Monday 16 August
9:15am-10:15am

ForestLearning in Australia

Presenter:

Beth Welden,

Program Manager

beth@forestleaning.edu.au

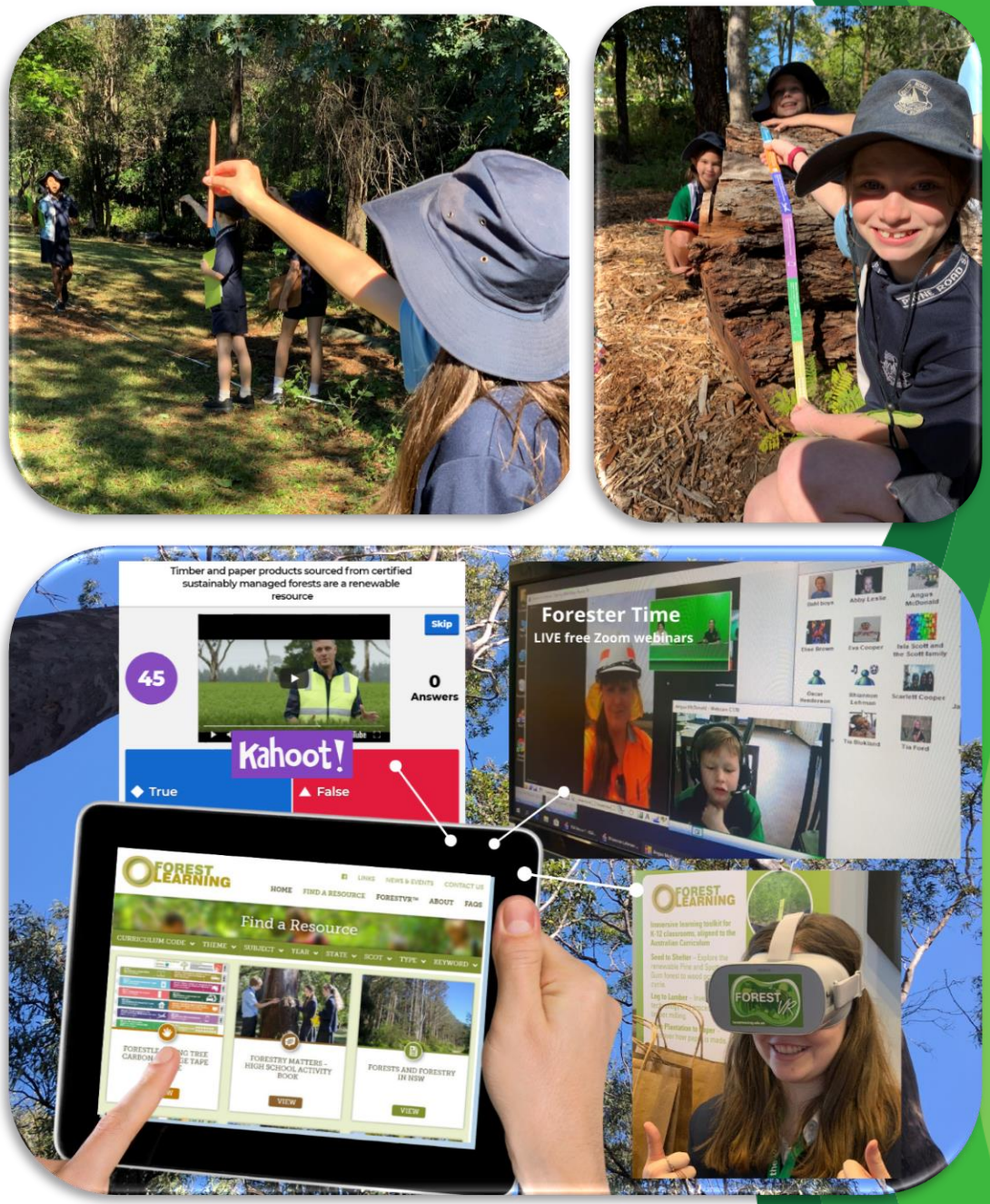
FOREST LEARNING

AN INITIATIVE OF

Forest & Wood Products Australia

Workshop Overview:

- Introductions
- ForestLearning and the shape of Australian education and perceptions of forestry and wood products
- Background to ForestLearning and Strategic Directions
  - Robust Resources
  - Productive Partnerships
  - Promotions
- Where to from here?
- Summary and close



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Forest & Wood Products Australia

Forest & Wood Products Australia

ForestLearning is an initiative of Forest and Wood Products Australia

FWPA's mission

We collaborate with government and industry stakeholders to determine strategy and deliver programs designed to grow the market for forest and wood products, increase productivity and across the value chain and ensure positive environmental and social outcomes.

