

# Australia's ForestLearning education programme – forest secrets revealed to school students

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## Abstract

ForestLearning is Australia's 'one stop shop' education programme, providing teachers from Foundation to Year 12 with quality teaching resources aligned to the Australian Curriculum and with a focus on Australian forests and sustainable timber products. Focusing on productive partnerships, relevant and robust resources and strategic promotions, ForestLearning seeks to develop innovative and tech-savvy learning tools, such as virtual reality experiences, to cater for the needs of 21st century learners.

## Background

The Australian primary and secondary education system is a mix of government and privately-run schools that are mostly organised around state or territory jurisdictions and requirements. In May 2009, the Australian Curriculum, Assessment and Reporting Authority (ACARA), a statutory authority, was established to oversee the implementation of the planned nationwide curriculum initiative.

Historically, forestry resources for educators were developed by willing Australian forestry organisations, mostly state forest agencies, to meet state or local requirements. These resources varied in educational rigour, and many lacked any identifiable alignment or relevance to school curricula. Therefore, forestry was neglected as a major primary industry within teaching and learning programmes in Australian schools, particularly in the subject areas of science, design and technologies, agriculture and geography.

Another main reason for the neglect of forestry studies, identified in a teacher survey conducted by the Primary Industries Education Foundation in 2011, was the lack of formal education and professional development for teachers in the area of forest and wood products. This resulted in a lack of understanding and confidence to teach forestry concepts (n=53, PIEFA Acer survey, 2011).

Most concerningly, of students surveyed (n=1,000), 85% of Year 6 students and 70% of Year 10 students did not connect that cardboard was a natural product from trees. This highlighted the lack of understanding that:

1. Harvested forests provide a natural resource, which can be processed and manufactured into everyday products, and
2. Harvested forests can be replanted, underpinning forestry's importance to a sustainable economy.

Further, environmental education as represented by the education-specific search engine, Scootle, presented one-sided and inaccurate information on forestry about the wide range of environmental, cultural and economic benefits that sustainable forest management can provide.

To help overcome these issues, Forest and Wood Products Australia Limited (FWPA) established its ForestLearning programme and used its role in research to secure the [www.edu.au](http://www.edu.au) domain name.

To provide better linkage with existing state initiatives, FWPA created the Australian Forest Education Alliance (AFEA) with partners, including the Forestry Corporation NSW (formerly Forests NSW), the Sustainable Forestry Programme at the Southern Cross University in NSW, PIRSA Forestry SA, VicForests, the Forest Education Foundation Tasmania, the Forest Products Commission WA, FWPA, Planet Ark and the Australian Forest Products Association (AFPA).

Since its launch, ForestLearning and its portal ([www.forestlearning.edu.au](http://www.forestlearning.edu.au)) provide primary and secondary teachers with a 'one stop shop' for high-quality, free-to-download teaching and learning resources aligned to the Australian Curriculum, focused on the sustainability and renewability of forest and wood products.

## What is ForestLearning?

The ForestLearning education programme focuses on providing quality resources for teachers, enabling them to successfully integrate forestry and sustainable wood product themes into their classroom teaching while aligning with Australian Curriculum outcomes.

ForestLearning centres around three pillars for success:

- Productive partnerships
- Relevant and robust resources
- Strategic promotions.

## Productive partnerships

This pillar aims to strengthen and expand ForestLearning partners within industry, education and other sectors.

An example of successful partnerships is the ForestLearning Industry Education Champion programme. ForestLearning Industry Education Champions are volunteer forestry and wood processing professionals working in each state and territory of

Australia. They offer schools and students a unique glimpse into the work and benefits of forests and wood products through in-school visits (incursions) and school visits out to forests or wood processing facilities (excursions), presentations, and hands-on workshops at times suitable for both Champions and schools.

Most actively involved Champions conduct one or two activities per year. The ForestLearning programme works with forest and wood product industry groups to promote the programme, facilitate on-ground activities and equip Champions with teaching resources, tools and activities.

