



Biodiversity Conservation at Berridale

Year 4-6 students from Berridale
Public School, Berridale.

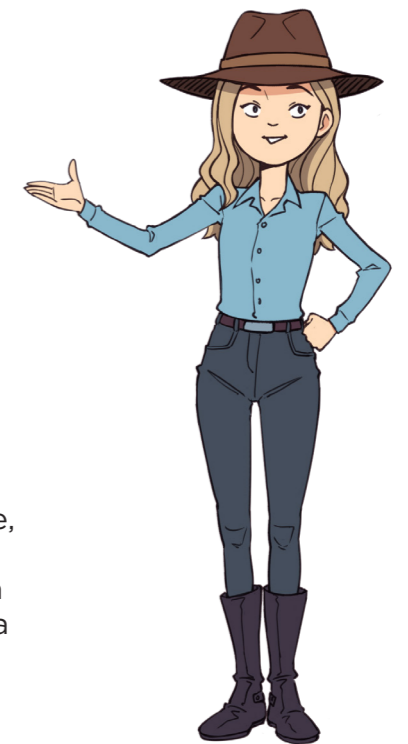
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Woodhouse
Berridale
NSW

The Woodhouse is a conservation area near Jindabyne, NSW. This grassland is dominated by high quality poa tussock and kangaroo grasses. This type of ecosystem contains unique combinations of native flora and fauna that are endemic to the region, meaning they occur nowhere else in NSW or Australia.





We are Year 4, 5 and 6 students from Berridale Public School, on Ngarigo Country. We are located in the Snowy Mountains area between Cooma and Jindabyne. In term two, we went on an excursion to the Woodhouse property to learn about Biodiversity. When we arrived, we met Elizabeth and Martin Timmins, who own the property, Donna who works for the Biodiversity Conservation Trust and Caitlin, Jasmin and Dominique who work for Petaurus Education Group. Together they took us around the property and taught us what biodiversity is and how biodiversity can be protected on properties.

The Woodhouse, owned by Liz and Marty Timmins, is about fifteen minutes from the centre of Berridale towards Jindabyne. The Timmins have owned the farm for forty years, and it is two thousand, two hundred acres in size. The Timmins manage and breed sheep and cattle for both meat and fibre. Liz explained that the reason she loves her property is that “the more I find out about it, the more we like it. It’s beautiful, interesting, and important.” Marty explained that they try to keep ground coverage high on their farm. He explained that to ensure they maintain good ground coverage, they have their stocks in big herds and rotate grazing. This means they move these big herds around the farm regularly to ensure different paddocks get time to “rest”, which allows the ground coverage to remain high. He said this is different to lots of other farms that keep the animals in small groups and allow their animals to stay in one spot for long periods of time.

We learnt all about the different living things that are on the farm. The differences between, or variety of, living things is called biodiversity. There are over two hundred different plants and animal species on their farm, so it has a lot of biodiversity. Some are native, which means they have been there for thousands of years, and some are introduced.

