River Detectives Story of Change

St Brendan's Primary School, Corangamite CMA region, 2026

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, including the Corangamite Catchment.

Small School, Big Impact: How St Brendan's Students Are Becoming River Detectives

Nestled in Victoria's beautiful volcanic region, St Brendan's Primary School may be small in size, but it is making a significant impact through its commitment to environmental learning.
Surrounded by rolling beef and dairy farmland near the township of Cororooke, the school's 37 students are discovering the power of science, stewardship and community through the River Detectives program.

Serving families from Cororooke, Beeac, Nalangil, Larpent, Swan Marsh and Colac, St Brendan's has built a strong culture of hands-on learning. Over the past four years, River Detectives has become a valued part of the school's Outdoor Learning program, giving students the opportunity to explore, investigate and care for local waterways.

Taking Learning Beyond the School Gate

For the staff at St Brendan's, one of the greatest strengths of the program is its ability to bring learning to life.

Outdoor learning teacher Alice Armistead reflects, *"I was drawn to River Detectives because it was interesting, relevant and hands-on, it gives our students an opportunity to move beyond the classroom and learn in a real environment. I believe it is an excellent way to build students understanding of environmental science."*

The school's River Detectives journey began at a site along the Gellibrand River, where a local family where happy to provide students access to monitor river health. When that opportunity came to an end, the school established a new monitoring site on the Woady Yaloak River near Cressy.

"The new site is close to school and easy for students to access safely," Alice explains. "It has allowed us to continue the program and maintain those valuable connections with our local waterways."

Young Scientists in Action

Each year, St Brendan's Grade 4 students take on the role of River Detectives. Accompanied by a teacher and learning support officer, they visit their monitoring site twice a year in terms 2 and 4.
Sampling is also conducted in term 3 however testing is conducted back in the classroom at school for third term due to bus costs and time constraints.

During each visit, students become scientists, carefully observing their surroundings and investigating the health of the river ecosystem.

Alice goes on to explain that,*"We encourage students to use all their senses, we ask them what they can see, hear, smell and feel. They quickly begin to notice changes in the river and the surrounding habitat from season to season."*

Students test water quality indicators including salinity, reactive phosphorous, pH, turbidity and temperature. They also search for macro invertebrates (water bugs), birds, fish and other wildlife that help tell the story of the river's health.

"Students love looking for evidence of life in and around the waterway. There is always excitement when they discover something new," Alice says.

The visits also include practical environmental action, with students collecting rubbish and helping care for the natural areas they monitor.

Growing Environmental Awareness

While the scientific skills students gain are valuable, staff say the most important outcome is the deeper understanding students develop about the importance of healthy waterways.

When asked about the impact the program has had on students, Alice said, *"One of the biggest changes we've seen is the students' understanding of water quality and what makes water safe and healthy. They are beginning to appreciate that water is a precious resource."*

A key lesson that students revisit throughout the program is the connection between actions and consequences within a catchment.

"Students are often referring to the knowledge learnt during these site visits to answer questions in other subject areas. They live a better way of life and make good choices because they know firsthand how important water quality is. They know what impacts water positively and negatively," Alice explains.

Building Confident, Curious Learners

The River Detectives program has also strengthened students' connection to each other, their teachers and the natural world around them.

Reflecting on the program Alice said, *"One of my favourite things is seeing students genuinely excited to participate. They love getting out on the bus, exploring the river and learning through experience."*

For a small rural school, these shared experiences create powerful opportunities for relationship building.

"You get to know students differently when you're learning alongside them outdoors," Alice reflected.

"We develop a shared interest and curiosity, and that helps strengthen those connections."

Watching the landscape change throughout the year has become another highlight. Alice loves seeing students notice how the river and surrounding environment change through the seasons: *"They start to understand that ecosystems are dynamic and constantly changing."*

Small Challenges, Big Rewards

Like many rural schools, St Brendan's must navigate practical challenges, including transport costs, timetabling and ensuring adequate classroom coverage during excursions.
Despite these hurdles, staff remain committed to the program because of the benefits they see in their students.

"There are certainly challenges, but when you see the excitement, knowledge and confidence students gain from these experiences, it is absolutely worth it," Alice said.

Looking Ahead

The future of River Detectives at St Brendan's is bright. Staff hope to continue participating for many years to come and are eager to expand the program's impact through partnerships with environmental organisations.