The productive partnerships programme has also:

- Strengthened and expanded the Australian Forest Education Alliance
- Identified existing partners and developed new industry and education partners
- Encouraged and grown an industry information network for resource development and promotions

- Worked with teacher, industry and education partners for the development and delivery of teacher professional learning activities
- Supported Industry Education Champions on the ground by providing teacher's packs, promotions of events and activities, presentations, ForestVR™ kits and training on delivery using ForestVR™ headsets or other deliverables, as determined in partnership with the Champions
- Worked to identify, develop and strengthen new opportunities to work with strategic education partners (e.g. forest education centres, forest/timber museums, environmental education centres and partnerships with similar international programmes).

The ForestLearning Forest Industry Education Toolkit for industry Champions and teachers is in the final stages of development and will be available to access via the ForestLearning website by the end of 2021. The Education Toolkit will include pdf 'How-to' guides for teachers and Champions to organise activities, activity evaluation tools, a photo library, and primary and secondary school PowerPoint presentation templates. More information will be available soon via the ForestLearning website.

## Relevant and robust resources

ForestLearning educational resources are designed to provide Foundation to Year 12 educators and students with information, lesson plans, worksheets, multimedia video resources, and classroom or outdoor learning tools to encourage teaching about sustainable forestry and the use of wood and wood products. These resources are delivered through the [www.forestlearning.edu.au](http://www.forestlearning.edu.au) website via a registration portal and are only available to registered users. Registration assists ForestLearning in tracking downloads and activity on the website and performing regular resource performance reviews.

The resources pillar has been undertaking a range of activities to improve the usability of resources (such as branding, layout consistency and educational quality), including:

- An audit of all existing resources via professional teacher association groups/peak teaching authorities, to identify gaps and potential improvements
- An evaluation, update and refinement process of current resources in collaboration with peak education associations, to assist in establishing teacher trust in resources, as well as to help in promoting and raising awareness of these resources through their teacher networks
- Creating a strategic and financial case for the development of new resources and standalone classroom tools where gaps and needs were identified
- Exploring teacher professional learning development and delivery mechanisms that enhance teacher confidence in using ForestLearning resources in the classroom and outdoors



Figure 1: Forest Industry Education Champion hosts a primary school excursion in a productive forest near Sydney, NSW

- Exploring international forestry education programmes to build international collaborations, where possible
- Monitoring, evaluating and refining teacher pack mailouts, including a teacher survey of contents and usability.

## Strategic promotions

This pillar aims to employ a range of strategies to boost demand, teacher adoption and awareness of ForestLearning teaching resources and tools. These strategies include:

- Developing, refining and evaluating marketing and communication plans
- Publishing, evaluating, refining and expanding current promotional tools
- Working with education partners and industry to raise teacher awareness, engagement and use of resources
- Working with industry partners to promote the Industry Education Champions programme
- Providing copy and articles for partner and education newsletters and promotional materials
- Increasing following and engagement of the ForestLearning Facebook page @forestlearningau and LinkedIn page @forestlearning
- Supporting and promoting key partner programmes
- Participating in conference workshop sessions, running trade stands, and hosting field tours at key teacher and forest and wood product industry events
- Producing, publishing and promoting quarterly ForestLearning e-news and increasing subscriptions to the Mailchimp audience for e-news

- Exploring, developing, delivering and evaluating the online delivery of resources and engagement with other organisations or independently, including Forester Time webinars and Virtual Classrooms on Zoom.

A range of promotional materials has been produced to support teachers and communicate ForestLearning's message, including teacher packs. The teacher pack order form can be found on the home page of [www.forestlearning.edu.au](http://www.forestlearning.edu.au). Materials from third party industry organisations are also sourced for inclusion into the teacher packs, such as Responsible Wood Sustainability brochures, ABARES Forests at a Glance booklets and Australian Government forestry branch posters. An audit of these promotional materials is underway, with a review of inclusions at the beginning of the 2022 school year.

