Learning Intention & Success Criteria:
L.I: To learn about Australian animals and traditional Aboriginal attitudes to the environment through using dot painting techniques to create animal masks.
S.C: I can create artwork using traditional Aboriginal colours and styles and identify several Australian animals, their habitat and lifestyle.

Pre-requisite knowledge and/or links to previous/future lessons:
- Previous knowledge/lesson on Aboriginal painting techniques and culture.
- Basic knowledge of Australian animals.
- Future lesson on Aboriginal dancing mimicking animal movements.

Resources/materials/equipment required:
- Acrylic, non-toxic paint.
- Painting equipment: kebab sticks, toothpicks, cotton buds.
- String, twine, or elastic cord.
- Scissors and glue.
- Optional: ICT to present dreamtime story.
- Optional: artificial feathers, fur and other materials to enhance masks.
Additional Resources:
How to teach dot painting to kids (watch from 40s-3mins):
https://www.youtube.com/watch?v=xI6RSRzmfVnw

Dreamtime Stories (Brolga Song recommended):
http://www.abc.net.au/dustechoes/dustEchoesFlash.htm

Preparation:
Choose dreamtime story that features Australian animals (e.g. Brolga song) and decide which animal masks to use. Print off mask outlines onto card thick enough for masks or paste onto card/cardboard – or have students do this in lesson. Set up tables with paint and painting equipment for each student.

Lesson Introduction:
(15 minutes)
• Show/present dreamtime story.
• Distribute masks and (optional) information sheets.
• Discuss the animals featured in the story, and the relationships the people have with the animals.
• Revisit techniques of dot painting, and discuss how masks can be made to look like animals – patterns, colours etc.

Main Component of Lesson:
(30 minutes)
• Students stick masks to card and cut out mask outlines
• Students create mask using dot painting techniques, making choices about colour and pattern.
• Leave masks in a safe, aerated place to dry.

Lesson Conclusion:
(10 minutes)
• Students share what they know about the animal they have chosen.
• Collect student work and display around classroom/can be used for follow up lesson with dancing or students can take home.

Learning Outcomes:
• Students strengthen knowledge of a traditional art form (Aboriginal dot painting)
• Students make choices about technique, colour, pattern and style.
• Students take ideas and concepts from a narrative and express these ideas through their own work.
• Students maintain a record of their work by displaying around class or keeping in portfolio.

Alternative Versions:
• For older year levels or more advanced students, make use of the Animal Masks Information sheet, or have students research the animal they have chosen.
Aboriginal Connection to the Land

Aboriginal peoples used the plants and animals around them for all of their food, shelter, tools, and other needs. Aboriginal people never used up all of one resource. They learned that using too much today means that there would be less left for the future. From a young age they learned all about the plants, animals and the land around them, what they could be used for, and how to care for them. This means that Aboriginals learned a deep respect for all living things, and an understanding that all living things depend on each other to survive, even humans. By understanding the connection between all living things, Aboriginal peoples preserved the landscape, plants and animals for thousands of years.

EASTERN GREY KANGAROO:
- Marsupials (mammal with a pouch).
- Mainly nocturnal (active at night)
- Live on grassy plains and open forests.
- Are found all over Eastern Australia.
- Fur is coloured light and dark brownish grey, with creamy white belly.
- Feed on grass, leaves and roots.
- Can’t move backwards.
- Preyed on by dingoes and humans.

BRUSHTAIL POSSUM:
- Marsupials (mammal with a pouch).
- Live in open forests and urban areas all over Australia and New Zealand.
- Feed on leaves, fruits, blossoms, food scraps from humans.
- Nocturnal (active at night).
- Fur can be silver-grey, brown, black or gold.
- Protected species in Australia.
- Preyed on by dingoes, foxes and cats.
- Threatened by cars.

GOANNA:
- Reptiles
- 25 different species in Northern and Eastern Australia
- Live in all types of habitats; open woodland, swamps, and deserts.
- Scales can be coloured green, black, brown, yellow and red, and provide camouflage.
- Feed on insects, other lizards, small mammals, birds, eggs, and dead animals.
- Threatened by habitat destruction and feral dogs and cats.
Aboriginal Art and Masks

The Aboriginal connection to the land is seen in their art. Lots of Aboriginal artwork contains images of animals, plants and the landscape around them. This shows that animals and the land were a very important part of daily life. Aboriginal masks were used for a variety of ceremonies, rituals and dances to learn about and show respect for the land, animals and plants that allow the people to live. Here are some sayings that help us to understand how Aboriginal peoples think about the land: “We do not inherit the Earth from our parents, we borrow it from our children” “The land is our mother, feeding all her children”

SHORT SNOTUED ECHIDNA

- Monotremes (mammals that lay eggs).
- Are found all over Australia and New Guinea.
- Fur is dark, reddish brown, with cream coloured spines.
- Feed on ants and termites.
- Have a long, sticky tongue to catch prey.
- Can dig holes quickly with front claws, or curl into a ball to evade predators.
- Preyed on by goannas, dingoes, foxes, feral animals.
- Many are killed by cars.