Alice notes that," *We would love to work alongside groups like Landcare or Greening Australia on projects such as river clean-ups and revegetation. It would be a fantastic opportunity for students to see how they can contribute to positive environmental change."*

For the students at St Brendan's Primary School, River Detectives is more than a science program. It is an opportunity to explore, discover and take meaningful action in their local environment.

"When students realise they can make a difference, even in a small way, that's incredibly powerful."

Alice reflects, "They're not just learning about the environment, they're becoming caretakers of it."

Through curiosity, exploration and hands-on learning, these young River Detectives are proving that even the smallest school community can make a lasting impact on the health of its local waterways.

For more information about River Detectives email riverdetectives@nccma.vic.gov.au or visit www.riverdetectives.net.au

Corangamite CMAs Citizen Science program is kindly supported by Barwon Water and Central Highlands Water.

River Detectives Story of Change

Emmaus Catholic Primary School, Corangamite CMA region, 2025

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.

Emmaus Catholic Primary School (ECPS) is located in Mt Clear, a suburb on the southern edge of Ballarat. A medium-sized Catholic primary school with a warm and welcoming community, the school is made up of families from both the local area and surrounding districts.

ECPS teacher Rachel Smith explains: *"Beyond its academic value, River Detectives is a core expression of our Catholic mission to care for our common home and to respect and protect sacred land. It sits alongside our wider sustainability initiatives - including the use of Ecobins for waste management and the development of a permaculture hub within the school grounds - fostering in our students a deep sense of environmental stewardship, responsibility, and connection to creation."*

The River Detectives program has provided an opportunity for ECPS to actively participate in their local community while engaging students in meaningful, hands-on learning. Engaging in Citizen Science activities allows children to explore scientific concepts in authentic ways, nurturing their innate curiosity and deepening their understanding of the natural world.

"Most importantly, being a River Detectives school is a direct response to the cry of the Earth, helping our students recognise their role in protecting creation and inspiring them to take action that reflects both faith and care for the environment," says Rachel.

ECPS students exploring their local monitoring site

Throughout their 4-year involvement in the River Detectives program students at ECPS have tested the health of local waterways at Union Jack Creek in Buninyong, Canadian Creek in Mt Clear and previously the Yarrowee Creek in Sebastopol. While on regular visits to these sites with teaching staff students collect crucial water quality data which supports the broader ongoing monitoring of the Leigh Catchment condition and its changes over time.

With their natural curiosity and fascination for the science behind water quality testing, students at ECPS collect water samples to measure parameters such as pH, electrical conductivity, air and water temperature, phosphorus levels and turbidity. Additionally, students have delved into the wonderful world of water bugs to assess biological health indicators of the river.

During monitoring site excursions, students actively participate in games and hands-on activities designed to enrich their understanding of environmental systems, life cycles and Indigenous knowledge. As part of their extended studies, students also engage in orienteering, tree planting, and rubbish collection initiatives – contributing meaningfully to the restoration and protection of their local waterways.

"Being involved in the River Detectives program has provided students meaningful opportunities to contribute to the wellbeing of both the local environment and the wider community."

When asked about the most significant change resulting from the school's involvement in the River Detectives program, Rachel reflects on the power of knowledge sharing and the ripple effect that engagement and awareness can create in striving for a more sustainable future.

"The most significant change for our school has been the way the River Detectives program has raised awareness about caring for our environment, both within the school and the wider community. It has given our students the chance to develop real-world knowledge and skills, showing them that their actions can make a tangible difference. Parents have also been amazed at what their children are capable of knowing and doing — from testing water quality and identifying species to confidently sharing their findings and taking meaningful action.

This program has strengthened the partnership between school, families, and community, highlighting the powerful role children can play as leaders in sustainability. The combination of family engagement, staff recognition, and student motivation highlights the deep impact the program has had on our community."

Sparking joy, curiosity and wonder…..

Teaching staff have observed that their students embrace every part of the River Detectives experience — from the excitement of going on a bus, to marching through a paddock, to the thrill of trying to work out which water bug they have discovered.

"These moments capture the spirit of learning, discovery, and stewardship that this program inspires in our school community."

Exploring the wonderful world of water bugs

Moving forward, Emmaus Catholic Primary School is committed to continuing their involvement in the River Detectives program as a key part of the school's sustainability journey. With excitement building for the development of a school permaculture hub, the growth students have experienced - their knowledge, confidence and ability to lead - will be the spark that lights real change.

