules in art!!



**Extension:** Design a forest/woodland area. What kind of trees will there be in your woodland? Are they native or non-native trees? Or coniferous trees? Your forest/woodland may be for a real place near your school or even in your school grounds.

Did you know that through the ground and the inter-connected web of roots, trees are said to communicate with each other? In fact, there is emerging research that there is a 'mother' tree that sends messages to the trees around it, distributing water and nutrients to younger trees.

Examples of tree drawings in various styles, showing root systems and foliage:



# LEARNING ACTIVITY

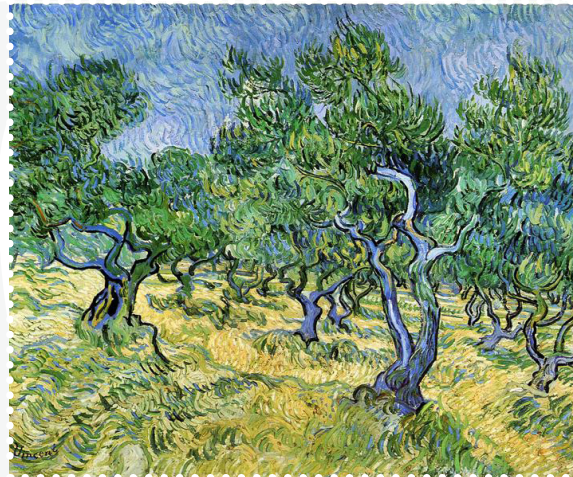


.....  
VIEWING AND DISCUSSING  
PAINTINGS AND CREATING  
YOUR OWN VERSIONS

## Info

How do artists depict and respond to trees in their artwork?

Artists through time have been inspired by the character, energy and visual qualities of trees.



Vincent Van Gogh used oil paints, water colour and line drawing to create artworks depicting the French landscape. The vibrant, surreal colours express emotion, bringing the landscape to life, the olive trees in this painting look like they are moving across the land towards us.

Van Gogh led this style of artwork called "Expressionism".

Olive Grove by Vincent Van Gogh, 1889



Gustav Klimt created a decorative style of 'Tree of life' using oil paint in gold hues. Inspired by the 'Tree of Life', it has two female figures on either side of the painting. If you look carefully you can also see a blackbird and mushrooms within the tree's design.

Klimt was a key artist in the 'art nouveau' movement.

The Tree of Life by Gustav Klimt, 1905

Your teacher will show images of tree-inspired paintings on a large screen and will have class discussions about the scale of the paintings, the materials used, the scale of the paintings, when they were created, what art movement the paintings are linked to and what the artist was trying to convey through their work.

**Task 1:** Research Gustav Klimt's 'Tree of Life' (1905) and Vincent Van Gogh's 'Olive Grove' (1889) and discuss the scale....

**Task 2:** Now you know more about these tree-inspired art works, choose your favourite and experiment and explore the painting techniques the artist used to create the artworks. Find a tree that inspires you and do some pencil sketches of the tree. You can create a small sketch book for this experimental work.

**Task 3:** In a second session create a painting using similar painting techniques to your favourite of these artists' work using poster paint or acrylics on white card (A3)

**Extension:** To experiment with paint to create your own painting style and your own Tree of Life inspired artwork. The paintings we have researched were created over 120 years ago, before people knew about the science of trees and how they work, and well before we were aware of the 'climate crisis'. Often trees were depicted on the land but we didn't see their roots or the life they support.

Let the knowledge you now have about trees inspire your artworks and create an imaginative 'Tree of Life' artwork relevant for 2023.

## POINTERS FOR TEACHERS

Take one of the learners's sketches of their favourite tree from the first session then do a demonstration for Van Gogh and for Klimt's painting technique for your learners. Encourage the learners to be brave and that nothing is ever wrong in art! Emphasise and encourage individual responses to the artworks so everyone's painting is unique and different. We suggest the learners work on card as paper would buckle with experimental painting.



# LEARNING ACTIVITY



.....  
**NATURE ART - BEST CARRIED  
OUT IN AUTUMN**



## Nature Artist

Andy Goldsworthy uses nature as a medium to his art. He creates artwork in the environment, playing with colour, line, texture, contrast, light and shade to create beautiful ephemeral (temporary) artworks that make us look at nature more closely and notice its beauty. Many people see Andy's work through photographs he takes of these temporary artworks. Much of his temporary work is created near his home in Dumfries and Galloway.

Andy works all over the world in cities like Hong Kong, London, Berlin and New York, bringing nature into galleries through his photographs.



'Green to Yellow Leaves' by Andy Goldsworthy



'Sycamore Tree', Andy Goldsworthy, 2013.



Your teacher will share with you some images of Andy Goldsworthy's ephemeral abstract artworks created using autumn leaves.

**Task 1:** You can have a whole class discussion about the materials used and how Andy uses colour, composition and line in his artworks.

**Task 2:** Go into an area of woodland, or the playground if you have a nature area, and create your own leaf-inspired artworks. Either work alone or in groups, working in groups will enable you to create larger artworks.

**Task 3:** Once you have completed your work, borrow the school camera or ipad and take some photographs of the nature artwork. Does it look better as an images than it does in real life?

**Task 4:** Have a walk around the woodland area looking at everyone's artworks and reflect on how they make you feel. Do they use contrast and colour? Are you really painting with leaves?

### POINTERS FOR TEACHERS

Encourage learners to work in the abstract like Andy Goldsworthy as this will be better for their learning and allow them to really observe nature while creating the artwork rather than creating a 'thing'. A fun activity at the end of the lesson is to ask the learners how they felt while making the artworks (usually they will say happy or relaxed, as they are in nature). You might want to emphasise that they can make nature art anytime or just go into nature to relax and feel rejuvenated.