BROLGA:

- Birds
- Live in wetlands, grassy plains, coastal mudflats and irrigated croplands.
- Found in tropical North and Eastern Australia.
- Feed on tubers, crops, snails and slugs, insects, frogs and mice.
- Feathers are mainly grey, with orange-red band on the head.
- Brolgas are famous for their beautiful mating dance.
- Preyed on by foxes.
- Threatened by poisoning, power lines, and destruction of habitat.

KOALA:

- Marsupials (mammal with a pouch).
- Live in trees in eucalypt forests and low woodlands and coastal islands.
- Are found in Eastern Australia.
- Sleep for 18 hours a day.
- Feed on Eucalyptus leaves, which are poisonous to other animals.
- Preyed on by dingoes, wedge-tailed eagles, pythons, feral.
Year Level: 3-4  
Lesson Duration: 50 Minutes

According to the Victorian Curriculum and Assessment Authority (AusVELS), students progressing towards level 4 in Arts and English are expected to:

• Apply and develop their arts knowledge by exploring arts processes and ways to communicate concepts arising from their personal experiences and from the world around them.

• Communicate ideas, observations and feelings using a range of media, materials, equipment and technologies to make art works.

• Create imaginative texts based on characters, settings and events from students’ own and other cultures (ACELT1601)

• Create literary texts by developing storylines, characters and settings (ACELT1794)

Learning Intention & Success Criteria:

L.I: To creatively explore the different uses of a forest and to present information in multiple ways. Be able to research and present information on a sustainability topic.

S.C: I have written a short story that shows my understanding of how a forest is used, and I have my own bookmark to take home.

Pre-requisite knowledge and/or links to previous/future lessons:

• Prior knowledge of basic story writing structure
• Some knowledge of what it means to be ‘environmentally friendly’

Resources/materials/equipment required:

• Story and bookmark template page.
• Access to the video links (provided in the Lesson Introduction section) and a way to show them to the class.
• FSC Video Guide resource (Forest Stories)

Additional Resources:

• Sustainability definitions for teachers and pupils  
  http://www.googolpower.com/content/free-learning-resources/environmental-education/definitions-of-sustainability-for-children
Preparation:
Photocopy enough Story and Bookmark templates for every student. Ensure access to provided video links. Photocopy the Video Guide for each student.

Lesson Introduction:
(15 minutes)
• Distribute Video Guides. Briefly discuss with pupils the different ways a forest is used, and who it might be used by. Suggested topics – endangered species, indigenous groups, forest recreational activities, forests for medicinal research, companies who make wood products.
• Talk about why the forest is useful for the lives of your students. Demonstrate some items in the room which are wood or paper based.
• Show the following videos which outline how some different people/animals use the forest, being prepared to discuss terms such as sustainability using the Video Guide resource:
  - ENDANGERED ANIMALS: https://www.youtube.com/watch?v=8-lAMEgiLq8

Main Component of Lesson:
(30 minutes)
• Ask pupils to write a short story about someone who uses a forest on the provided template page. Their story needs a beginning, middle and end.
• Their story should show why and how the main character uses the forest, and should say why it is important that they are allowed to keep using the forest.
• When pupils have written their short story, pupils should use the provided template to draw their own bookmark with a character from their story.

Lesson Conclusion:
(5 minutes)
• Discuss what students have learned about how a forest is used.
• Allow students to take home their story and bookmark. They may need to finish their bookmark at home.

Learning Outcomes:
• Students should be able to name a number of different groups to whom forests are important.
• Students should have written a story that adequately shows why forests are important to their main character.
• Students should display the basics of story writing, with a beginning, middle, and end apparent in their stories.
Year Level: 3-4
Lesson Duration: 2 x 50 Minute lessons

According to the Victorian Curriculum and Assessment Authority (AusVELS), students progressing towards level 4 in Civics and Citizenship are expected to:

• Students engage in democratic processes to plan and carry out activities and events at the school or in the local community.

• They participate in community, school and/or home-based projects designed to protect and care for the natural and built environment and promote the sustainable management of resources that they use.

• Students learn about environmental and charitable organisations. They develop knowledge about their community and environment, and a sense that individuals’ contributions can care for and improve the environment, their own lives and the lives of others.

Learning Intention & Success Criteria:
L.I: To understand individual, household, school, and community impact on the environment and to plan, vote, and commit to a class group action plan to reduce environmental footprint.

S.C: I am aware of how my actions add to the impact of climate change, and I am actively reducing the impact I have on the environment.

Pre-requisite knowledge and/or links to previous/future lessons:
• Prior knowledge of mind maps, brainstorming.
• Prior knowledge of what energy is, and the sources of energy.
• Prior knowledge of voting in a fair, democratic system.

Resources/materials/equipment required:
• Computers – access to the internet

Additional Resources:
• EPA Ecological Footprint Calculators
• Animation – Carbon Footprint
Preparation
Calculate ecological footprint of school. Optional – Give students at home task of investigating which everyday tasks use energy, what type of energy, sources of waste, how household waste is disposed of, and whether the products their parents buy are sustainably sourced.

Lesson Introduction:
(30 minutes)
• Optional – Complete Activity sheet: ‘What is an Environmental Footprint?’
• Class discussion: create mind map about sources of energy, waste, and the effect these have on the environment. Identify misconceptions. Provide prompts such as the garbage patches in the oceans, food waste producing methane, emissions from motor vehicles, burning coal to produce electricity etc.
• Introduce the concept of an ecological footprint. Optional: show animation ‘Carbon Footprint’.