The statewide River Detectives program acknowledges the First Nations People across Victoria, their continued rich culture and spiritual connections to Country and waterways. We also recognise and acknowledge the contribution and interest of the First Nations People and organisations in land, water, climate and biodiversity management.

For more information about River Detectives:

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

Corangamite CMAs Citizen Science program is kindly supported by Central Highlands Water and Barwon Water.

River Detectives Story of Change

Covenant College, Corangamite CMA region, 2024

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.

Covenant College is a Christian school that caters for students from three year old kindergarten to VCE. They welcome families from diverse cultural and denominational backgrounds, drawing students from Geelong and the surrounding region.

The school has been involved in the River Detectives program since 2020, integrating it into the broader sustainability curriculum that has been successfully delivered by the college in partnership with Batesford Fyansford Stonehaven (BFS) Landcare for over a decade. Their story is a fine example of the way curriculum and learning outcomes can be enhanced through strong collaborative partnerships with community groups.

Now in its fourth year, Covenant College involve their Year 9 students in River Detectives as part of the College's Community Service Program. Students are immersed in the local environment and community action by working closely with BFS Landcare to improve the health of the Moorabool River. This collaboration allows students to make tangible contributions to their local environment while learning valuable skills.

In the past, a huge variety of activities, projects and events have been held including weekly walks, talks and on-ground work in the Moorabool River Reserve. Focusing on the river in the vicinity of Dog Rocks Fauna and Flora Reserve, the students have increased their awareness of the condition of the Moorabool River and the importance of healthy waterways to the environment; and learned about threats to the river system, threatened species and habitat.

Regular water quality monitoring, an integral feature of the River Detectives program, has added a new citizen-science component to the learning of both the students and Landcare members.

Corangamite CMA staff member Deirdre Murphy with Covenant College Year 9 students

The students regularly visit the Dog Rocks Fauna and Flora Reserve with volunteer members of the local landcare group as well as staff from the Corangamite Catchment Management Authority. During these excursions, they collect crucial water quality data, which supports the broader ongoing monitoring of the Moorabool River's condition and its changes over time.

The data collection involves measuring various parameters such as pH, electrical conductivity, air and water temperature, phosphorus levels, and turbidity. Additionally, students perform macro-invertebrate surveys—analysing water bugs to assess biological health indicators of the river.

Vice president of BFS Landcare, David Clift, explains the value of utilising the River Detectives program in their work with the school.

"*As a Landcare group we welcome the opportunity to work with the River Detectives program which we understand to be a worthwhile initiative.*

Our hope is to introduce students to the important concept of being responsibly engaged in care for our local waterway environments, with weeding and planting in land reserves. It's also a great way to be involved ourselves as a Landcare group in monitoring the health of our local waterways."

By alternating between physical-chemical testing and biological assessments, students gain a comprehensive understanding of the river's health. This dual approach provides insights into both the physical conditions and the ecological state of the waterway, fostering a deeper connection to their local environment.

BFS Landcare secretary, Felicity Spear, enjoys the relationship they share with the school.

"BFS Landcare works with school groups to raise awareness of the value of caring for and protecting the natural environment and its waterways, including our local Moorabool River and its surrounding riparian zone.

Covenant College students complete water quality testing and macroinvertebrate sampling to assess the health of Moorabool River.

With assistance from the Corangamite CMA and local volunteers our school groups from Covenant College regularly monitor water quality and bug biodiversity contributing this data to the bigger picture of river health in the region.

We regard this activity as a valued part of our program, with students having an opportunity to be actively involved in the experience of 'hands on' analysis, while developing a greater understanding of the impact of their findings."

BFS Landcare members with Covenant College Year 9 students

The River Detectives program not only teaches students about water science but also emphasises the importance of environmental stewardship.

It offers a hands-on, engaging way for young people to explore the interconnections between water, land, plants, animals, and their communities.

Through this experiential learning, students develop a greater appreciation for their local waterways and their roles in sustaining them.

For more information about River Detectives:

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

River Detectives Story of Change

Timboon P-12 School, 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.

Stories from the Corangamite CMA region

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

River Detectives Story of Change

Deans Marsh Primary School, 2022

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.

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

In the Corangamite CMA region Russell Taylor-Shaw is the teaching principal at Deans Marsh Primary School, a small rural school of 40 students with three class groups in 2022: Prep/1/2, Grade 3/4 and Grade 5/6. For the last three years, Grade 3/4 have participated in the River Detectives program.

