

Activity 1

Detectives in the woodland – Investigating biodiversity

Suggested approach

- Students work in pairs.
- Students construct and use their own method of recording – using the 'Table of clues', is one option.
- Students may need ideas for clues. Examples include nests (birds and invertebrates), feathers, animal droppings, footprints and tracks, borer holes, spider webs, marks on leaves (include anything different from 'normal' leaf appearance), cocoons, reptile skins, animal fur and invertebrate exoskeletons.
- Students compile a class list of all evidence or animals seen and construct a column graph showing the number of different clues found in the tuart and non-tuart habitats. Prompt students to suggest reasons why biodiversity is greater or less in a particular area and why it is important to retain biodiversity.

Curriculum links

Science
Life and Living

Society and Environment
Investigation, Communication and Participation

Mathematics
Measurement

Activity 2

Saving tuart woodlands – Writing

Who am I in the tuart woodland? – Research

Resources available in libraries or by contacting the Department of Environment and Conservation on (08) 9334 0481 or by email (customer.service@dec.wa.gov.au):

- Bush Books – pocket-sized guides to flora, fauna and fungi of Western Australia with coloured photographs. Suitable for all learning levels.
- *LANDSCOPE* magazine

Curriculum links

English
Listening, Speaking, Viewing, Reading, Writing

Science
Life and Living

Society and Environment
Active Citizenship

Animals associated with tuart:

Reptiles and amphibians– Southwestern spiny-tailed gecko, marbled gecko, king's skink, javelin legless lizard, carpet python, black-striped snake, banded sand snake, turtle frog, sandplain froglet, slender tree frog.

Mammals – Brushtailed phascogale, quenda, honey possum, western ringtail possum, western bush rat, Gould's wattled bat, white-striped freetail-bat.

Birds – Australian kestrel, brown goshawk, Carnaby's cockatoo, red-capped parrot, regent parrot, boobook owl, sacred kingfisher, rainbow bee-eater, striated pardalote, weebill.

Activity 2 (continued)

What will happen to me? – Creative writing

Alternatives

Students may wish to:

- write a poem,
- display their story as an illustrated children's book, or
- design a comic strip.

I want to make a change! – Writing letters

Extension

Students can conduct research into the different levels and responsibilities of government to find the most appropriate department or person to send their letter to.

Activity 3

How to grow a tuart tree in your classroom – Group activity

Suggested approach

- In addition to the brainstorming exercise, students may wish to conduct research on 'Leaf Themes'.
- Examples of leaf text may be:
 - Aboriginal culture – camping and hunting
 - Aesthetics and spirituality – appreciating natural beauty
 - Art and craft – drawing and painting natural woodland scenes
 - Health and recreation – bushwalking and orienteering
 - Historical use – timber for transport
 - Language – writing skills (stories and research)
 - Science and biodiversity – relationships in nature, protecting rare and threatened species
 - Society and environment – conservation of natural resources.

Curriculum links

The Arts
Arts Ideas
Students generate arts works that communicate ideas.

English
Listening, Speaking, Viewing, Reading, Writing

Society and Environment
Active Citizenship



Activity 1

Detectives in the woodland

Investigating biodiversity

The tuart woodland supports thousands of different species of mammals, birds, reptiles, amphibians and invertebrates. Many of these we do not notice, because they may be resting, hiding, hunting or just very well camouflaged!

Just as we leave footprints in beach sand and fingerprints on objects we touch, other animals leave evidence of their living, feeding or travelling habits. By searching for these 'clues', we can find out how diverse the animal population is in areas without actually seeing any animals!

For this activity, you will be investigating two different habitats – a grassy area on your school grounds (containing no other plants) and a tuart tree or area of tuart woodland. To make the investigation valid (fair), the areas should be of similar size and should be visited at a similar time of the day.