Main Component of Lesson:
(30 minutes)
• Students calculate their ecological footprint using EPA calculator or activity sheet.
• Students use the internet or other material provided to research ways of reducing household waste.
• Students work individually to produce action plan for reducing their ecological footprint. Complete Individual section of worksheet ‘How to reduce my Environmental Footprint’
• Break

Main Component of Lesson:
(30 minutes)
• As a class explore the environmental footprint of the school, mind map about how energy is used and wasted.
• Class vote on an action plan to reduce their collective footprint.
• Pledge, commit to these actions, and the individual action plan.

Lesson Conclusion:
(10 minutes)
• As a class go back over the concept of a carbon footprint, waste, and how energy is produced and used.
• Hang Pledges around the room

Learning Outcomes:
• Students take part in a fair, democratic process to agree on a group action plan.
• Students understand the ecological impact of their individual actions, home, and school.
• Students understand the importance of living sustainably in order to conserve resources and protect the environment.
• Students participate in a school/home based project designed to protect and care for the natural and built environment and promote the sustainable management of resources that they use.

Alternative Versions:
• For younger students, use worksheet ‘How big is my Environmental Footprint’ instead of EPA calculator.
• For older or advanced students, research environmental organisations e.g. FSC, WWF, EPA.
Year Level: 3-4  
Lesson Duration:  
50 Minutes

According to the Victorian Curriculum and Assessment Authority (AusVELS), students progressing towards level 4 in Civics and Citizenship are expected to:

- Participate in community, school and/or home-based projects designed to protect and care for the natural and built environment and promote the sustainable management of resources that they use.

- Learn about environmental and charitable organisations. They develop knowledge about their community and environment, and a sense that individuals’ contributions can care for and improve the environment, their own lives and the lives of others.

Learning Intention & Success Criteria:

L.I: To understand individual and collective impact on the environment and to plan and commit to an action plan to reduce individual environmental footprint.

S.C: I am aware of how my actions add to the impact of climate change, and I am actively reducing the impact I have on the environment.

Pre-requisite knowledge and/or links to previous/future lessons:

- Prior experience of brainstorming and mind maps
- Prior knowledge of energy sources and waste.
- Links to future lesson “Environmental Footprint 2”

Resources/materials/equipment required:

- FSC Activity Sheet “What is an Environmental Footprint?”
- FSC Activity Sheet “How to reduce my Environmental Footprint”
- Computer with access to internet.

Additional Resources:

- FSC Activity Sheet “How big is my Environmental Footprint?”
- Board for brainstorm
- Scissors, glue and magazines, newspapers etc to make collage on Activity Sheet “What is an Environmental Footprint?” or ICT device to add pictures from internet.
Preparation:
Photocopy activity sheets as needed.

Lesson Introduction:
(15 minutes)
• Introduce the term 'environmental footprint' (show EPA animation 'Carbon Footprint')
• Brainstorm about things that contribute to your environmental footprint, 3 main categories – Energy, Water, Waste.

Main Component of Lesson:
(30 minutes)
• Ask students to complete the Activity sheet “What is an Environmental Footprint?”
• Provide magazines, newspapers etc for collage OR
• Use ICT device to download activity sheet and add pictures from the internet.
• If enough time/older students, ask students to calculate environmental footprint using online calculator OR
• If no time/younger students, Introduce Activity Sheet “How big is my Environmental Footprint?” and set a homework task to complete it.

Lesson Conclusion:
(10 minutes)
• Recap what students have learned in lesson, class “share time” of collages.
• Ask students to fill in Activity Sheet “How to reduce my Environmental Footprint”

Learning Outcomes:
• Students understand the ecological impact of their individual actions at home and school.
• Students understand the importance of living sustainably in order to conserve resources and protect the environment.
• Students plan and commit to implementing an individual action plan to reduce their environmental footprint.

Alternative Versions:
• For younger students/homework task/if no computer access use Activity Sheet “How big is my Environmental Footprint” rather than the EPA calculator.
• For older or advanced students, set them the task of finding 5 facts about environmental organisations e.g. WWF, FSC, EPA.
FSC Activity Sheet  
How big is your environmental impact?

Instructions
1. Write down 10 activities you do every day. You may choose activities such as having a shower, eating a meal, watching T.V, or using the heater.
2. Record which resources were used. This includes water, electricity, and gas.
3. Record how long you were using each resource for each activity. If you use more than one resource, include the amount of time each resource is used for.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Resources</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brush my teeth</td>
<td>Water - 1 minute Electricity - 4 minutes</td>
<td>1 + 4 = 5 minutes</td>
</tr>
</tbody>
</table>

Total Score. Add up all the minutes to find how big your footprint is:

How big is your Environmental Footprint?
Small = 100-150 minutes  Medium = 160-200 minutes  Large = 210-300 minutes
Write down 3 changes you will make to use less energy.
1. 
2. 
3. 

Write down 3 changes you will make to use less water.
1. 
2. 
3. 

Write down 3 changes you will make to produce less waste.
1. 
2. 
3. 

