Schools Tree Day

Schools Resource Pack
On behalf of the Forest Education Foundation and Sustainable Timber Tasmania, we would like to thank you for participating in Schools Tree Day 2020. We are excited to be able to celebrate this wonderful event with you and your students. We hope this experience will provide your students with the opportunity to make a positive contribution to their local school environment and learn more about trees - how they grow and change, the resources they provide, and the people who work in the forest and forest industry.

This resource pack is a snapshot of different activities that can be found within the Forest in a Box resource kits. Activities include suggested curriculum links, a series of guided questions and explorations, as well as print and online resource material. Each activity will encourage your students to explore the features of trees in their own school yard and think on a deeper level about their discoveries - how are all of the features of an ecosystem connected? What role do trees play in our everyday life? What choices and actions can we make for a sustainable future?

For more information about the Forest Education Foundation and the programs and resources we provide, visit our website: [http://www.forest-education.com/our-programs/](http://www.forest-education.com/our-programs/)

## Contents

<table>
<thead>
<tr>
<th>Activity</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adopt a Tree</td>
<td>3</td>
</tr>
<tr>
<td>Parts of a Tree</td>
<td>5</td>
</tr>
<tr>
<td>Habitat Tree</td>
<td>7</td>
</tr>
<tr>
<td>Leaf Detective</td>
<td>10</td>
</tr>
<tr>
<td>Trees and Me</td>
<td>12</td>
</tr>
<tr>
<td>Planting your Seedlings &amp; Species List</td>
<td>13</td>
</tr>
</tbody>
</table>
## Adopt a Tree

### Curriculum Links

<table>
<thead>
<tr>
<th>EYLF - Outcome 2</th>
<th>Science - Foundation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Explore relationships with other living and non living things</td>
<td>Living things have basic needs, including food and water (ACSSU002)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Science - Year 1</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Living things have a variety of external features (ACSSU017)</td>
<td>Science - Year 2</td>
</tr>
<tr>
<td>Living things live in different places where their needs are met (ACSSU211)</td>
<td>Living things grow, change and have offspring similar to themselves (ACSSU030)</td>
</tr>
</tbody>
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<table>
<thead>
<tr>
<th>HASS - Year 1</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>The natural, managed and constructed features of places, their location, how they change and how they can be cared for (ACHASSK031)</td>
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</tbody>
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### Learning Intentions:

Students observe and identify the features of trees and how they grow. Students identify the ways trees can meet the needs of other living things.

Providing active and experiential learning opportunities in nature is vital for Early Years students to develop care, curiosity and begin to pose questions about forests. Adopting a tree encourages students to make a personal connection and experience hands on discovery, to engage their five senses.

### Tuning in:

Ask students: What do you know about trees? We are going to adopt a tree here at school and learn all about how it grows and changes. Ask your students to choose a tree in your school yard. Students will adopt this tree for the length of your unit. Smell, touch, listen and look closely at your tree and its surroundings.

### Guiding questions:

- What words can you use to describe the tree?
- Why are trees important?
- What kinds of animals are living in or around your tree?
- What other living things need trees to survive?
- How are trees connected to non-living things?
- How are people connected to trees?
- Is your tree alive? Is it healthy? How can you tell?
Taking your learning further:

- Draw a picture of your tree from different positions/angles.
- Make a bark rubbing. How does your tree’s bark feel? Why is bark important?
- Who might use your tree? Use the picture books provided to follow up and identify the local wildlife that might interact with your tree. Do they live in the tree or do they eat it?
- Think about the parts of the tree and explore with students how each part helps the tree stay healthy and grow.
- Draw a picture of a leaf from your tree. Does it smell? How does it feel? Why might they be the shape they are?
- Write a descriptive sentence about the tree.
- Where is your tree? Create a map to show its location.
- Find out what type of tree it is? Does it have fruit, seeds, flowers or any features that will help you identify it?
- Visit your tree multiple times and observe the changes each visit. Record the changes to your tree. When do flowers or fruit start to appear? Do its leaves drop or change colour?
- Write a paragraph or poem describing your tree.
- Represent your trees connection to other living things in a role play or model.
- Write a story about the life of your tree and the living things that rely on it to survive.
Parts of a Tree

Tuning in:

Ask students: What do you know about trees? What do all trees have in common? How are they different?

