

Adding value

One of the ways the TAP has been able to include a diverse range of curriculum-based, applied learning opportunities to students across all year levels is by integrating external programs into the curriculum design, as well as the activities devised and developed with local partners. In 2014, the external programs include:

Dairy Australia:

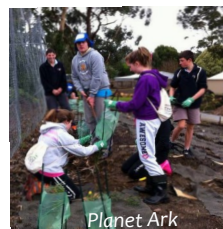
Cows Create Careers (Farm module)
Cows Create Careers (Manufacturing module)
Camembert in the Classroom

WestVic Dairy:

Maths & Science @ Work
A Taste of Dairy

National Centre for Dairy Education:

Certificate II and III in Agriculture



ABC Heywire:

TRACTA (Try Regional Australian Careers—Try Agriculture)

Royal Melbourne Show:

The Great Lamington Challenge

Wannon Water:

Water It, Grow It, Cook It

Planet Ark



Stephanie Alexander Kitchen Garden Program

Bridging the gap

Schools and industry across the nation are concerned with the need to increase student engagement to improve literacy, maths and science outcomes, and to enhance student awareness of food and fibre careers. Research shows that knowledge gaps on both sides create barriers to working together to achieve these goals.

The TAP is building a model to bridge that gap, and in the process has created active local champions for effective school-industry engagement among its staff and school families. Their work in sharing the TAP's processes and results in community, education and industry settings is another positive outcome of which the Timboon and district community is justifiably proud. To follow the progress of the TAP, you can visit the school website: www.timboonp12.vic.edu.au, or go directly to the TAP blog: timboonagproject.weebly.com/tap-blog.

Connected learning

The TAP is designed to meet specified curriculum outcomes in the various learning areas. In doing so it creates a learning environment that provides students with opportunities to develop a range of skills, experiences and understanding beyond the boundaries of curriculum.

Careers awareness

The industry presenters working with our students are passionate about what they do, and in sharing their expertise to deliver curriculum, provide an insight into their work, education and career pathways.

Communication skills

The active learning in the TAP requires students to question and engage with a variety of presenters in the classroom and in industry settings.



Understanding our community

Our local economy is predominantly reliant on food production, particularly dairy, but young people traditionally have a limited understanding of the diversity of people, and skills, that contribute to it, and to the community that sustains it. The TAP gives students a broad exposure to their own community and the opportunities it offers.

Presentation skills

The TAP has brought a lot of attention to the school, and students have stepped up to talk to visiting academics, industry reps and teachers from other schools about their curriculum activities. Around 200 students are involved each year in preparing and delivering an active snapshot of their curriculum at TAP's On!, for students from other schools and year levels.



Leadership

Many of the TAP's curriculum initiatives provide for older students to mentor or work with younger students in an element of the program, such as the VCAL students working with Year 6 on the construction and ongoing development of the poultry precinct, and Year 8 students mentoring the Year 1/2s in tree planting.

Timboon Agriculture Project

a continuing partnership to enhance student learning

Timboon P-12 School welcomes the support of the National Centre for Dairy Education Australia, which is funding the TAP for 2014-2015.

The NCDEA is the dairy industry's training provider and has delivered vocational training in agriculture to school-based apprentices from Timboon and other local schools at the Timboon agriculture precinct since 2012.

The school is justifiably proud of its students' results in NAPLAN, which show significant improvement since the introduction of the TAP, leading to Timboon P-12 being singled out nationally for its 2013 results.

The real tests, though, are in the classroom, and in students' attitudes to learning. The 'classrooms' at Timboon P-12 now extend to poultry houses and gardens, to a dedicated agriculture precinct and to food and textile production and processing businesses across the district. Annual surveys of student attitudes to learning, and their engagement with their education have shown phenomenal improvement since the introduction of the TAP.

"It was fantastic to see how enthusiastic the students were about getting their hands dirty and doing some practical studies..."

"...this is truly changing the way the children perceive their education."

"I look forward to my children taking part as the years go on"

- TAP industry presenter parents.