I hereby pledge that I will reduce my environmental footprint by making the changes to my daily activities listed above. By reducing my environmental footprint, I am making the world a healthier, safer, and happier place for all living things.

Signature: 

Signed by: 
What is an Environmental footprint?

Cut out pictures from newspapers, magazines, or use a computer to create a collage of images that represent things that make up your Environmental footprint below:

Australia’s Environmental Footprint
In Australia, we’re consuming more than three times our fair share of the planet’s natural resources. If we continue these consumption patterns, we will face an ecological overshoot that will have far reaching future consequences for people and nature.

For More Information:
http://www.wwf.org.au
Learning Intention & Success Criteria:

L.I: To be able to locate areas where there are problems in relation to deforestation and can explain how to solve the problems

S.C: I can outline issues with the rainforest and how the destruction of the rainforests impacts different groups of people and animals.

Pre-requisite knowledge and/or links to previous/future lessons:

- Prior knowledge of deforestation and its Consequences.
- General idea of where countries are.

Resources/materials/equipment required:

- Deforestation Information Sheet
- Computer/device – Internet connection necessary
- Interactive map which has deforestation problems pinned out http://map.mongabay.com/

Additional Resources:

- Additional Map which shows forest changes over the years http://www.globalforestwatch.org/map
- Additional deforestation news http://www.theguardian.com/environment/deforestation
- General solutions to deforestation http://www.greenpeace.org/usa/forests/solutions-todeforestation/
Preparation:
Access to computers with internet access. If map is not loading properly, students can find deforestation news by hovering over the rainforest tab at the top of the website and clicking deforestation.

Lesson Introduction:
(10 minutes)
• Introduce the deforestation with video: https://www.youtube.com/watch?v=M4jhjt1_eyM
• Briefly discuss with the students if they have heard anything in the news about deforestation and why they think deforestation is bad. For example, the orangutans in Borneo are facing extinction because of the cutting down of the trees they live in for palm oil.
• Introduce the different organisations who aid in minimising the effects of deforestation: FSC and how the FSC regulates the cutting of forests: https://www.youtube.com/watch?v=51AwOL0He4c
• WWF: specialise in sustainable forestry and the protection of animals in the rainforest: https://www.youtube.com/watch?v=w-1DQwaauwE
• Greenpeace: campaigning for a future where rainforests thrive. https://www.youtube.com/watch?v=Swj5_._CgHPc

Main Component of Lesson:
(30 minutes)
• Introduce the students to the interactive map, which shows the different locations of deforestation by pins. Zooming in on specific areas will show more pins.
• Once the students have read the reports by clicking on the pins, move on to part 2 of the activity.
• Part 2: Students are asked to write what they would do to explain what each group involved in the news article can do in order to prevent or minimise the effects of the over logging of trees.

Main groups from most articles include:
Forestry Workers  Forest Users  Organisations
Timber Companies  Indigenous/ Local People  Government
Consumers  Environmental  Animal Activists

Lesson Conclusion:
(10 minutes)
• Discuss what some of the most common ways that student came up with to overcome the specific incident of deforestation from their articles.
• Summarise with the video: https://www.youtube.com/watch?v=TxGupv74KPI

Learning Outcomes:
• Students should be able to find recent deforestation news stories and understand what different parties can do to combat the over logging of forests.

Alternative Versions:
• Briefly note any suggested alternatives, such as for a younger audience, using different resources, or for a longer/shorter time period.
Deforestation

Deforestation is when humans remove, clear, cut down, burn and damage large areas of forest lands and related ecosystems for non-forest uses. These include clearing for farming purposes, mining, fires, commercial logging and for urban use. In these cases, trees are never re-planted. Since the industrial age, about half of world’s original forests have been destroyed and millions of animals and living things have been endangered and it is estimated that one and a half acres of forest is cut down every second.

Environmental Effects of Deforestation From Above

**Loss of Habitat:** One of the most dangerous effects of deforestation is the loss of animal and plant species due to their loss of habitat; not only do we lose those known to us, but also those unknown, potentially an even greater loss.

**Increased Greenhouse Gases:** In addition to the loss of habitat, the lack of trees also allows a greater amount of greenhouse gases to be released into the atmosphere. The tropical rainforests of South America are responsible for about 20% of Earth’s oxygen and they are disappearing at a rate of 4 hectares a decade, if these rates are not stopped, the consequences will become even more severe.

**Water in the Atmosphere:** The trees also help control the level of water in the atmosphere by helping to regulate the water cycle. With fewer trees left, due to deforestation, there is less water in the air to be returned to the soil. In turn, this causes drier soil and the inability to grow crops.

Environmental Effects of Deforestation From Below

**Soil Erosion and Flooding:** Trees function to keep water and topsoil, which provides the nutrients to sustain forest life. Without them, the soil erodes and washes away, causing farmers to move on and continue the cycle. The land which is left behind is then more prone to flooding.

Effects of Deforestation on Indigenous People

**Destruction of Homelands:** As large amounts of forests are cleared away, the indigenous tribes who depend on them to sustain their way of life are also irreparably damaged. The loss of forests has an immediate and direct effect on their lifestyle. The governments of nations with rainforests in their borders also attempt to evict indigenous tribes, and often succeed, before the actual clear-cutting begins.
Deforestation Article:

Explain why this article interests you?

