

The days of the new school yard

Renew's Lori Dalton goes around the country to show us the critical role schools can play in building climate resilience.



Indigenous interpretative garden, credit Linda Hampton

Ask any primary school class what they want fixed in the world and most will answer: “save the trees” or “save the animals”, with a mixture of sadness and passion. If you ask them how, their answer will likely be limited to “recycling”.

Yet, we adults often say, with a proud smile on our faces, “the next generation will fix it”—certainly an unfair legacy to leave them, especially if they are only equipped with “recycling”.

Schools can be a centrepiece drawing people together—pumping inspiration and learning into the world. They can be the place where ideas are born, where the pebble lands in the lake and creates ripples. In our efforts for a sustainable humanity, schools certainly have an important role to play.

Schools can also consume a lot of resources and produce a lot of waste. We’ve all walked past schools with copious amounts of litter spilling under the fence lines, with fake grass ovals that burn little knees in the summer, or with completely cemented surfaces that add to the urban heat-island effect.

More and more, our children are being pushed indoors at school, whether that’s due to extreme weather days or to squeeze in an ever-expanding curriculum and testing regimen. It creates a disconnect in them with the natural world, where there is much to be observed and where risk analysis, teamwork and a sense of caretaking and belonging can flourish.

Most Australian states have voluntary programs to support those interested in embedding environmental sustainability into all aspects of school life, including energy and water use, waste policies, travel, classroom

curriculum and the biodiversity of the grounds. The UN Sustainable Development Goals are typically employed to guide the programs.

Here, we take a look at some of the programs, school projects and campaigns across Australia that are increasing energy efficiency in our schools, spreading sustainability tools and ideas throughout our communities and getting our kids outside.

School Strike 4 Climate (SS4C)

The SS4C, an international movement started by Greta Thunberg in 2018, says its largest strike in Australia was in 2019, just after the IPCC released an eye-opening report that we had limited time to act on climate change.

The strike mobilised over 350,000 people nationwide. "It is the largest environmental strike in the history of Australia and was pivotal in shifting narratives and attitudes towards climate change and climate justice," says a representative of SS4C.

I was at the Melbourne protest along with an estimated 100,000 people. It's hard to understand what that statistic looks

like if you weren't there. The crowds were overwhelmingly jammed into Melbourne's Treasury Gardens. Having done our share of climate walks, we decided to stay in the gardens and watch the crowd flow down the road, like a stream of water pouring slowly from a large jug. What blew my mind was that the last of the crowd was still in sight when the front returned. The strike had formed an unbroken loop through the entire city. With school children at its helm!

Solar and building design

Solar Our Schools is a campaign run by Australian Parents for Climate Action. It seeks government funding of solar and batteries for every school and early childhood centre in Australia.

Australian schools have more heating and air-conditioning than ever before, and an increasing reliance on electronic devices, electric whiteboards and, since Covid, air purifiers.

According to Zero Positive for Schools, a non-profit that uses school energy data tools to create curriculum activities, Australia's school

system is the fifth largest emitter of carbon dioxide and equivalent (CO₂e) in the country. On their website, they say: "creating a positive cost-and-emission-reduction program to help schools take action on climate change was not just rational, but vital."

The report, *An Untapped Opportunity for a Carbon Neutral Future*, published in 2020, studied 13 schools over two years in Perth, Western Australia, as part of a pilot program to understand how schools can reduce their carbon emissions and operational costs. The study found that schools in the pilot "reduced their carbon emissions on average by 20% on a per student basis and saved an average of 15% in costs. More than 70% of the actions... were low or zero cost. This study demonstrates the abundant opportunities available for schools to reduce their consumption of resources, carbon emissions and utility costs with minimal to no cost outlay".

Large roofs make schools ideal for generating solar power, with untapped potential for selling excess solar into their community through a virtual power plant or by feeding into a community battery.



Green Adelaide—2021 YEC members at Arbury Park Outdoor School.



Wash Against Waste—Westgarth Whopping Great Fete. Credit: Grant Hargreaves.

There are great examples of schools both reducing their consumption and adding solar, such as Brisbane-based Corinda State High School, which was the first school in Queensland to achieve Carbon Neutral accreditation. Their off-grid HIIVE building was the only school facility that remained operational during a state-wide power failure in 2021, thanks to its Tesla-battery storage system.

Geothermal energy is used to power a building in Wangaratta High School, in regional Victoria. Built in 2009, this building uses water circulated in a series of underground grid loops (pipes buried in the earth), keeping the building temperature between 20-26°C year-round. Along with other design features, Wangaratta High School is a leading example of how building design can reduce environmental impacts and improve the health and learning of its students.

Active transport

Walk Safely to School Day, which is held Australia-wide (this year on May 19), encourages walking to and from school for environmental and health benefits, as well as teaching children about road safety. VicHealth says walking to school creates a connection with family and neighbours and improves mood and mental wellbeing.