The Timboon Agriculture Project started in July 2012 and was officially launched in November of that year. As the TAP enters its third year, Timboon P-12 School's students and teachers would like to thank the many people and businesses who continue to support its development and delivery.

One hundred and twenty people from 35 farm businesses (21 dairy), 19 agricultural service providers, nine food processing / manufacturing businesses, and others, have donated their time and expertise to develop and deliver curriculum, and/or to assist in the physical development of the school's agricultural and horticultural infrastructure.

Linking industry expertise to the school is the role of the project coordinator, who acts as a learning broker.

That role was previously funded by the Gardiner Foundation - 2012/13, and WestVic Dairy 2013/14.

For more information contact
The Principal, Timboon P-12
School, (03) 5598 3381,



or
the Careers Coordinator,
WestVic Dairy, (03) 5557 1000

EDITION 3, SPRING 2014

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In the Primary School

PREP Three TAP-linked units have been introduced in support of Science and English: *Staying Alive*; *From little things, big things grow*; and *On the move*. Students have class pets (stick insects and a hermit crab), and investigate the necessities for life. Sowing and growing plants from seed supports their investigation into different types of seeds and their requirements for growth. Toy tractors give way to real ones as the students investigate physical science, and how things move, including gears, levers and wheels. Supported by an agronomist (seed specialist) and local farmer.

YEARS 1/2 In *Waste not, want not*, students explore recycling: at home, in the classroom, on farm and in the community as a whole, and its impact on our environment. Worms link this theme to the next: *The needs of living things*, in which students investigate mini-beasts and their habitats, undertake a *Schoolyard Safari* and care for a worm farm, created with the help of VCAL students. In *Up, down and all around*, students investigate changes in sky and landscape daily and over time, drawing on the knowledge of grandparents, observation and investigation of seasonal changes on beef, sheep and dairy farms, traits of growth in shelterbelts and other plantings on farm. Supported by local government environment officer, horticulturalist, community member, refrigeration technician, family members, Landcare, sheep, beef and dairy farmers.

YEAR 3 The *Effects on plant growth* unit now includes exploring the impacts of sun, shade and wind by planting and observing growth in different sites around the school. Supported by horticulturalists.

YEAR 4 Students' science literacy is extended in *It's a material world* by exploring the materials that make up dairy equipment and packaging containers, exploring their properties and purposes. They also investigate how people use science in their careers in the dairy industry. In *TAP into Farm Science*, students investigate animal welfare, recycling, silage making and breeding values on a beef and a dairy farm. Supported by dairy processors, milking harvesting equipment supplier, herd test company, beef and dairy farmers.

YEAR 5 Our badling of **ducks** now includes Cayugas and Pekins. Students investigate breeds of Mallards, and duck maths. Supported by duck farmer , poultry club and community members. Year 4/5 students continue to be mentored by Year 7/8 Food Tech students in the *Stephanie Alexander Kitchen Garden* program.

YEAR 6 Now that *Which comes first, the chicken or the egg* is established, the focus is extended to breeding. Science is boosted with a study of soils and silage to explore *Microbiology*, investigating aerobic versus non-aerobic reactions. Supported by VCAL students, poultry club, community members, silage technical advisor and soil scientist.

TAP's On! - Sharing the learning

On one big day in November, over 500 Prep to Year 10 students from Timboon P-12, Simpson Primary and Nullawarre & District Primary come together to showcase their food and fibre-linked curriculum. Pairs of students from Year 5 up take turns, supported by industry mentors, to present some of the learnings from the year. The event is set up like a mini-agricultural field day, with students rotating through a range of activities derived from the curriculum units that have been delivered through the year. The Timboon students present from their TAP linked curriculum, the Nullawarre students from their *kids@demoDAIRY* activities, and this year Simpson students will, for the first time, present some of their curriculum activities based on *WaterWatch*.

TAP's On! is a community event, welcoming observers from industry, community and school families, as well as from other schools in the region, from Melbourne, Ballarat, Geelong and further afield. The event extends and reinforces students' learning and highlights the significance of the time and expertise donated by our industry partners. It creates an atmosphere of celebration of what has been achieved, and excites anticipation about the activities students will access as they graduate from one year to the next. In 2014, TAP's On! is funded by a FRRR Reaping Rewards grant.