List the group(s) this incident of deforestation affects.
Deforestation

Deforestation is when humans remove, clear, cut down burn and damage large areas of forest lands and related ecosystems for non-forest uses. These include clearing for farming purposes, mining, fires, commercial logging and for urban use. In these cases, trees are never re-planted. Since the industrial age, about half of world’s original forests have been destroyed and millions of animals and living things have been endangered and it is estimated that one and a half acres of forest is cut down every second.

Deforestation Article:

If you were in this group(s) what would you to prevent or minimise the effects of the over logging of trees?
Year Level: 5
Lesson Duration: 2 x 50 Minute lessons

According to the Victorian Curriculum and Assessment Authority (AusVELS), students progressing towards level 6 in The Humanities are expected to:

• Practice contesting ideas, debating and using evidence to form and express opinions on economic issues that interest and/or have an impact on themselves and on society, particularly their local community.

• They explore how the community defines, classifies and uses resources.

• They learn about the nature of the economic problem (scarcity): that is, that our needs and wants are unlimited but the resources available to satisfy these wants are limited. They explore how the community defines, classifies and uses resources.

Learning Intention & Success Criteria:

L.I: To be able to form arguments for their individual stakeholder and structure them into a speech, conveying as to why cutting down tree’s would beneficial/harmful to whichever side to the deforestation debate they have been given

S.C: I can research and articulate the importance of why deforestation is important to my stakeholder.

Pre-requisite knowledge and/or links to previous/future lessons:

• Students should know the basics of deforestation, if not there is a video link for the introduction.

Resources/materials/equipment required:

• For an introduction watch ‘Buyer Be Fair – The Promise of Product Certification’
  http://www.fsc-uk.org/films.44.htm

• For an introduction watch

• Deforestation Debate Information Sheet
• Notebooks & pens
• Electronic Devices to research topics.

Additional Resources:

• Sustainable Logging
Preparation:
For this activity you will need a large screen to present the introduction video. The Children will need access to electronic devices to research their stakeholder’s view to the debate.

Lesson Introduction:
(20 minutes)
Teachers should introduce the activity with asking what the students how much they know about deforestation. After discussing with the class and writing down key points given from the class discussion, show them:
• Which wood you choose?
  https://au.fsc.org/educational-videos.388.htm
• And then deforestation cartoon:

Main Component of Lesson 1:
(30 minutes)
• Separate the students into groups of 4 or 6, depending on class size, giving each student a stakeholder either for or against deforestation and ensuring that there’s an even number of for and against in each group.
• Once given a side to the debate, Allow the rest of the lesson for the students to research and prepare their side of the debate. Each student should be able to summarise their side to the debate within 5 minutes.

Main Component of Lesson 2:
(40 minutes)
• The students should separate into their groups and begin presenting their peers about how deforestation or not cutting down trees would affect their stakeholder.

Lesson Conclusion:
(10 minutes)
• After the students have presented to their own individual groups, another group discussion should be held to talk about how all the individual sides to the debate can come to an agreement of the topic of deforestation.
• The answer to this question is: the FSC
  https://www.youtube.com/watch?v=hWSvqxRaNWE
• Talk about the 10 principles and hand out activity sheet of matching the FSC principles to the individual groups in the debate they concluded.

Learning Outcomes:
• At the end of this lesson the student will be able to view both sides of the deforestation debate, and make well informed decisions from the activity.

Alternative Versions:
• Briefly note any suggested alternatives, such as for a younger audience, using different resources, or for a longer/shorter time period.
Learning Intention & Success Criteria:

L.I: To be able to order animals in regards to the food chain and understand the way in which animals in an environment gain energy.

S.C: I can successfully order certain animals in order of a food chain and grasp the concept of energy consumption

Pre-requisite knowledge and/or links to previous/future lessons:

• Previous knowledge and understanding of animals
• Ability to categorise and organise tables.

Resources/materials/equipment required:

• FSC information Sheet (title pending)
• Blank table of food chain with list of animals and plants.
• Pens and/or pencils

Additional Resources:

• Interactive Food Chain Resource: http://www.sheppardsoftware.com/content/animals/kidscorner/games/foodchaingame.htm
Preparation:
Photocopying of the table and word list will be needed for as many students as required.

Lesson Introduction:
(15 minutes)
• Using the information sheet, describe the different types of animals in an environment (producers, consumers and decomposers)
• Discuss the idea that animals need energy to survive, they eat plant material and other animals to obtain this energy. E.g. a giraffe may eat leaves off a tree, what then eats the giraffe? (lion)
• Distribute worksheets and discuss what needs to be completed within the lesson (table completed)

Main Component of Lesson:
(25 minutes)
• Students will be provided with a list on animals and plants that need to be organised.
• Students will fill in the tables provided according to highest on the food chain to the lowest.
• Ask students to create the biggest food chain they can produce.
• Ensure students are on task by providing guidance where necessary.

Lesson Conclusion:
(10 minutes)
• Students will share their favourite food chain and discuss one of the animals they found interesting. (If they are a producer (grass etc.) consumer or decomposer)
• Students will review their food chains to ensure they are in the correct order.

Learning Outcomes:
• Students will enhance their understanding of the food chain and cycle of life.
• Students will be making organised decisions about order and classification.
• Students will be able to identify numerous animals that are found within the environment.