Let’s find out:


Guiding questions:

- How do different parts of the tree support each other?
- Why is it important that all parts of the tree are healthy?
- Do all seedlings grow into mature trees? Why or why not?
- How does a tree change over its life? How are a seedling and mature tree different? How are they the same?

Find out more:

- Visit different trees in the school playground. Make observations about the main parts of the tree.
- Collect leaves from different trees (look in the leaf litter under the trunk)- How are the leaves the same? How are they different?
- How do people use different parts of trees in their every day lives?
Leaves
Plants are able to make their own food, by taking in energy from the sun, through their leaves, to help them grow. Just as a King wears a crown on his head, the top of a tree is called a crown. The crown can tell you a lot about the health of a tree.

Flowers / Fruit
The flowers/fruit help a tree to grow, change and to create new plants. Eucalyptus flowers hold nectar, which is food for insects, birds and small mammals. By feeding on the nectar these living things help pollinate the flower. Pollination is an important part of creating healthy seeds.

Branches
The branches of a tree help the leaves reach out and stretch towards the sun.

Trunk
The trunk of a tree holds it tall and straight.

Bark
The bark of a tree helps to protect the tree, just like our skin protects us! The bark protects the tree from the heat of the sun and drying winds. It also prevents damage from fungi, insects and mammals.

Roots
Roots take in water and nutrients from the soil and hold the tree in the ground. While we might not be able to see them the roots of a tree can be as long as the tree itself.

Seed
A tree begins its life as a seed. One tree can drop hundreds or even thousands of seeds. A seed needs food, water, space and sunlight to grow. Not every seed will become a mature tree.

The different parts of a tree help it to meet its needs and stay healthy.
Habitat Trees

Tuning in:
Ask students: What do living things need to survive? What is a habitat? Why are habitats important?

Let’s find out: A habitat is a home for living things- a place that provides them with food, water, shelter and space. Trees are important habitats for a wide variety of animals in Tasmania- from a tiny ant to the huge Wedge-tailed Eagle. Use the What is a Habitat Tree? resource for more detailed information.

Visit some trees in your school playground- What evidence can you see of something living in or around the tree?

Learning Intentions:
Students identify the interconnections between trees and the other living parts of an ecosystem.
Students explore basic needs of living things and how trees can meet these needs.

Curriculum Links

<table>
<thead>
<tr>
<th>Science - Foundation</th>
<th>Year 4- Science</th>
</tr>
</thead>
<tbody>
<tr>
<td>Living things have basic needs, including food and water (ACSSU002)</td>
<td>Living things depend on each other and the environment to survive (ACSSU073)</td>
</tr>
</tbody>
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<table>
<thead>
<tr>
<th>Year 1- Science</th>
<th>Year 4- HASS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Living things live in different places where their needs are met (ACSSU211)</td>
<td>The importance of environments, including natural vegetation, to animals and people (ACHASSK088)</td>
</tr>
</tbody>
</table>

Feathers or fur | Scat (Animal droppings) | Scratch marks on the trunk or branches |
|----------------|------------------------|-----------------------------------|

Animal tracks | Leaves have been chewed (look at the edges of leaves in the leaf litter as well those on the plant) | Nests or hollows |
Habitat Trees

Guiding Questions:
• Which parts of the tree could be used for shelter?
• Which parts of the tree could provide food to other living things?
• Do all animals living in a tree eat parts of a tree—leaves, flowers, shoots? If not, how else can the tree help to meet their needs?
• Did you see any living things in or around the tree? How might other living things depend on these animals for their survival?
• Why is it important that all parts of the tree are healthy?
• How can trees still be important habitat, even when they have died or fallen to the forest floor?

Taking your learning further:
Research a native Tasmanian animal species that lives in a forest environment.
• What does it eat? Is it a herbivore, carnivore or omnivore? Does it eat parts of a tree?
• Where does it live? Is it usually found in a Wet Eucalypt Forest, Dry Eucalypt Forest or Cool Temperate Rainforest?
• What type of trees does it live in? Small, bushy shrubs in the understory or perhaps a tall tree in the canopy.
A habitat tree is often a mature to old tree, which contain hollows, cracks and crevices of various sizes that are likely to be used by animals. Habitat trees create nesting sites for many different animals to live, shelter or breed in. They also provide the conditions for other plants and fungi to grow. The best habitat trees can take years to grow and form.