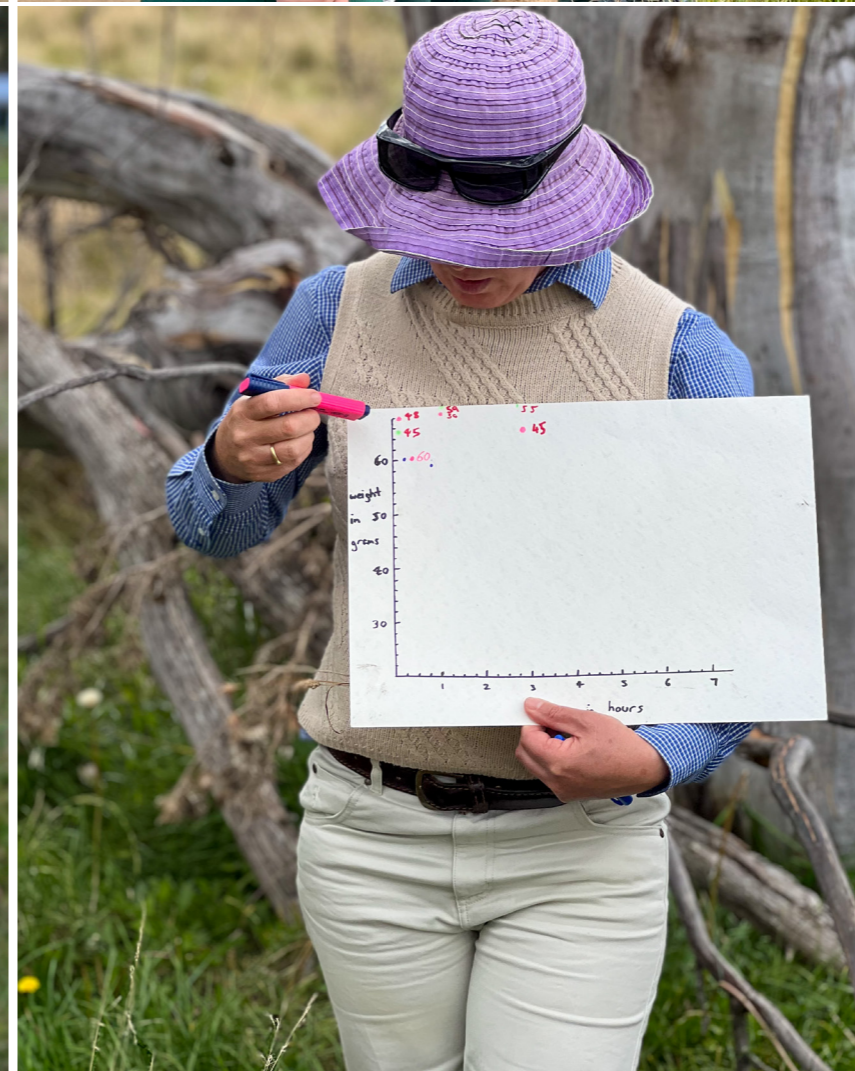
Liz explained why having a diversity of grasses is important, to support their stock and the native animals on the property too. Different grasses grow well at different times of the year, so a diversity of grasses means they have feed for the stock and habitats for animals all year round. Liz picked a piece of grass and explained to us that the grasses were currently in head which meant that we could see their seed heads. Liz helped us pick some seed heads so we could survey how many different types of grasses we could find.

We were surprised that we found so many different species of grasses in one small part of the property. Donna explained to us that this was part of the biodiversity on the land. She showed us a few really special types of grasslands that were native to Australia and quite rare. These grasslands are dominated by poa tussock and kangaroo grass and have lots of other native species like orchids and daisies too.

Donna showed us examples of these good quality grasslands and explained that they used to be all over the Jindabyne and Berridale area but have slowly become degraded due to farming and the introduction of other non-native grasses and weeds.

We realised that it is important to protect native grasslands on properties like the Woodhouse so we can protect the different native animals that call these grasslands home. By conserving important plant biodiversity we can protect animal biodiversity too.





As part of our investigation, we worked with Donna on a “*Sponge Frog Experiment*”.

We placed one sponge in the grass and another in the sun on the dirt road. These two sponges represented frogs in different habitats. At the start of the day, Donna made sure the sponges were filled with the exact same amount of water. We weighed them to check, and they both weighed exactly 60 grams. Then throughout the day we went and checked on them and weighed them both to see how much water they lost. We noticed that each time the sponge in the open sun was losing more water than the sponge in the grassy-covered area. Donna explained that this is why ground cover is so important. It provides not only frogs but a lot of other animals the right habitat to help them survive.

Sponge Frog Experiment

- 1 Get two dry sponges and place them on scales
- 2 Wet two sponges with water so that they each weigh exactly 60g
- 3 Place one sponge on top of grass in a paddock at 9am
- 4 Place one sponge on top of bare dirt in the same paddock at 9am
- 5 Reweigh each sponge at one-hour intervals until 2pm and record the results

Donna, an Ecologist at the Biodiversity Conservation Trust, helped us explore why protecting biodiversity is so important. Donna explained that an ecologist “works with people like Liz and Marty who are interested in looking after biodiversity on their properties and help them work out which parts have special values”. She explained that biodiversity is a complex web of life and that if you take some grasses or animals away completely that you never know what else is going to die because of that. Donna went on to say that the food web is like a pile of fruit, if you take one out from the bottom of the pile, you never know what else is going to fall.