Alternative Versions:
• For a younger students, small simple food chains will suffice with a reduced word list.
What is a food chain?
The food chain shows the relationship between different living organisms in a habitat or environment. A food chain is all related to feeding! A food chain is used to see what happens in the cycle of life.

Energy from the sun is taken in by producers, which is then eaten by a consumer and finally the consumer is eaten by the decomposers! The food chain represents the flow of energy from one organism to another within the ecosystem!

What is an Ecosystem?
An ecosystem contains a community of living organisms and non-living things that occupy the same space and interact with each other. Ecosystems can be as large as an ocean or as small as a patch of dirt! Everything in an ecosystem is quite balanced and all it all works together to keep it that way.

Producer
A producer can produce its energy all on its own, they usually do this by photosynthesis. This is where light and carbon dioxide produce energy for an organism, usually a plant or tree.

Consumer
A consumer is an organism that obtains its energy by hunting and feeding on other organisms or organic matter. Most of the animals that you see every day are consumers, dogs, cats, mice and even humans! Consumers can’t produce their own energy so they feed on other organisms to obtain theirs.

Decomposer
A decomposer is an organism that breaks down organic material into chemicals. When an organism dies it is the decomposers who break down the body into smaller pieces and consume the material left behind. When the decomposers are feeding, material from the bodies of the deceased organism enters the environment and is used up again in a continuous cycle.

Flow Chart: Provided is a simple representation of the flow of energy between producers, consumers and decomposer. This is a continuous cycle found within many ecosystems around the world!

Example: A patch of grass will obtain energy from the sun, using photosynthesis! A kangaroo might come along and eat the grass, obtaining its energy, then when the kangaroo passes away, decomposers will eat the kangaroo and obtain their energy!
What is a food chain?

1. Choose 3 colours and circle the producers, consumers and decomposers

2. On a piece of spare piece of paper make as many food chains as you can using the word list.

3. Draw the longest food chain you created in the blank box.

Word List
- Grass
- Snake
- Kookaburra
- Mouse
- Grasshopper
- Eagle
- Leaves
- Slug
- Frog
- Lion
- Giraffe
- Zebra
- Flower
- Tiger
- Krill
- Whale
- Algae
- Zooplankton
- Ants
- Rabbit
- Fox
- Butterfly
- Lizard
- Shark
- Human
- Mushrooms
- Cockroach
- Gazelle
- Dingo
- Bilby
- Fish
- Tree
- Fly
Year Level: 5-6
Lesson Duration: 50 Minutes

According to the Victorian Curriculum and Assessment Authority (AusVELS), students progressing towards level 6 in English and Civics and Citizenship are expected to:

- Understand how authors often innovate on text structures and play with language features to achieve particular aesthetic, humorous and persuasive purposes and effects (ACELA1518)
- Understand that protecting the environment requires that people work together as citizens and consumers and participate in appropriate actions as environmental stewards or in other civic action to effect positive change.
- Plan, draft and publish imaginative, informative and persuasive texts, choosing and experimenting with text structures, language features, images and digital resources appropriate to purpose and audience (ACELY1714)

Learning Intention & Success Criteria:
L.I: To be able to write persuasively and imaginatively from the perspective of someone who relies on the use of a forest.
S.C: I can accurately outline the importance of forests to different stakeholders.

Prerequisite knowledge and/or links to previous/future lessons:
- Prior knowledge of persuasive writing.
- Ability to write from someone else’s perspective.

Resources/materials/equipment required:
- FSC Information Sheet (Who Uses A Forest?)
- Paper for writing

Additional Resources:
Preparation:
Photocopy as many copies of the Information Sheet (Who Uses A Forest?) as needed, and ensure there is access to writing materials.

Lesson Introduction:
(10 minutes)
• Utilise the provided Information Sheet to discuss how different groups and individuals use the same forest in different ways.
• Discuss the different kinds of value these groups take from a forest (for example, the intrinsic value of endangered animals, the financial benefits of logging companies, the aesthetic and health benefits for recreational groups)
• Briefly discuss each of the persuasive language techniques/ components in the A FOREST acronym from the Information Sheet.

Main Component of Lesson:
(35 minutes)
• Ask pupils to write a short persuasive letter to their teacher about why a forest should be protected, based on the perspective of:
  - An indigenous person whose family live on the forest land
  - An endangered animal which lives in the forest
  - A person who goes bush walking in the forest
• Students should use at least three of the persuasive language techniques from the acronym

Lesson Conclusion:
(5 minutes)
• Class “Share Time” so students can reflect on how they have chosen to persuade the letter recipient.

Learning Outcomes:
• Students should be able to identify and describe a number of the different groups that rely on a forest.
• Students should be using various persuasive language techniques to make their arguments, and should have a clear stance with evidence and reasoning given.
• Students should be able to recognise that different groups may have different values and priorities.

Alternative Versions:
• Students could use the above prompts for an oral presentation or debate.
• Give an opportunity for students to read their piece aloud – other students can comment on how well the letter persuades.
Act Wild For Leadbeater’s Possum

Leadbeater’s Possums used to be called Fairy Possums.
They are tiny animals that move fast between the trees.

