

River Detectives Story of belonging

Jeparit Primary School, Wimmera CMA region, 2023



River Detectives is a cross-curricular citizen-science program connecting teachers and young people with their local waterways. Through water-quality testing, macroinvertebrate sampling, and habitat surveys, students learn about the importance of catchment health and their role in caring for it.

The program is available to schools and youth groups in five regions across Victoria.

Craig Donahoo is the Principal of Jeparit Primary School, a small rural school on the Wimmera River in the state's west that has been involved in the River Detectives program since 2017. Students monitor their adopted site on the Wimmera River nearby. The river terminates six kilometres north of the town at Lake Hindmarsh and this year a fantastic opportunity arose to connect with this ancient lake.

Lake Hindmarsh has been dry since 2013, but in December 2022 received water after three years of La Nina conditions. In 2023, as water receded from the lake bed, distinct vegetation zones became obvious and this was identified as an ideal investigation to complement the school's term four theme of Belongings.



Lake Hindmarsh, the first of a series of terminal lakes.

In October, 15 Prep to Year Six students travelled by bus to the lake. Students worked in groups of three to identify plants in thirteen 10-metre transects along Picnic Point Track from the lake edge to the lunettes.



Senior students measure the 200m transect over the big lunette sandhill with a trundle wheel.

Principal Craig Donahoo explains, *"Leading up to the field work, we instructed students on plant identification using phone apps and introduced them to the concept of using transects to describe changes that occur in landscapes. In the field, River Detectives Coordinator Jeanie had pre-prepared booklets with 20 photos of plants to be found. Using the visual aids, students were able to identify a range of species in the field and to draw and photograph ones which were not in the booklets."*

Parks Victoria officer Jeremy Downes attended the excursion and helped students identify plants as well as facilitating the removal of three bags of cape weed, ice plant, and gazania with permission from Barengi Gadjin Land Council.

"Students were given agency to remove weeds. Students reported they enjoyed removing weeds as they felt they were doing something positive for the environment."

As a natural example of Belongings, the very visible zonation of plants was discussed: from reeds to herbs and grasses; from wattles to gums and pines. Students came to understand that each plant family belonged to different parts of the lake environment according to their habitat needs.



Students hear from Jeanie, Jeremy, and Sue on site at the lake.

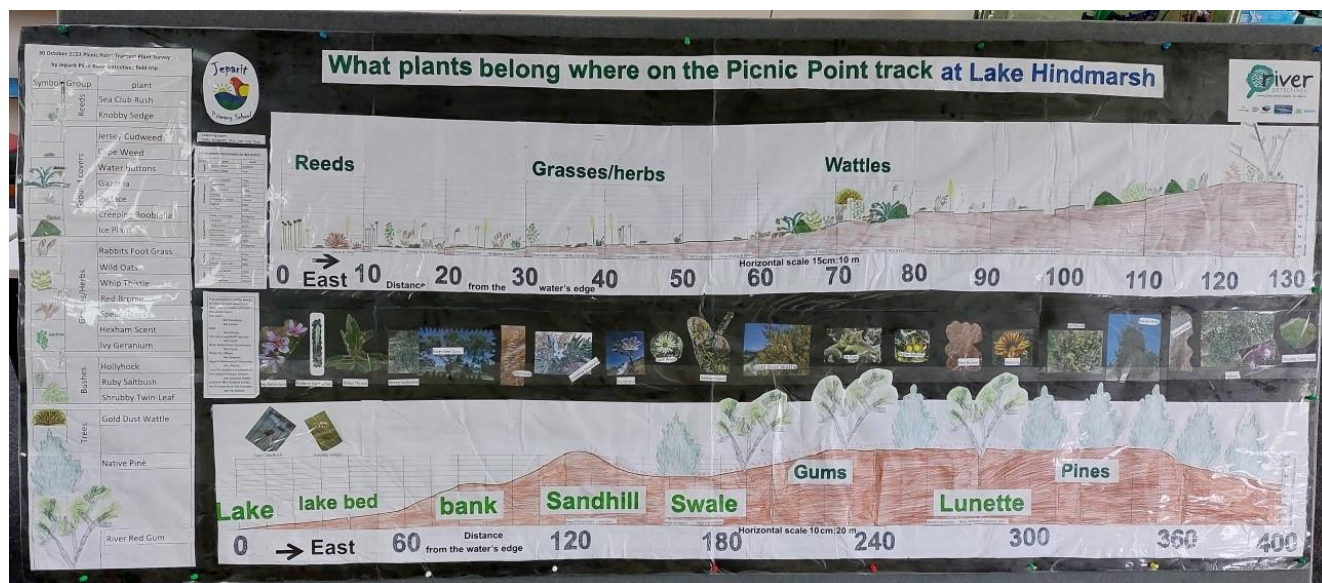
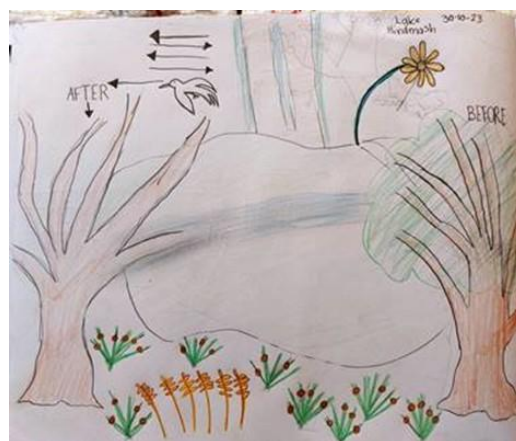
Students were able to show their understanding of each layer of native vegetation, weeds, changes over time around the lake, and the animals that call it home (right).

Over the following six weeks, students continued their learning, transforming their field trip experiences and their observations into an incredibly detailed two-metre poster. They made scaled plant diagrams and used their transect survey data to place species in the correct section of the poster.

The visual cross-section of Lake Hindmarsh vegetation is a great example of student inquiry at a place of importance in the local environment, and of the way River Detectives can integrate with many curriculum areas. Field work and class work can go hand in hand.

From the human aspect of Belongings, WaterWatch volunteer Sue Afford from a neighboring farming family shared memories of the lake as a place for recreation during her lifetime. Jeremy also spoke about the lake as his workplace.

Students drew pictures to reflect on their sense of belonging to Lake Hindmarsh.



The poster will be on display in the window of the local supermarket over the summer holidays.

Craig reflects on the impact of this activity and the River Detectives program,

"I was really pleased to see the high level of enthusiasm and engagement of all students during this activity."

Students were able to:

- increase their plant identification skills
- understand the relationship between site geomorphology and species locations
- gain knowledge of why scientists use transects to describe changes that occur in landscape
- complete a table to describe species in a section of the transect
- use scale to represent species in a transect
- feel satisfaction and purpose when removing weeds
- gain knowledge of the Lake's past social and commercial history

"It was great to see students learning in real life situations. I think we need to do more of this."

A copy of the booklet featuring plants of Lake Hindmarsh that Jeanie prepared was given to each family of the school.

Jeanie reflects,

"None of us had realised how much variety there was in the plants at this part of the lake, much further around from the main tourist site. The weeds there were also a surprise. We hope our transect poster will not only reinforce what we found out about native and weed plants but also be able to be used to inform others."

For more information about River Detectives:

Email riverdetectives@nccma.vic.gov.au or visit www.riverdetectives.net.au



Sea club rush
(water's edge).



Jersey cudweed
(dry lake bed)



Ivy geranium
(lake edge)



Cypress pine
(lunette sandhill)

Photos by Jeanie Clark (cc, 2023)