**Hollows**
Tree hollows come in all shapes and sizes, including, circular openings on the trunk of a tree and a small crack at the base of a branch. In Tasmania there are a number of animals that rely on hollows to survive and reproduce, including, owls, marsupials and bat species. The type of animal that uses a hollow depends on the size of the opening, the height and specific location on the tree.

**Leaves**
Leaves provide a primary source of nutrition for many different herbivorous animals in a forest. Insects can also use the leaves as site to lay their eggs or seek shelter from predators.

**Dead Branches**
Dead branches provide birds with a site for roosting, sunning and preening. It also allows them a lookout site to watch for prey and protect themselves, if suddenly approached by predators.

**Large Trunks, Bark and Branches**
Many different animals use the trunk of trees and branches as a hunting site, others seek refuge in the bark, or hollowed out trunks.

**Food for Wildlife**
Habitat trees provide food sources for many different living things. Animals can consume the nectar, pollen, sap, fruit, leaves, seed, wood and leaf litter of trees.
The leaves of a tree tell us a lot about the conditions it grows in. In fact, by looking at the features of many Tasmanian plant species you can sometimes determine which forest type they grow in. Every leaf gives us clues about where it lives and the conditions it must adapt to, in order to survive.

Ask students: What features might we look for to discover where the plant is growing?

Let’s find out: Using the *Forest Types of Tasmania* resource provided, observe the features of each main forest type. Brainstorm the features of the three main forest types and the challenges that plants may have in those environments. For example, Dry Eucalypt Forest - lots of browsing mammals, Wet Eucalypt Forest - dark, wet conditions.

- Ask students: What might be the challenge for a plant living in these conditions?
- Select a plant to observe and explore as a group. Encourage students to look closely at the specimen or image.
- Ask students: What do you notice about the leaves of this plant? What might this tell us about where it lives? How is it adapted to its environment?

Taking your learning further:
- Using the Schools Tree Day species list on page 13, research the adaptations of the different tree and shrub species.
- Collect 10 different leaves. Create a classification system based on observable characteristics.
- Explore the other parts of the plants and how they might be adapted to the conditions.
- Consider the following adaptations and how they can help a plant to survive:

<table>
<thead>
<tr>
<th>Thorns</th>
<th>Large, broad leaves</th>
<th>Hard, woody seed capsules</th>
<th>Small, prickly leaves</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bright, sweet smelling flowers</td>
<td>Thick bark</td>
<td>Deep root system</td>
<td>Waxy leaf surface (cuticle)</td>
</tr>
</tbody>
</table>
Dry Eucalypt Forest
Canopy: Open canopy with multi-aged eucalypts.
Understorey: Almost non-existent with hard leaved plants.
Ground Level: Short, sharp prickly plants, including, lots of flowering plants and grasses.
Forest Floor: Crunchy, thin dry leaf litter. Exposed rocks and bare soil.
Soil: Generally dry, rocky with low nutrients.
Sunlight: Lots of sunlight reaching ground level.
Wind: More space for wind movement.
Rainfall: Less than 1000mm per year.
Fire: Low intensity, frequent fires.

Wet Eucalypt Forest
Canopy: Thick canopy with tall, even aged eucalypts.
Understorey: Dense understorey with soft, broad-leaved plants.
Ground Level: Soft ferns, mosses and lichen.
Forest Floor: Thick, moist leaf litter, fungi and rotting logs.
Soil: Generally fertile and rich in nutrients.
Sunlight: Little sunlight reaching ground level.
Wind: Sheltered from wind movement.
Rainfall: Between 1000-1500mm per year.
Fire: High intensity, infrequent fires.

Cool Temperate Rainforest
Canopy: Thick canopy with few or no eucalypts.
Understorey: Understorey plants vary greatly in Rainforests. The understorey can be tangled and dense or sparse and open.
Ground Level: Lots of mosses, ferns and lichens.
Forest Floor: Soft damp leaf litter, fungi and rotting logs.
Soil: Very moist, fertility depends on the dominant tree species.
Sunlight: Very little sunlight reaching ground level.
Wind: Sheltered from wind movement.
Rainfall: Greater than 1200mm per year.
Fire: Not adapted to fire.
Trees and Me

Curriculum Links

<table>
<thead>
<tr>
<th>HASS - Year 4</th>
<th>HASS - Year 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>The use and management of natural resources and waste, and the different views on how to do this sustainably (ACHASSK090)</td>
<td>The environmental and human influences on the location and characteristics of a place and the management of spaces within them. (ACHASSK113)</td>
</tr>
</tbody>
</table>

Science- Year 8
Some of Earth’s resources are renewable, but others are non-renewable. (ACSSU116)

Learning Intentions:
Students explore the importance of forest landscapes.
Students explore the ways that people are connected to forests.