The Bicycle Network, which ran Ride2School Day in March, says the 1970s were a lot more active, with something like 60% of children getting to school on foot or bike. Today, they estimate less than a third of children use active transport.

To reverse this trend, the Bicycle Network has been running Open Streets trials—where designated streets are restricted to active transport during drop-off and pick-up times. Sheltered and secure bike parking zones within schools also help.

Bicycle Network's Ride2School Program Manager, Manon Dolet says, "Actively travelling to school is fun, keeps us healthy, reduces our carbon footprint, fights climate change, and gets us focused for a full day of learning!"

With the growing popularity of family-friendly e-bikes, the line between active transport and motorised vehicles is blurring. While the Federal Government passed regulation for e-bikes in May 2012, it took another five years before road laws across Australia became consistent.

Peter Bourke, general manager of Bicycle Industries Australia, says e-bike sales have gone from approximately 9,000 a year in 2017

to an expected 100,000 this year. "Like many products, e-bikes have been hit by supply constraints, otherwise the growth would have been even greater" Peter says.

Water

Tom Saxton from Off Grid Plumbing, who helped install 40,000 litres of water tanks to the toilets at Fairfield Primary School in Melbourne, says rainwater tanks are "a bit of a no brainer, given the amount of kids that are at the school and the amount of water they flush. It's better that every litre you flush comes from the sky rather than from our water storage. With the schools, you benefit from having large surface areas of roof and large areas where you can place tanks."

Regarding future school projects, Tom's advice is to plan for the long term: "You never look at what you want to do now, because that's when you make mistakes. You'll be ten steps behind and one step forward." For new buildings, he suggests getting the builder and the plumber to talk directly to each other to avoid critical infrastructure being left out.

Castlemaine Steiner School and Kindergarten, winner of the Victorian-based Resource Smart Schools program this year, built its own wetland with an island. The wetland includes three effluent ponds, one dam and four large water tanks. Surface water

from the school grounds feeds into the dam and storm water is used for gardening and firefighting purposes. The wetland is also used as part of the school's River Detectives program, designed by Melbourne Water to get students outdoors and learning about their local waterways and how to care for them.

School uniforms

Standing by the schoolyard as my eldest started school, I was thrilled to hear about the second-hand uniform shop. I even found a school bag and pair of shoes there for a fraction of the cost and with far less eco-guilt.

Still good, used uniforms are donated to the school, tidied by a volunteer parent and then purchased for a small fee. Six years later, I have rarely purchased a new uniform item for either of my children. At high schools, there can be a more complicated process for buying and selling quality used items. The Sustainable School Shop tries to make it an easier process.

But there is still the problem of how these uniforms are made in the first place, and what they're made from. The options are scarce, information on the supply chains even scarcer. Most school uniforms are not Fairtrade and are made from polyester, often contributing to unethical labour and our oceans being littered with microplastics. You

Alicia and Holly at Fairfield Primary School's Bike Shed.



Sept 25, Darebin | School Strike 4 Climate | Flickr.



would think affordability is the trade-off, but new school uniforms don't come cheap.

After negotiations with the school on price, my kids' school switched from an overseas supplier to a local Fairtrade manufacturer, but we compromised on sustainable fabric. There are only a few suppliers such as Hemp Clothing Australia that sells school basics in more sustainable fabrics.

Caring for the land

Schools lucky enough to enjoy ample grounds have a great opportunity to teach land care management, biodiversity and gardening. Joining schools to larger nature corridors allows interesting animal visitors to pass through or make a home on the grounds, while pollinator gardens, bush tucker gardens and kitchen gardens can be used as part of an outdoor curriculum.

The Keep Australia Beautiful Tasmania Sustainable Schools Grants 2023 saw most of the winning projects focus on growing food, composting and habitat regeneration.

Karen Sutherland from Edible Eden

Design has built over a dozen gardens in schools and pre-schools across Victoria, including the bush tucker garden at Yarralea Children's Centre. Karen incorporates educational signs throughout her gardens. She says, "Specialised school gardens can be wonderful outdoor classrooms for students to experience the connections between people and plants and learn their many uses."

Winner of the ACT's Climate Choices School of the Year, Majura Primary School is an excellent example of whole school sustainability in action, with their kitchen garden, a Stephanie Alexander demonstrator school, a standout.

The bush trail developed through Coolbinia Primary School in Perth and the cross-curricular teaching and learning activities in its bushland are inspiring. A student-programmed robot updates those passing through about what's happening on the trail. Each year students care for the trail and collect and publish data about the flora and fauna and its recovery from a bushfire event in 2015, winning the school

the United Nations Association of Australia's environmental school award.

Events

School fairs can be disastrous for the environment, with their plastic sticky wrappers, noisy electric rides, hairspray cans and glitter. But they can also create a wonderful sense of community and be a great testing space for unusual ideas like recycled box mazes.

