

River Detectives Program

Story of Change

Jeparit Primary School, Wimmera CMA region



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 website provides access to a wide variety of engaging resources inspiring teachers to embed River Detectives in school and community life.

Since 2016, the program has been available to school and youth groups in five regions across Victoria.

In the Wimmera CMA region, Heidi Lees is a teacher at Jeparit Primary School, a small school community of 17 students where all students from Foundation to Grade 6 participate in the River Detectives program. The Wimmera River flows through the farming area of Jeparit before terminating at Lake Hindmarsh just north of town. Lake Hindmarsh is Victoria's largest freshwater lake and the first of a series of terminal lakes. The river is an important feature of the town and a common point of reference for students who come from a variety of backgrounds.

The school has a long-standing association with the Wimmera River. They began monitoring the waterway in 1996 as part of the Waterwatch program and have maintained a connection with the river over the years thanks to support from their regional coordinator and freelance environmental educator Jeanie Clark and by liaising closely with the local Jeparit Waterwatch group.

When Heidi joined the staff in 2018 she strengthened their association by joining the revamped River Detectives program.

"I saw the training advertised and thought it was a great opportunity considering the Wimmera River flows through our school's 'backyard'. Our school had just started a kayaking program in 2018 and I felt that the two programs would complement each other. The students learn about the river they are paddling on, know how to look after it and appreciate the river more. It is my philosophy that students learn best through hands-on learning. Therefore, students collect real data for graphing rather than pretend data."

Heidi outlines that River Detectives is the core program that engages Jeparit PS students in sustainability education.

"Things have been disrupted due to Covid, but we have always tried to complete our monthly water quality monitoring. Before Covid students ventured down to the river during geography or science to collect the sample, we completed the testing back at school. Data was then uploaded onto the website. We also took part in macroinvertebrate sampling in March and October. Jeanie collected bugs from the river and brought them into school for our students to experience. This activity adds a different dimension. Students become aware of what lives in the river, what should live in it, the role waterbugs play in the food chain and learn to appreciate the importance of keeping the river healthy."

With support from Jeanie we have learnt about the effects of flood, drought, and humans on the Wimmera River over time, especially their impact on salinity levels and turbidity. We notice that salinity levels are generally quite high. We learn about the fauna that visit our site through observations of tracks, scats, nests and other clues. We know which fauna have visited our site."

Reflecting on her River Detectives highlight, Heidi spoke passionately about a project they have been able to achieve throughout 2020 and 2021 despite the challenges of Covid-19 and remote learning, testament to the program's flexibility and potential;

"In 2020 during remote learning, students were learning about erosion in science and mentioned that they'd noticed erosion on the river banks when conducting monthly testing. Students wrote letters to GWM Water, Land care, Jeanie, and local farmers to ask if they could interview them about what we could do to improve the river and prevent erosion. We met on WebEx, and students learnt that revegetation could help to minimise erosion. We then successfully applied for a Junior Land care Grant to tackle the problem."

Between lockdowns we invited ecologist Mirinda Thorpe to visit. She walked along the river with students, identified native plants growing on the banks and discussed the benefits of revegetation. Then, in November we visited Dalki Garinga, the Wail native nursery, where nursery manager Paul Lehmann taught us how to propagate plants indigenous to the area."

Next, we enjoyed a visit from Barengi Gadjin traditional owners. They helped us to observe culturally significant sites. The students saw middens and learnt about what traditional daily life would have been like along the river. They taught students about their culture, traditional tools and environment."



Parks Victoria supported us to identify suitable revegetation sites protected from people/cars providing plants with the best chance of success.

In May 2021, students planted out the plants they had propagated at the nursery in November with the support of representatives from Barengi Gadjin, Parks Victoria, Paul Lehmann, Hindmarsh Landcare and the Jeparit Town Committee.

To educate the broader community and raise awareness we put up a display in the main street to explain the project.”

Grant money was allocated to funding the ecologist’s visit, the nursery excursion, and to purchase plants. But, as is so often the case when good people come together on inspiring projects, organisations and individuals were so supportive of the project that many donated their time and materials. Heidi explains the next goal of the project;

“We aim to use leftover funds to install bollards to protect future revegetation sites in areas frequented regularly by people for recreation, as vehicles in these areas would be likely to damage existing vegetation and new plantings. We also plan to install signage at the revegetation site outlining the project activities and goals, acknowledging project partners, promoting local user groups, sharing thoughts about why the river holds value for them and why we need to look after it. We hope the sign will communicate how local groups are working together and share that for people to use boats on the river, it needs to have water and to have fish in the river, the water needs to be healthy. We need to look after each other so we can all enjoy the benefits of the river.

An annual fishing competition is held at Easter and we have dreams of supplying information to participants when they register to let them know about our project and encourage them to look after the plantings whilst fishing.”

The fishing competition is an important event for Jeparit. People come from near and far to participate, fishing and camping along the river. Heidi feels it’s very important for all in the community to support events such as this because they bring people to the area, and it’s great for socialising and for health and wellbeing.

“There is a real need for us all to work together so that people can still fish, still boat, and protect the river from erosion. If we have a common understanding that all of these activities are great and we work together, we will continue to enjoy the benefits of the river for many years to come.”

Jeparit PS was proud to have received a Highly Commended mention for the Woolworths Junior Landcare Team Award at the 2021 Victorian Landcare Awards for its innovative and collaborative project.

Covid-19 has heightened awareness of supporting students’ learning of key concepts. Heidi values the opportunity to implement River Detectives content through literacy and numeracy activities so teachers can satisfy the demands of core curriculum areas whilst engaging students in the River Detectives program.

“Students have learnt science and geography concepts like understanding erosion and revegetation. They collect field data when we visit the site. Water quality testing gives them confidence with scientific processes. In Maths we use the data we collect for graphing. Recounts of their experiences visiting the nursery, propagating and learning from the ecologist and traditional owners were written by students and published in the school newsletter.”

Heidi explains that the River Detectives program provides hands-on learning and encourages students to be more observant.

“Students love to be out in the environment and nature and as we walk to our test site, the students notice things – flora and fauna – and then they ask questions about what they’re seeing and why it might be occurring. Sometimes they google or sometimes they contact Jeanie for more information. It’s precious learning out in the environment instead of learning from a textbook. Students spend time at the river with family during holidays, weekends and after school; now they have an understanding of what’s under their feet, the reason for looking after it and how we can do that.”

One of Heidi’s greatest joys has been witnessing how some students who struggle with the academic challenges of reading and writing in the classroom “come alive” outdoors by the river.

“During our excursion with Mirinda, one student asked so many questions and was so enthusiastic about participating. I realised this activity was something this child could excel in, go on with in life and be successful.”

Heidi values the support of her regional River Detectives coordinator.

“Jeanie trains teachers up and then we roll out the program with our school. Jeanie is so knowledgeable and inspires the teachers she trains. We rely on her so much. Her role as coordinator is so valuable to support schools undertaking the program. Continued funding is essential to enable her to continue this role. She takes away my stress and we love to see her out in schools doing hands-on activities with students and staff.”

For more information: Email riverdetectives@nccma.vic.gov.au or visit www.riverdetectives.net.au