1. You will need:

- magnifying glass
- pencil
- clipboard
- table of 'clues'
- grassy area in your schoolyard
- a tuart tree or small area of tuart woodland (if available)



2. **Before you start your detective work**, your teacher will discuss with the class all the different 'clues' you may come across during your investigation.


3. **Design a way to record your findings.** You may use the table shown below as a guideline.

Label one as tuart and one as non-tuart. In each square, write down a different 'clue'.

Leave some space for a small sketch and some notes.

The notes may include where you found the clue and what animal you think left the clue.

Table of clues (example)

Marks left by leaf-miner 			
Notes: Found in tuart leaf-litter.	Notes:	Notes:	Notes:

4. **Find as many clues (and animals if possible) as you can in each habitat area.** Suggest what type of animal may have left the clue. Remember, a good detective leaves no trace so tread carefully in areas of natural bushland. If possible, keep to tracks or paths provided to avoid trampling on small shrubs.

5. **Discuss your findings with your class.** First you may wish to compile your results and then compare the biodiversity of the different habitats.



Who am I in the tuart woodland?

Research

Choose a tuart woodland animal from those shown on the poster or suggested by your teacher. You may wish to use the following questions to direct your research and then make notes.

1. What am I?
2. What do I look like?
3. What do I eat?
4. Why do I like the tuart tree or woodland as my home?
5. Other interesting facts.



Information can be found on the Treasure the tuart poster, on the NatureBase website (www.naturebase.net/tuarts) or Perth Zoo's website (www.perthzoo.wa.gov.au).

What will happen to me?

Creative writing

Imagine you are an animal that lives in a tuart woodland. One morning you are disturbed by the noise and sight of earthmoving equipment – bulldozers, graders, excavators and dump trucks. Your precious home is going to be cleared for a new housing development!



Write a short story about yourself as your chosen animal (from the research activity). Your story might be about how you survive when the bulldozers arrive or your life after the tuart woodland has been cleared. Be imaginative but remember you need to reflect the true nature of the animal in your story.

I want to make a change!

Writing letters

When areas of land are cleared for housing, native vegetation is often removed. This did not happen 25 years ago. Before the mid 1980s many large, local native trees such as tuart, jarrah and marri were left standing. Many home owners living in the older suburbs on the Swan Coastal Plain are lucky enough to have large, old trees in their backyard. These days, new housing developments are virtually treeless and can be distinguished by a 'sea of rooftops'. This land clearing is detrimental to the ongoing survival of our native flora, fauna and fungi, and biodiversity of the area.



Write a letter to your local member of government. You may wish to brainstorm some ideas with your class members about how you could reduce this problem and help protect large areas of