## ForestVR™ – bringing the forest to the classroom or remote learner

Australian school students are going deep into remote forest areas across the country thanks to a new series of virtual reality (VR) learning tools funded by the Australian Government's National Forest Industries Plan and developed by the FWPA ForestLearning programme, in partnership with Australia's peak teacher association groups and members of the forest and wood products industry.

The ForestVR™ virtual tours are immersive experiences teaching primary and secondary students about the science behind sustainable forest management, the benefit of growing more trees on farms and the exciting career opportunities in forestry. The 360 degree VR tools allow students to see the entire 'seed to shelter' process, following seedlings on their journey to becoming the wood products they use every



Figure 2: ForestLearning has a range of resources for the classroom freely accessible via the website

day. Students can also see a 30-year time-lapse video of a forest growing from seedlings to 35 m tall trees.

ForestVR™ was launched in 2019, and a suite of teaching tools will be launched for the start of the 2022 school year. The tools during COVID-19 school lockdowns have proven so successful that new tours and video experiences are now in development and will be launched at the end of 2021.

The ForestVR™ technology has received widespread praise from teachers. One teacher's feedback commended how the ForestVR™ helps students to be curious and engage with their learning: 'Rather than just being told information to learn, I can set out a task that they then have to investigate further, and it's really nicely linked through this technology.'

The free Virtual Experiences can be accessed via the ForestVR™ app using digital and cardboard VR headsets, iPads, smartphones, laptops or smart boards for whole-of-class activities.

New VR experiences are in production for the 2022 school year. These include a primary school-focused 'Forest Science Explorers', which will take students on a virtual tour to four of Australia's unique forest biomes to compare the important timber tree adaptations to their local environments. It will shine a light on the science behind sustainably managed productive forest areas in Tasmania, Western Australia, Western Queensland and the east coast's dry eucalypt forests. It will also help unpack the science that foresters use every day to manage Australian forests sustainably now and for all future generations.

Another VR experience will be a high school-focused 'Agroforestry – Trees at Work on the Farm'. This showcases how trees can improve farming landscapes for profitability and the environment and successfully address land degradation issues like evaporation, salinity and erosion.

Also, to highlight the diversity of work tasks and career pathways in forestry, three two minute career snapshots (forester, environmental forester/ecologist and wood processor) are also being developed. These career snapshots have been designed to meet the Australian Government-funded myfuture website requirements ([www.myfuture.edu.au](http://www.myfuture.edu.au)). This will allow

their posting on the myfuture portal, which provides reach to their 800,000+ registered student users.

ForestLearning has been pleased to see the suite of popular and innovative resources expand following positive feedback from teachers and students, particularly at a time of lockdowns and uncertainty about travel. Whether in the classroom or at home, these experiences provide teachers and home teaching parents with fun and informative learning activities. The experiences transport students deep into the heart of our Australian productive forests without even having to step outside the front door.

### Online learning – the key to success in 2020 and beyond

ForestLearning continues to look at innovative ways of educating students during this period of increased online and home learning.

Beyond the well-received VR tours, many students are accessing other online ForestLearning experiences. More than 1,700 primary and secondary students from all states and territories logged on to be a part of the live Forester Time webinars for National Ag Day 2020, a joint initiative of ForestLearning and the Primary Industries Education Foundation Australia. A further 2,350 primary students participated in the 2021 National Schools Tree Day 'Forest Science Explorers' Virtual Classroom, with 'George the Farmer' and an expert forester, live from the pine forests of Mount Gambier.

The Forester Time webinars and Forest Science Explorers Virtual Classroom allowed students to interact live with a forester via Zoom from their classrooms or home learning spaces. By participating, students were able to learn more about the daily work of foresters, the diversity of career opportunities available in the sector, and the renewable and sustainable cycle of forestry. More 'Forest Science Explorers' virtual classrooms and national Ag Week Forester Time live sessions are slated for this year.

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