You may have seen Wash Against Waste in action at your local school fair. To reduce waste, food is served with reusable plates and cutlery, with parent volunteers rolling up their sleeves and diving into bubbly water to clean up. As a coordinator for the wash and waste at our school events, I am often surprised by how social and fun this can become for parent volunteers.

Many school fairs also have second-hand stalls selling books, toys and clothes. It's where most of my kids' Christmas presents and Halloween costumes come from.

Melbourne Girls' College have run a pedal cinema for over 10 years. The outdoor cinema is a carbon-neutral event where students pedal all day to generate enough electricity to run the film. The event has a great community spirit, with live music, sustainable carnival rides, food and education stands to keep everyone occupied while they wait for the sun to set and the movie to begin. Money raised at the event is used to help the school become carbon neutral.

Waste

Melbourne Girls' College is also well known for its controversial bin ban. It is the first secondary school in Australia to go bin-free in the school yard. They call the program the National Parks Scheme, as any waste brought into the school must either be composted or return home, just like it would in a national park. Not having the convenience of a bin shifted how both teachers and students thought about food packaging.

Waste management is by far the most difficult and least rewarding challenge for schools. At our school environmental committee meetings, we often laugh that we are more like a waste management committee. When you first join you come with lots of exciting ideas about gardening, possum boxes and solar panels, and instead spend most of your time with your head stuck in a bin!

A great way to reduce waste coming into the school is through a Nude Food program,



The completely offgrid HIIVE building houses the Smart Farm Dashboard which monitors every aspect of the school's operational farm including weather, soil moisture, temperature, humidity, water intake and water quality.

where students are encouraged, or sometimes required, to bring their food to school without single use packaging. It also encourages healthier choices.

When a waste audit at Aranda Primary School in the ACT found that nearly all waste came from their canteen, a dedicated student, Yassine, worked hard to propose changes. At first Yassine met resistance, but this didn't put her off. With the support of the Plastic Oceans Program and a new canteen manager, she eventually got the whole school on board, re-writing the menu and reducing single-use waste from the canteen.

Empowering the next generation

Sustainability education at schools is a mix of giving our kids the tools they need to take on the problems of tomorrow, an appreciation of the natural world, community spirit and good role modelling. Rather than relying on dedicated volunteers and passionate students, I look forward to the day when all schools have great policies and curriculum with sustainability at their core.

"Sustainability's got something for everybody," says Kathy Anketell, sustainability coordinator at Lynwood Senior High School in Western Australia. "It's about economics, it's about maths, it slots in easily in every area of the curriculum." 📌

AUTHOR:

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Sustainability programs around Australia

Social media programs:

There are 6800 members of the Sustainable Schools Australia Facebook page, where parents, teachers and students informally share tips and discuss best approaches for improving sustainability at their school.

State education programs:

South Australia: Green Adelaide coordinates Sustainable Schools with 88 sites currently registered. Now that Covid-related pressures are easing, numbers are expected to build to pre-2020 levels, when over 400 schools were involved.

Victoria: Sustainability Victoria coordinates Resource Smart Schools. Since the program began, 1400 Victorian schools have participated, saving 118,000 tonnes of greenhouse gases.

Australian Capital Territory: The ACT Government's Environment, Planning and Sustainable Development Directorate delivers their Sustainable Schools Program (SSP), a replica of Victoria's RSS program.

New South Wales: Sustainable Schools NSW is managed by the Australian Association for Environmental Education NSW and supports a whole school approach to sustainability, incorporating three key elements: campus, curriculum and culture.

Western Australia: Sustainable Schools WA is led by WA's Department of Education, and takes a whole-school approach to sustainability education.

Queensland: Schools in Queensland can register with the Queensland Environmentally Sustainable Schools Initiative (QESSI). From 2012 to 2022, a total of 1,036 schools and environmental centres registered and a total of 1,397 plans were created.

Northern Territory: Keep Australia Beautiful NT manages an Eco-Schools program.

Tasmania: Keep Australia Beautiful is the main body working on sustainable schools in Tasmania. The Department for Education, Children and Young People has a Sustainability Learning Centre near Hobart, which runs programs that focus on science and sustainability.

National programs:

- Eco-Schools Australia
- Australian Sustainable Schools Alliance
- Australian Youth Climate Coalition
- The Sustainability cross-curriculum priority
- Sustainability in Schools

Examples of other programs:

Natural Resource Management (NRM) Education Program works with school communities to embed sustainability principles into their learning and management practices.

Climate Ready Schools (CRS) local government climate data is used to inform practical action within schools.

The Youth Environment Council (YEC) is a leadership program established in 1997.

The Schools Water Efficiency Program (SWEP) tracks water usage using data logger technology. SWEP has registered over 1300 schools in Victoria since it started in 2012—that's more than half of all schools.