Deans Marsh is a wonderful place with unique nature and wildlife, and the school draws on its environment to support student learning. It has been an active River Detectives school since 2020.

"We do a lot of environment stuff on site at school, but the proximity of the Deans Marsh Creek is just a good opportunity for us [to get the kids out into the community]. We pride ourselves on being a community school – and so, we love the walk down there as well because people see us with our buckets and our nets and it's good. We walk along the main street of the town and we only have to cross two roads and we're there. It's not a long walk but there's not a lot of town around us!"

Deans Marsh Primary School adopts responsibility for testing the water quality of Deans Creek, a tributary of the Barwon River, a significant river in the Corangamite CMA region – and they've learned a lot about where the water comes from and where it goes:

"So the water starts up in the Otways, and Deans Marsh Creek is really where it starts and then eventually it ends up in the Barwon River. So the kids find that interesting as well. All that water is flying down those hills – they all know that area well and then it's coming to us in this creek.

We've looked at the River Detectives videos on rivers and things and that's been good for the kids to access a bit more information because they do [get a better understanding of the whole concept of catchment, not just a creek on its own."

"We're an inquiry learning school, so we encourage students to have wonderings about topics; and they do have wonderings about nature and about the environment and about their local area, and so this is a good program – and it's a year-round program. We do our other inquiry topics just for a term, but this one runs throughout the whole year.

We try and get down there once a month to do testing and see it in all its different stages. We're heading down next week, and there's a little dam on the way there and the landowners told us it's full of tadpoles [following recent, sustained rainfalls], so we'll be doing a bit of a detour."

The school enjoys visits by River Detectives coordinators from the Corangamite CMA. This year Deirdre Murphy held a macroinvertebrate incursion where students learnt about aquatic waterbugs and collected further data.

"When Deirdre showed us the water bugs and brought a sample in and there was a little pygmy perch fish and the kids, were like: 'OK, we're gonna go down there again, 'cause we haven't found a pygmy perch!' So, yeah, they're pretty determined."

The school fosters extensive community partnerships and demonstrates a substantial commitment to environmental education, including an annual trip to the Bambra wetlands to investigate a larger local ecosystem and conduct revegetation at Bambra.

They've developed the school wetlands into a small wildlife reserve involving a partnership with Landcare and local families.

Parents and community members have shared their knowledge of native flora and fauna, working with the school to create a nature walk linking the school wetland with the playground.

The school is also involved in recycling programs, is a Resource Smart School and is part of the Schools Water Efficiency Program.

Through a water meter installed on their main tank, students and staff monitor water consumption to assist the school to become as water efficient as possible.

And let's not forget about the local cricket club connection:

"Our Grade 5/6s last year were studying the rakali, which is a local species, like a swamp rat. And that's what the local cricket team is named after, the Rakali: the Deans Marsh Swamp Rats.

So they're the swamp residents; and we've got a big artwork here of a rakali, so that's always in the back of the mind as well: will we see a rakali? The way the Grade 5/6s described it to these guys [Grade 3/4], they think it's about a metre long. So it's like some kind of mythical beast. So yeah, I think they're probably looking for something that's maybe a bit bigger than what it is!"

Russell explains the impact the River Detectives program has had on the school and students:

"River Detectives is one of those things that students will list as a personal highlight in the yearbook, where students talk about their gratitude and their highlights from the year and put all their photos on their page.

But it's more than that; there's the invisible aspects too: the pride in their town and in their environment and in themselves.

They're in little teams named after water bugs. So we've got our water boatman team for instance, and each time the team will have a different testing regime. They might be testing the pH one week or the electrical conductivity and that water boatman team gets quite close and they've designed themselves some little logos and things and they've got a folder of their notes. So we've really embraced it as a school program and added our own flair to it.

So there are a lot of invisible things, like that team building and that pride, and that sense of achievement in doing something good for the community. When we all sit down and enter the data at the end, they can all hear it and can all see the fish change colour (on the screen) based on the quality of the water. So there's quite a bit of learning in there as well – the testing, the main four tests – but we also try and get some samples to look at and do the habitat check as well."