People thought they were extinct, because they didn’t see any Leadbeater’s Possums for fifty years.

Leadbeater’s Possums have tails like baseball bats! They use their tails to carry bark to trees to make nests. Possum families huddle together in the nests to keep warm.

Possum families huddle together in the nests to keep warm.

Possums need big old trees in ancient forests, because these trees have the hollows in which possums build their nests.

Big fires destroy the trees the possums need. When old forests are cut down they also lose their homes.

Possums rely on forests, so it is important to make sure forests aren’t destroyed and are used responsibly.

Natewa Tunuloa Important Bird Area

The important bird area, or IBA, is on the second largest island in Fiji. It is 17,600 hectares of land, and 6625 hectares of this is conserved under an MoU. An MoU is an agreement between two groups. In this case it is an agreement to protect the forest.

The IBA has large tracts of old growth forest. If you travel past the farming land, you find these beautiful ancient forests.

Fijian culture is strongly linked to land and nature, and more than 80 percent of indigenous communities rely on natural resources for survival.

Since the Fijian communities rely on natural resources, they need to protect the resources so that they can keep using them in the future. This is known as sustainability.

The indigenous groups are trying to keep their cultural traditions alive, and trying to keep earning money without destroying natural habitat. They are protecting wildlife and spreading awareness about conservation because they think forests are for everyone.
All living things use forests, even if they don’t realise it! The trees in forests help to filter the air we breathe and the water we drink. Worldwide, 1.6 billion people rely on forests for their livelihoods, including food, clothing, energy and shelter.

**Look Around You**

Look at the things in the room around you right now. If you're using a wooden table or a wooden chair, you're using a product from a forest. The paper you're writing on today, the medicines you take when you get sick and the household products you use come from forests.

Have you ever had pancakes with maple syrup? Maple syrup comes from forests!

Forests provide the materials we use in everyday life, and they also help to make us happier and healthier.

**Recreational Groups**

Forests can be enjoyable for a range of reasons. The air in forests is better for you than the air in cities and towns, because in forests the trees are helping to filter pollutants out of the air. As a bonus, forests often smell nice! Being in nature is good for our brains and our bodies, and it can help to keep down our stress levels. Some studies even show that being in nature can help us heal faster if we get hurt. Forests provide a good place to move around and to keep active, to explore new places, new plants and new animals, or just to take it easy away from the rush of everyday life. They always have something new and interesting to see, and many people find it important to get away from the noise and pollution of cities.

**Science and Medical Research**

Researchers are always finding new uses for products that come from forests. As well as giving us the health benefits of fresh air, forests are the source of hundreds of substances which are used in medicines, construction materials and foods. If we lose forests, we may lose the chance to find new medicines to fight diseases. Forests are also areas with high biodiversity and many different natural processes, so there are often new plants and animals that can teach scientists about how the world works.

**Industries**

Forests can provide many financial benefits to different companies and communities. They can be a source of energy, a place to harvest trees to make paper and wood, or a source of food and water. It is important that all the groups who gain financial benefits from a forest do so in a sustainable manner, so that they and other groups can continue to use the forest in the future.

**Indigenous Groups**

Some areas of forest have particular significance to indigenous groups, such as Booderee National Park in Jervis Bay, NSW. Jervis Bay has great meaning to local aboriginal people, especially to the Wreck Bay aboriginal community. The area is an important point of focus for dreamtime stories and for reflecting on aboriginal history and practices. Since many indigenous groups in Australia do not have access to their ancestral land or to areas of cultural significance, forests like the one in Jervis Bay provide an important way for indigenous communities to interact with land and with their culture. Through engaging in environmentally friendly tourism and forestry practices, indigenous groups are able to look after the land while still gaining economic benefits, and they can pass on valuable cultural and conservationist knowledge.

**Endangered Animals**

Some animal and plant species require specific habitats, making forests extra important in maintaining biodiversity and keeping endangered species alive. The Leadbeater’s possum, for example, requires a forest habitat with hollow trees and food that is available all year round. Since a lot of its habitat in Victoria was turned into farming land, the Leadbeater’s possum is now only found in some mountain ash forests, and it is important to keep these forests safe so that the possum does not go extinct. Different parts of an ecosystem interact together in many ways, so if a species disappears it can affect the other plants and animals around it. It is important to preserve species when we can, and so forests are important for providing good habitats.
Persuasive Language Techniques (A FOREST)

✓ A

Alliteration – Using words that start with the same letter can make a headline or statement more memorable. For example ‘Friends frolic in the forest!’

✓ F

Facts – It is important to use facts and evidence when you argue for something, so that you and your argument seem knowledgeable and logical. For example ‘FSC can be found in 81 countries around the world.’

✓ O

Opinions – Apart from your facts, your opinion will be the main part of your argument, and contains how you feel about a topic. For example ‘I think that endangered animals are the most important thing about forest conservation.’

✓ R

Rhetorical Questions – Questions that need no answer, and are meant to make the audience respond in a certain way. For example ‘Do we want a world without forests?’ The answer is, of course, ‘no’.

✓ E

Emotive Language – Appeal to the reader with emotional words, to try and make them feel strongly about something. For example ‘The horrifying destruction of our beautiful forests…’

✓ S

Statistics – Like facts, statistics help to support your argument and prove the things you are saying. For example ‘70% of the world’s animals and plants live in forests.’