Liz and Marty shared with us that they are working with the Biodiversity Conservation Trust to conserve and protect important and unique species on their land. When Liz and Marty talk about the Woodhouse, you can see how proud they are of their home. They spoke about all of the birds they hear in the mornings, and native animals that join them on their daily jobs.

Liz spoke about how important the natural environment is to their happiness and their enjoyment. Liz and Marty want to protect their property to ensure that there is always beautiful bushland around for the future, for us to enjoy too. Marty and Liz told us they have a conservation zone on their property. This means that a certain part of their land is protected for 20 years.

They make sure that biodiversity on their land stays protected by only allowing their stock to go into the zone for a maximum of four weeks a year.

Just before we left, Liz and Marty took us down to the front of their property where they showed us some of the native trees they were planting. Marty also explained to us about recruitment trees and pointed some out to us. Recruitment trees are where trees naturally pop up near other trees of the same kind. This happens by the seeds germinating nearby. He explained that it is really good when trees do this. Liz and Marty also like to plant lots of trees to ensure they are protecting the land they live on and making sure it stays as close to what it originally was as possible.

Thank you to Elizabeth and Martin for showing us around the Woodhouse, we learnt so much and are very proud of how you are protecting biodiversity and nature for us to enjoy in the future.

The next day, our entire school travelled out to the Gegedzerick Travelling stock reserve. (TSR).

A Travelling stock reserve is public land that people can use. It is mainly used for people moving their stock long distances that need spots for their stock to rest overnight. TSRs are also very important for biodiversity conservation and can have recreational and Indigenous cultural values too.

When we got to the TSR, we met a number of BCT staff, Petaurus staff, Damon from the South East Branch of the Department of Planning and Environment, Lauren from Upper Snowy Landcare Network and Gail, a Ngarigo Indigenous woman. On the day we participated in four different activities. We explored local birds, ground cover, Caring for Country practices and planted native flora.



Our first activity was bird watching with Damon. He told us all about the different birds from the area. We were lucky enough to spot some glossy black-cockatoos flying around, which was really cool. Glossy black-cockatoos prefer to eat seeds from native she-oak trees, and leave traces of their meal on the ground in the form of cracked seed cones.

Damon had also hidden some cut out pictures around the TSR for us to find. Each picture had lots of interesting facts about the different birds that we got to learn. Damon explained to us the different habitats birds live in. We learnt that old trees and hollows are really important habitats for birds, so we shouldn't cut them down or remove them. He also told us that hollows can take over 100 years to be a habitat



We then headed to meet with Lauren to help Upper Snowy Landcare Network plant some trees. Lauren explained that it is important to plant native trees properly so they survive and grow into habitat. We needed to dig a hole deep enough so when the tree is planted, it covers one-third of the plant. That even includes covering some of the leaves. We planted two types of trees that like to grow with each other. We planted acacias and eucalypts.

Once we had planted the trees, we had to place a tree guard around it. This was to protect the tree from the wind and any other animals that might want to eat the tree. We also watered the tree as we know all trees need water to help them grow. Lauren suggested that we can come up to the TSR at any time and check on how our trees are going. We can show our families the tree we planted and even come back when we have our own children and show them what we did when we were at school. We can't wait to see how big our trees are when we go there next!

Donna then helped us learn more about groundcover. We learnt that ground cover is more than just grasses. Did you know that it is all of the different things that cover the ground? This includes fallen leaves and logs, to bones, fungi and lichen. We then did a scavenger hunt to see all the different types of ground cover we could find. Our bags were overflowing with all the different things we could find. We then sorted what we found into the different types of categories of ground cover. Donna then explained to us that different ground cover provides habitat to a whole range of different animals. This is why groundcover and habitat is so important for biodiversity, each animal has preferred food or homes or hiding places, just like we do.

If we were to take the ground cover away, then those animals would have nowhere to live and would have to go somewhere else to find a new home or die. If this happened the biodiversity in the area would be lost. Even if we just take away some of the ground cover that would be taking some of the animals' homes away and that might impact the food web that we learnt about earlier.



Our final rotation was with Gail, a Ngarigo artist. Gail did a Welcome to Country and explained some things that can be found in and near the TSR that are important to her people. We explored the storytelling and symbols used in her art.