For Russell, the River Detectives program has provided a flexible, engaging, outdoor learning experience:

"River Detectives is a really good out-of-classroom experience for the kids. If COVID taught us anything, it's that we're not always going to be in our classrooms. Things don't always go to plan. So it's good that we can show that some great learning can happen outside of the classrooms as well. Pulling on the gumboots and heading down to the Deans Marsh Creek with the kids and the school therapy dog and all our buckets and things is a great adventure – last time we got caught in the heaviest rain I've ever experienced. And you know, it's all just part of the adventure. And the kids – the kids really love it."

For more information:

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

River Detectives Story of Change

Carlisle River Primary School, 2020

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 Corangamite CMA region, Jeff Douma is the principal of Carlisle River Primary School, a small school of just nine students nestled in the Otway Ranges. The school has been involved with the River Detectives program for many years.

"We have always been interested in the indigenous flora of the local Carlisle River forest. We were very fortunate to have a passionate teacher, Gail Maddern, work with us to learn about the biodiversity of our area.

The late Mrs Laura Bocker (early years teacher) first got our school involved with the River Detectives program. She had a passion for nature and we soon found it was the perfect program to involve our students in learning about the local environment."

Students and staff have adopted a site on the Carlisle River, a small waterway in the Corangamite catchment of the Otways area. It is a tributary of the Gellibrand River with running water all year round.

At Carlisle River PS the whole school is involved in the program.

"We do water sampling at least once a month at Carlisle River. We all walk the 1km to the river (subject to weather) and undertake the testing at the bridge over the Carlisle River. All of the students from prep to Grade 6 are involved. Older students work with younger buddies to undertake the five tests. The older students take the lead on the more complicated tests such as reactive phosphorus, electrical conductivity and turbidity and the younger students take the lead testing pH with strips and taking photos of the site. On our return to school students add the results on the Waterwatch chart displayed in the school breezeway for parents and visitors to see."

Jeff comments that it has been great to be involved in the program over many years to collect lots of data and for students to become very familiar with the program and the river's health through their involvement from Prep.

"Students enjoy being out and about and making a connection with the land and water. They love walking to the river and having time to admire the river. The testing is always interesting. The students estimate the quality of the water due to various factors such as rain, presence of weeds, etc."

Older students remember a time when river levels were higher;

"A fish ladder was installed some years ago which banked up the water and created a much-loved swimming hole for locals however it has since been removed so water levels at the monitoring site are generally lower now with the water flowing more freely."

Other changes have been observed over time;

"*Some time ago a program of fencing was undertaken to fence off local farmland from the waterway. Revegetation was added and it was all looking terrific but it hasn't been maintained and now weeds such as blackberry have taken over the site making access to our testing site very difficult."*

Talking about these local issues gives students a real-life experience of how land and water management decisions impact plants, animals, land, water, people, industry and communities. Jeff reports that his students really love being involved in the River Detectives program.

"*The program helps students really appreciate the importance of looking after our waterways. Our area is a dairy farming area. Learning about the Carlisle River makes students more aware how water quality could impact on local industry."*

Jeff speaks passionately about one of the highlights of the school's River Detectives journey;

"*In 2019 we set ourselves a goal to see as many waterways in our local area as possible. We researched to find the very start of the Carlisle River. We enjoyed an excursion where we travelled to the source which was actually a spring and then followed the waterway 20-30km to the mouth. This was a fantastic experience for the students to see the waterway on a landscape scale, see how it is an integral part of our area and understand the impact that upstream activities could have further downstream and on the ocean.*

We visited waterfalls, rivers, creeks, the confluence of the Carlisle and Gellibrand rivers and also the estuary of the Gellibrand River at Princetown. The older students visited Camperdown Treatment Plant and learnt a lot about how river water is turned into our tap water."

This year's COVID restrictions have meant challenging times for schools but fortunately Carlisle River PS was able to continue with testing as a few students were still at school during lockdown. During this time the remote learning matrices developed and distributed by the River Detectives team were very useful.

"Students were given the opportunity to choose a selection of activities from the matrix that appealed to them. Due to the lack of internet at many students homes, the resources for chosen activities were then printed out by staff and posted to students. Students were asked to work on their chosen activities one afternoon each week for one hour. One student did a wonderful job of the rainbow task from the Nature Study matrix, thoroughly enjoying searching for natural objects from every colour of the rainbow. He had trouble with blue but found some hay band on his farm. The final product looks amazing."

Looking forward Jeff plans to continue water testing and as school life returns to normality hopes to undertake waterbug and habitat survey activities. He would also love to see the Billabong Banter area of the website used more by schools to share the great River Detectives activities they are doing.

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