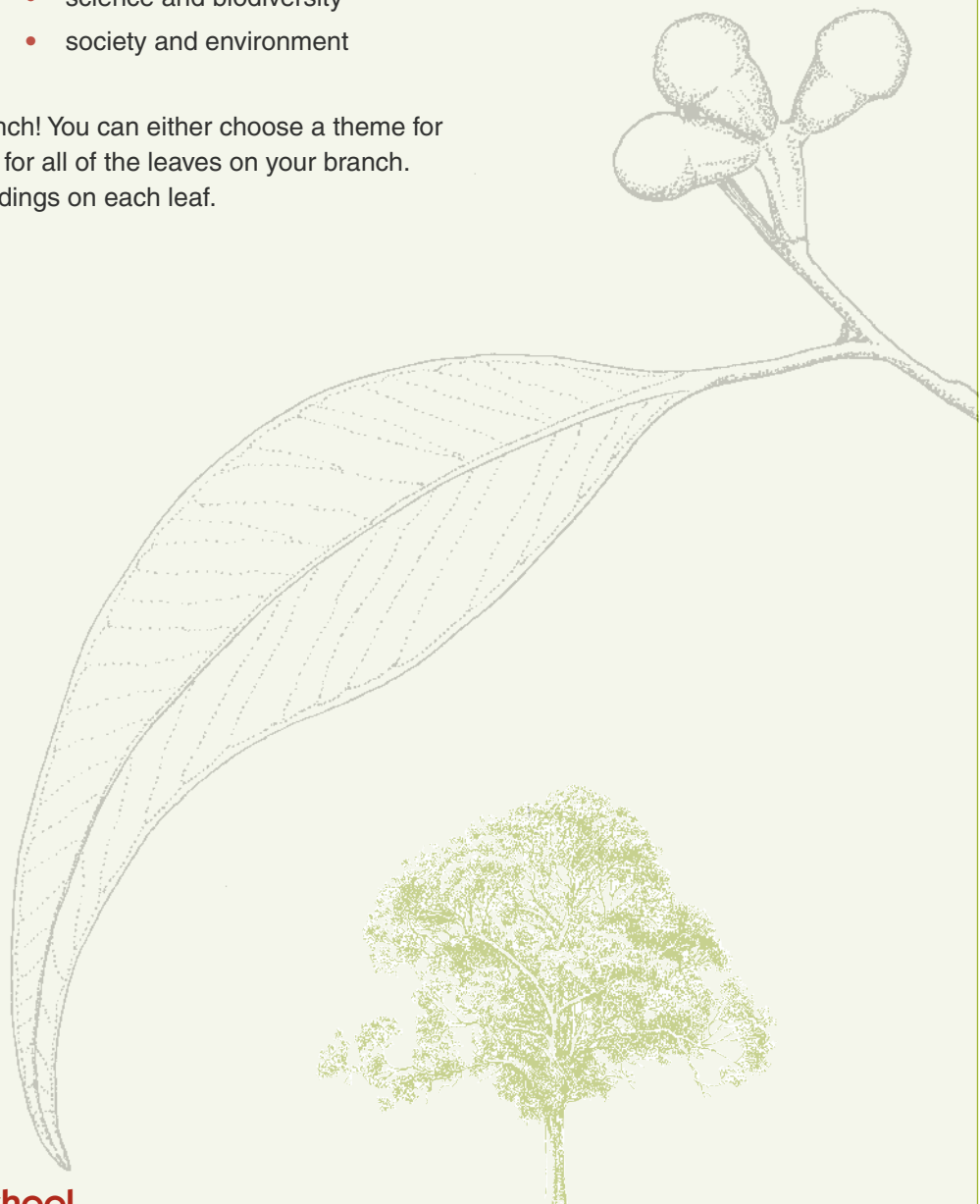
Activity 3

How to grow a tuart tree in your classroom

Group activity

Tuart trees and woodlands are valuable to people and to many native species. This activity will help you to understand and appreciate the importance of the tuart in our lives.

1. Each member of your group will need to trace at least two copies of the tuart leaf shown in the background of this activity sheet. You can use coloured card for the leaves or decorate them yourself. These leaves will form a branch of the tree.
2. Within your group, or as a class, brainstorm the definitions of each of the following 'Leaf Themes' and how they relate to the tuart tree or woodland:
 - Aboriginal culture
 - aesthetics and spirituality
 - art and craft
 - health and recreation
 - historical use
 - language
 - science and biodiversity
 - society and environment
3. Time to construct your tuart tree branch! You can either choose a theme for each leaf or just focus on one theme for all of the leaves on your branch. Write one of your chosen theme headings on each leaf.
4. On the leaves, write down how each theme relates to the tuart tree and why it is important to you.
5. Once your group has completed the 'Leaf Themes', design and construct the branch on which they will hang and the main trunk of the tree. Try to make the trunk look as realistic as possible. This design may be individual for each group or directed by your teacher.
6. Once the trunk is complete and safely attached to a wall, place your group's branch on a limb of the tree.
7. Add some life! To make your tree look more 'living', you can create an image or model of a tuart woodland animal to put in or around the tree.



Grow a tuart tree for your school

Is your school located in the tuart belt? If it is, why not plant one in your school grounds to give your school a sense of place? Your teacher may need to get permission from the school principal or gardener.