Gail painted our faces with Ochre. Ochre is like a clay and comes in different colours. The ochre is removed from the rocks and ground down to a fine powder. Once you have the powder all you need to do is add water and mix it until you get a paint-like consistency. Ochre is used for many different reasons. It is used in different ceremonies and also in artworks. Gail said she likes use to white ochre because white represents peace.

We then got to create an artwork. Gail told us to try and include things from the environment we see and to also try and represent what we had learnt over the last two days. She also had lots of different Indigenous artefacts that she showed us. She explained why they are important to Indigenous people and how they create and use them.



STUDENT REFLECTIONS

ALEXANDER

Biodiversity is different animals and plants relying on each other. The way they rely on each other is that the plants give oxygen, and the animals give carbon dioxide.

QUINCEY

When I started this program, I didn't even know what biodiversity is. But now I know that it is the variety of living things like animals and plants, and I know it is important. I will know what biodiversity is forever.

SHAYLA

Before I did this program, I thought it would be fun and it was so fun.

INDI

When I started this program, I thought Biodiversity was a variety of fruit but now I know that it is a variety of living things such as plants and animals, I think biodiversity is important because if you take a few grasses or anything living you could kill a lot of biodiversity.

BEN

When I first started the program, I thought it was going to be boring, but it wasn't that bad and I learnt how long it takes for a hollow to form in a tree. It takes 100 years!

AVA

I am a conservation champion because I thought it was going to be boring planting trees and bird watching but it was actually really fun. I loved it. I love biodiversity and care about it too.

BEN

When I started this program I didn't know what biodiversity was but now I know what it means. It is like when you have a stack of fruit and take a piece away it all falls down.

JAYDA

When I started the program, I thought biodiversity was confusing but now I know that it means that if you take a stack of fruit and if you take one away it will tumble down. This is like nature if we take a living thing away it affects other living things.

ISAAC

When I started this program, I thought biodiversity was a food source but now I know it is a variety of living things.

MAKENZIE

When I started this program, I thought it would only take about a year to make a hollow in a tree. But because of what Damon told us, while we were doing the bird watching, I know how long it takes. It takes over 100 years.

SAM

When I started this program, I thought it was just an excursion about plants and animals. But after being taught about how important biodiversity is, I've learnt a lot more. I learnt a lot more about ground cover and how important it is for animals to survive.

HENRY

I am a Conservation Champion because I hunt feral pigs, deer, and cats on the property my dad manages. I want to make sure Australia's native birds, small creatures, and plants do not get killed by these introduced animals.

ASTON

On the field day, I learnt that Ochre is a powder like a clay. Aboriginal people use Ochre for ceremonial face and body painting. It is very cold when it is on your face.

XAVIER

We planted trees on the Travelling Stock Reserve. We learnt how to plant the trees. I enjoyed the bird watching because we were looking for different types of birds using binoculars.





I see an old plant that has seen more than we will ever see.

HENRY



Light green spikey bush with cold wind dashing behind blue cloud gazing upon and mountains waving behind.

QUINCEY



It is like a forest for ants but, just another meer stick for a human.

SAM



The prickly bush of sticks covered in minty coloured lichen, the blue sky in the distance.

ISABELLE



Thank you to Liz and Marty for having us at The Woodhouse. Thank you to Donna and the BCT staff, and Petaurus staff for teaching us about science and biodiversity conservation. Lastly, thank you to our teachers for taking us to The Woodhouse and Gegedzerick Travelling stock reserve. We now know that biodiversity is the variety or differences between living things.

The Woodhouse was a great example of how we can manage and protect biodiversity and showed us how important land conservation is, not only to protect the environment but also to bring people joy. We had heaps of fun and learnt so much. We understand the importance of biodiversity and are happy that there are people like Liz and Marty who are conserving the land so we can continue enjoying biodiversity forever.

Biodiversity Conservation at Berridale

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Photography

All photos are courtesy of Petaurus Education Group unless otherwise indicated

Front cover photo

Landholders, Liz and Marty Timmins. Image by Jasmin Maiden

Design

Petaurus Education Group

Biodiversity Conservation Program

In 2022, students from Berridale Public School participated in creating a book as part of the Biodiversity Conservation Trust's *Conservation Champions* Program.

Acknowledgement

We would like to acknowledge the Traditional Owners of this land and pay respect to their Elders — past, present and future.

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