Forests are an important part of the Tasmanian landscape - covering almost one half of the state. They are important to people in a number of different ways. For some people, being in a forest can make them feel inspired, connected to nature or just simply relaxed. For others, the forest is a fun place to enjoy camping, hiking or bike riding with friends and family.

Forests are places of cultural importance to the Indigenous Australians who are connected to them, both physically and spiritually. They are important to local communities and bring people together. Forests can be managed to provide wood products today and into the future.

Let’s find out:

- Explore the environmental benefits of trees in the landscape. Some key areas to explore include; soil health, water quality, oxygen and carbon cycles, and habitat.
- Trees provide people with natural, renewable resources. Brainstorm all of the things you use in everyday life that come from a tree. Don’t forget products made from fibre - paper, toilet paper and tissues.
- Discuss positive actions and choices people can make for forests and their future. Explore the term sustainable in regards to forests and their management.
- Brainstorm all of the careers related to forests - don’t forget the people who work with forest products!

Guiding Questions:

- How are you connected to forests?
- Why are forests important?
- Why are people’s connections to trees and forests different?
- What are the advantages of using wood products over other resources, such as plastic or metal? Have you ever built something made from wood?
- What is your role in the future of forests?
Planting your Seedlings

Where will you plant?
Choosing the right site for your seedlings is very important. Some things to consider include:
• Temperature- Will the seedlings receive lots of sunlight during the day?
• Is the soil moist or dry? Is there easy access to water?
• Are there weeds or other trees growing nearby?

Can you think of any more?

Why are you planting?
Think about why you are planting your seedlings.
• Do you want to create shade? Do you want to attract wildlife to your school playground?
• Do you want to protect the sand pit from the wind or create an outdoor learning space?

What seedlings are you planting?
Learn a little more about the trees and shrubs you will be planting.
• The Species Cards provided give you an overview of the ideal growing conditions, uses and size guide.
• Find out where the species naturally grows. Is it a Tasmanian native species?

How will you plant and protect your seedlings?
Preparing the site for planting helps give the new seedlings the best chance to grow.
• What steps will you need to take to prepare the soil and remove weeds?
• How will you protect your seedlings from browsing mammals, like wallabies?
• Ensure you provide plenty of water and be sure to organise someone to water your seedlings over the holidays.

<table>
<thead>
<tr>
<th>Shrubs</th>
<th>Trees</th>
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<tbody>
<tr>
<td><strong>Lemon Bottlebrush</strong></td>
<td><strong>Tasmanian Blackwood</strong></td>
</tr>
<tr>
<td><em>Callistemon pallidus</em></td>
<td><em>Acacia melanoxylon</em></td>
</tr>
<tr>
<td><strong>Hop Bush</strong></td>
<td><strong>Silver Gum</strong></td>
</tr>
<tr>
<td><em>Dodonaea viscosa</em></td>
<td><em>Eucalyptus cordata</em></td>
</tr>
<tr>
<td><strong>Mountain Bottlebrush</strong></td>
<td><strong>Bull Oak</strong></td>
</tr>
<tr>
<td><em>Callistemon viridiflorus</em></td>
<td>*Allocasuarina littoralis</td>
</tr>
<tr>
<td><strong>Slender Honey-myrtle</strong></td>
<td><strong>White Peppermint</strong></td>
</tr>
<tr>
<td><em>Melaleuca gibbosa</em></td>
<td><em>Eucalyptus pulchella</em></td>
</tr>
<tr>
<td><strong>South Esk Pine</strong></td>
<td><strong>She Oak</strong></td>
</tr>
<tr>
<td><em>Callitris oblonga</em></td>
<td><em>Allocasuarina verticillata</em></td>
</tr>
<tr>
<td><strong>Scented Paperbark</strong></td>
<td><strong>Mugga Ironbark</strong></td>
</tr>
<tr>
<td><em>Melaleuca squarrosa</em></td>
<td><em>Eucalyptus sideroxylon</em></td>
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</table>