

River Detectives Story of Change

Timboon P-12 School, Corangamite CMA region, 2023



River Detectives is a cross-curricular citizen-science program connecting teachers and young people with their local waterway. 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.

Timboon P-12 school, comprising of 470 students, is in a farming, artisan food, and tourism region of Victoria. It receives high rainfall feeding many small tributaries of the Curdies River that winds its way south west to the sea at Peterborough. It's also home to the Timboon Agriculture Project (TAP) coordinated by Andrea Vallance.

TAP has been described by the Minister of Education as “a best-practice example of what can be achieved with a strong partnership between schools, industry, and the community.” Classrooms extend into the community with contributions by those with work or life knowledge and skills that align with curriculum. The Curdies River and its tributaries touch all parts of our community; geographically, but also through leisure activities and as a resource for the dairy, food, and fibre producers in the area. The school's strong affiliation with the Curdies River meant that when the estuary experienced blue-green algal blooms and fish deaths in April 2022, community concern was heightened, and a natural teaching moment arose.

Andrea explains, “I spoke with Corangamite CMA about becoming a River Detectives school but it was too late to sign up that year, so we accessed the online resources and put ourselves on the waiting list for 2023.”

Keen to get started, TAP prowess came to the fore and they immediately began integrating the Curdies River into the curriculum in anticipation of becoming official River Detectives the following year;

“Year 7/8 Community Projects elective students linked up with Power Creek Reserve Committee and Heytesbury and District Landcare Network to plan and begin rejuvenation of the reserve over two school terms. The students' work in cleaning up this stretch of the creek prompted a session with local shire staff on rubbish and waste management.”



CCMA project officer Gene demonstrates water quality testing.

“The Year 7 Geography study of water and catchments was enriched by the deep knowledge held by Debbie of Curdies Valley Landcare Group (CVLG), and Gene, a Land and Catchment Project Officer from CCMA. Year 7 students, supported by Gene and Debbie, shared what they had learned with school visitors and younger students at the school's annual curriculum expo, TAP's On!, later that year.”

Andrea explains even though Timboon P-12 School only joined the River Detectives program in 2023, its story is powerful because TAP was an established vehicle for the program to seamlessly integrate with;

“As a result, our engagement with the river and the school's capacity to capitalise on the River Detectives program was immediately realised. We haven't created something new with

River Detectives, but using it we have been able to super-charge a new focus within the TAP, across year levels and curriculum areas.”

This has proven to be a highly successful delivery model.

The chosen monitoring site was on the Curdies River at the tourist icon of Trestle Bridge. In Term One, 2023, the program was used to add value to a Year 10 study of the Curdies estuary. Debbie of CVLG and CCMA River Detectives Coordinator Deirdre, trained students in water-quality testing and water bug identification.

“Students learnt a lot about the causes and impacts of water quality changes and how land use upstream can affect water quality all the way down to the estuary.”



Deirdre works with students at Trestle bridge



During April, Year 5/6 drew on real data and the lived flooding experience of a local farmer to predict the on-farm damage and repair costs following a 30 per cent higher-than-average forecast rainfall event.

“Although not strictly part of River Detectives, learning can be successfully built upon because of links across the curriculum and between year level. The Curdies River is now one of those links.”



Dean from CRCA with Year 9 's

In May, Year 9 students visited the estuary to contextualise a writing project, 'Curdies Stories; Tales of the People and River'.

“They interviewed locals for their memories of the Curdies catchment. Members of the Curdies River Catchment Alliance group, formed after the fish deaths, along with Landcare and CCMA representatives spoke to students about the river’s use, history, ecology, and management. Stories the students wrote are being published thanks to a grant from our local op-shop.”

In June, Year 3/4 students learnt about waste management which tied nicely to the Story Of A River session River Detectives Coordinator Deirdre delivered in November at the annual TAP's On! event. Students grew to understand the impact of litter and pollution on our waterways.

Even Year 1/2 students are involved. In May, they investigated the water cycle and visited Power Creek to make scientific observations and collect a water sample for testing.



Year 1/2 students at Curdies River tributary, Power Creek



"In June, Debbie of CVLG used apples, ink, crumpled paper and water to explore how much water is on the planet, how the water cycle works, how a catchment works and our responsibilities in protecting waterways."

And after enjoying a retelling of the rainbow serpent Dreamtime story, Prep/1/2 students arrived at school one morning after a rainfall event to find an outline of a serpent on the path.

"Under guidance from the art teacher they brought the Rainbow Serpent to life, just like the Curdies River after a good soak."



Year 1/2 students learn how catchments work.



The rainbow serpent arrives one morning after a big rainfall event and gradually comes to life.

Andrea knows from her decade-plus of delivering the TAP that cultural change about community and environmental issues takes many years but is helped along by young people developing and sharing their enthusiasm and understanding with their families.

"As more teachers access the training and resources on offer from River Detectives in coming years, and as students move through year levels engaging with the river in different ways, we expect the interest and enthusiasm for the Curdies River, its catchment, and estuary will flow strongly through the district."

For more information about River Detectives:

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

Photos provided by Andrea Vallance