✓ T

Tripling Effect (Repetition) – If you say something three times, it will stick more in the reader’s mind. For example ‘It is important to protect animals. It is important to protect indigenous people. It is important to protect forests.’

FSC Information Sheet

Who Uses a Forest?

All living things use forests, even if they don’t realise it! The trees in forests help to filter the air we breathe and the water we drink. Worldwide, 1.6 billion people rely on forests for their livelihoods, including food, clothing, energy and shelter.

Look Around You

Look at the things in the room around you right now. If you’re using a wooden table or a wooden chair, you’re using a product from a forest. The paper you’re writing on today, the medicines you take when you get sick and the household products you use come from forests.

Have you ever had pancakes with maple syrup? Maple syrup comes from forests!

Forests provide the materials we use in everyday life, and they also help to make us happier and healthier.
Learning Intention & Success Criteria:

L.I: To be able to research and present information on a sustainability topic.

S.C: I have displayed good research skills and the learning of new knowledge about a particular environmental issue. I have presented it in a cohesive and interesting way.

Pre-requisite knowledge and/or links to previous/future lessons:

• Prior knowledge of PowerPoint (alternatively Keynote, etc) presentation construction
• Prior knowledge of search engine use
• A basic understanding of ecosystems

Resources/materials/equipment required:

• Computers / iPads with Microsoft PowerPoint (or similar program)
• Access to FSC website and other websites
• FSC Information Sheet (Ecology Topics)

Additional Resources:

• What's Happening in our Forest? https://www.youtube.com/watch?v=y1vQAWmduM4
  An overview of some of the forces that affect forests.
Lesson Introduction:
(10 minutes)
• Refer to FSC Information Sheet (Ecology Topics) and discuss definitions and issues of four particular topics. Put students in four groups and ask each to read about one of the four topics, then to share definitions to the class and discuss any words they might not know
  - Climate Change
  - Habitat Loss
  - Water Pollution
  - Deforestation
• Outline the PowerPoint structure and write a prompt on the board

Main Component of Lesson:
(35 minutes)
• Pupils should choose one of the above topics and create a PowerPoint presentation. For each slide, students should write two or three sentences (in their own words) and include a fact/statistic and a photo or diagram.
• Presentations should be four slides long with the following format:
  Slide 1- Introduction: what it is and what it is caused by
  Slide 2- Issues: what its effects are and who it affects
  Slide 3- Where the issues are seen in Australia
  Slide 4- How the issues are managed
• Make sure to highlight that the last slide should be about positive change, and keep them on track by letting them know their available time frame.

Lesson Conclusion:
(5 minutes)
• Class “Share Time” so students’ can reflect on what they have learned.
• Encourage students to discuss the links between their different topics.

Learning Outcomes:
• Students should be able to briefly summarise each section of their topic
• Students should be using diagrams and images that complement their presentation
• Students should be independently using internet resources in their research, and in finding images and diagrams

Alternative Versions:
• For a double length lesson, add some additional slides. For example, a slide of websites where one can learn further information, a slide of interesting facts, or a slide with a news article they have found that relates to their topic.
• In a longer lesson, give students the opportunity to present their slideshows.
• They can team up in groups of 2-4, and either work together to present one of the four topics, or focus on a topic each and present the different topics together.
CLIMATE CHANGE
Climate change is a general term for when our earth’s average temperature changes permanently, and you may hear it used in reference to global warming. Our atmosphere traps heat from the sun and keeps the earth warm, with a layer of gases called greenhouse gases. Global warming can happen naturally, and the earth goes through hot and cold cycles. However, when we burn coal and gas for energy, when we clear forest land, or when we rely on industries like agriculture, we increase greenhouse gas levels. This traps more heat and creates higher temperatures than would happen otherwise, and this may end up causing rising sea levels and severe weather around the world.

HABITAT LOSS
Habitat loss refers to when a particular ecosystem is removed, degraded, or broken up into smaller bits, and this means wildlife are no longer able to live and breed in that ecosystem. Habitat loss may occur because of deforestation, when forests are removed for agricultural or building purposes, or it may be caused by pollution. It can be caused by landscape change due to human settlements, and it can also be due to the effects of global warming. Without their habitats, and especially without high quality forests, endangered species of plants and animals may go extinct.

WATER POLLUTION
Water pollution occurs when pollutants build up in waterways. These pollutants may include harmful chemicals such as insecticides, fuels and detergents, which may be accidentally or deliberately dumped into waterways. Though substances such as nitrogen are often found in bodies of water, when their concentration gets too high they can be unhealthy for the plants and animals that live in and around the water. Thermal pollution may also occur, where the temperature of the water changes and it can affect the wildlife. Water pollution may harm individual plants or animals or whole ecosystems.

DEFORESTATION
Deforestation is the destruction of forests in order to use the land for agricultural or building purposes. WWF estimates that 36 football fields worth of forests around the world are removed every minute, and these trees are not replaced. Trees may be removed through burning or through clear cutting, which is where large areas of forest are cut down. The removal of so much forest contributes to greenhouse gas pollution and results in habitat loss. Deforestation can also have many negative effects on local wildlife, water systems, soil erosion and land fertility.