Join us for TAP's On! 2014 at the TAP precinct, Timboon P-12 School, on November 20th, 10.00am—2.00pm.

At Secondary level

YEAR 7 An applied Maths unit, *TAP into Sheep*, is being developed with the support of a local sheep farmer. Timboon P-12 hosted Year 7 students from Cobden and Camperdown for *Maths&Science@Work 2014*, in which 26 applied maths and science activities with separate dairy industry presenters illustrated how maths and science are used in different dairy occupations.

YEARS 7/8 Taking over the lavender plantation established in 2013, in *Money, money, money*, students explore the economic implications of running a small business—by running a small business! They maintain the plants, harvest, prepare and sell products. Supported by a former lavender producer and community members.

A local government economic officer, marketing experts and local niche businesses support students in the community partnerships elective, *TAP into your creative side*. From alpacas to wild flowers to snails, and many points in between, students explore what it takes to make an idea a reality, or not. They investigate community expectations, regional context, how to research a market, product development, marketing, production and sales.

Year 7/8 Food Tech *Best in Show* now includes Dairy Australia's Cows Create Careers (in Manufacturing), school grown produce is cooked as part of *Water it, Grow it, Cook it*, and once again students enter their work in the Royal Melbourne Show, as part of the Great Lamington Challenge. The journey from paddock or garden to plate will also be further explored in *Stephanie Alexander Kitchen Garden Program*.

YEAR 8 The maths needed for planning farm infrastructure informs *TAP into farm maps*, in which students develop the maths skills needed for farm planning, including consideration of area, tracks, costings, fencing, underpass construction, pivots, sheds, dams etc. Supported by a farm technical advisor, and dairy farmers.

In Science, ice cream will be included in the established cheesemaking unit *Camembert in the Classroom*. Chemistry includes a practical investigation into the causes and prevention of *rust* on tractor/silage equipment; and Biology includes a unit on *digestion*, comparing the stomach structure and function of ruminant and human stomachs, supported by a veterinarian. Year 8 TAP-linked science units are supported by local dairy processors and manufacturers, a dairy products advertising agency, a vet clinic and farmers.

Wildlife Warriors investigate the balance between native wildlife and human impact, care and conservation of wildlife and its habitats including sustainable land use. This community partnerships elective is supported by local wildlife carers and environmental groups. Students are mentored by VCAL students in tree planting activities, and will mentor Year 1/2 students in similar activities.

TRACTA stands for Try Regional Australian Careers—Try Agriculture. With funding from ABC's Heywire program, students will make short films showcasing a range of TAP activities and related occupations and career opportunities in agriculture, and use them to promote the TRACTA concept on a tour to key regional Victorian towns.

YEAR 9 The *Bilyana Maths* unit, where the business of rearing heifers provides practical application for developing skills in statistics and probability, number, algebra, measurement, geography and technology skills, has been extended to a full-year unit of business owner/manager.

YEAR 9-11 VET Vocational training is delivered on the TAP precinct to students from Timboon and neighbouring schools undertaking a school-based apprenticeship. Most of the TAP VET students are studying *Certificate II or III in Agriculture*, with the NCDEA. One has a traineeship with the local veterinary clinic, and is studying for her *Certificate II in Animal Studies*.

VCAL From transforming a de-gassed fridge into a worm farm for Year 1/2, working with Year 6 students to develop the poultry precinct, to mentoring the Wildlife Warriors in tree planting, VCAL students continue to enjoy a diverse range of learnings within the TAP. They are currently researching ideas to remodel and kit out a **food van** for use at farmers' markets.

VCE Business Management students from two other schools joined our VCE students in meeting with a corporate director from a dairy processing company to explore a **Unit 3: Corporate Management** case study. Timboon students then explored operations management in an on-site visit, and will review their learnings with an investigation into the management and operations of a national trucking and logistics company. Two of our VCE Science students successfully applied to the Primary Industries Centre for Science Education Industry Placement Scholarship program.