What we do

- Industry services company
- Owned by members (180 members)
- Contract with the Australian Government
- Funded through compulsory levy (growers, processors and importers) and Government
- R&D investor, Market development, Statistics and economics, Promotions, Education

ForestLearning < FWPA Program 1: Promoting the advantages of wood products

Scope: Develop new innovative and interactive teaching resources to help increase the uptake and active use of teaching resources from the forestlearning.edu.au website.

Talk with a group of 2-3 on your table for 4 minutes

1. Introduce yourself and your role
2. What are you hoping to get out of this session?
3. Decide on the top 3 reasons for forestry as a sector to ‘meaningfully’ engage with schools – teachers and students?

Can you empathise – does this feel like you when thinking about school engagement?…

(SPOILER ALERT: There is hope in partnerships to share the load)

Teachers too - and this has only increased with Covid19 uncertainty + lockdowns…

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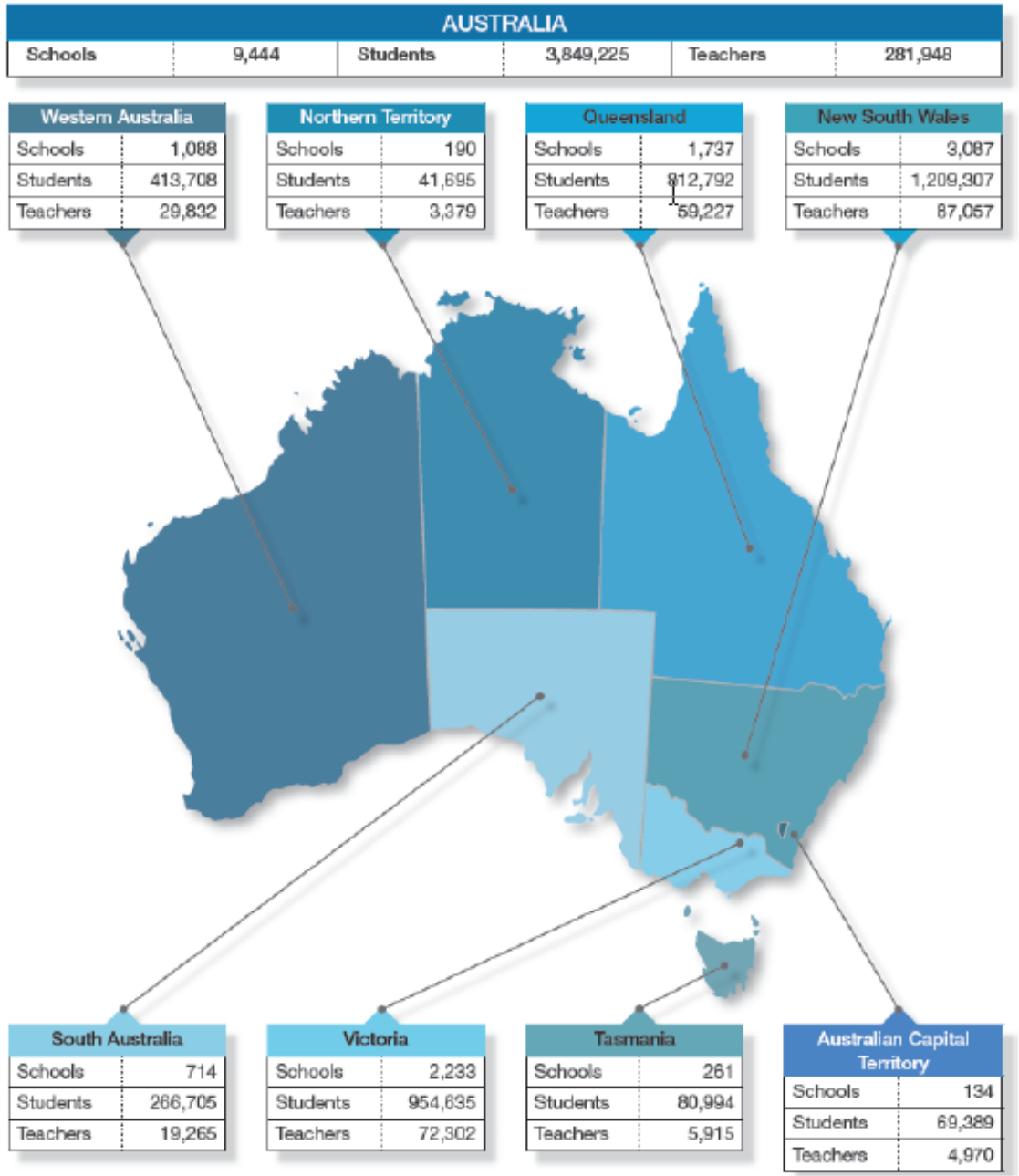
Numbers of schools, students and teachers by state and territory, Australia, 2017



Source: https://www.acara.edu.au/reporting/national-report-on-schooling-in-australia/national-report-on-schooling-in-australia-2017#Link1

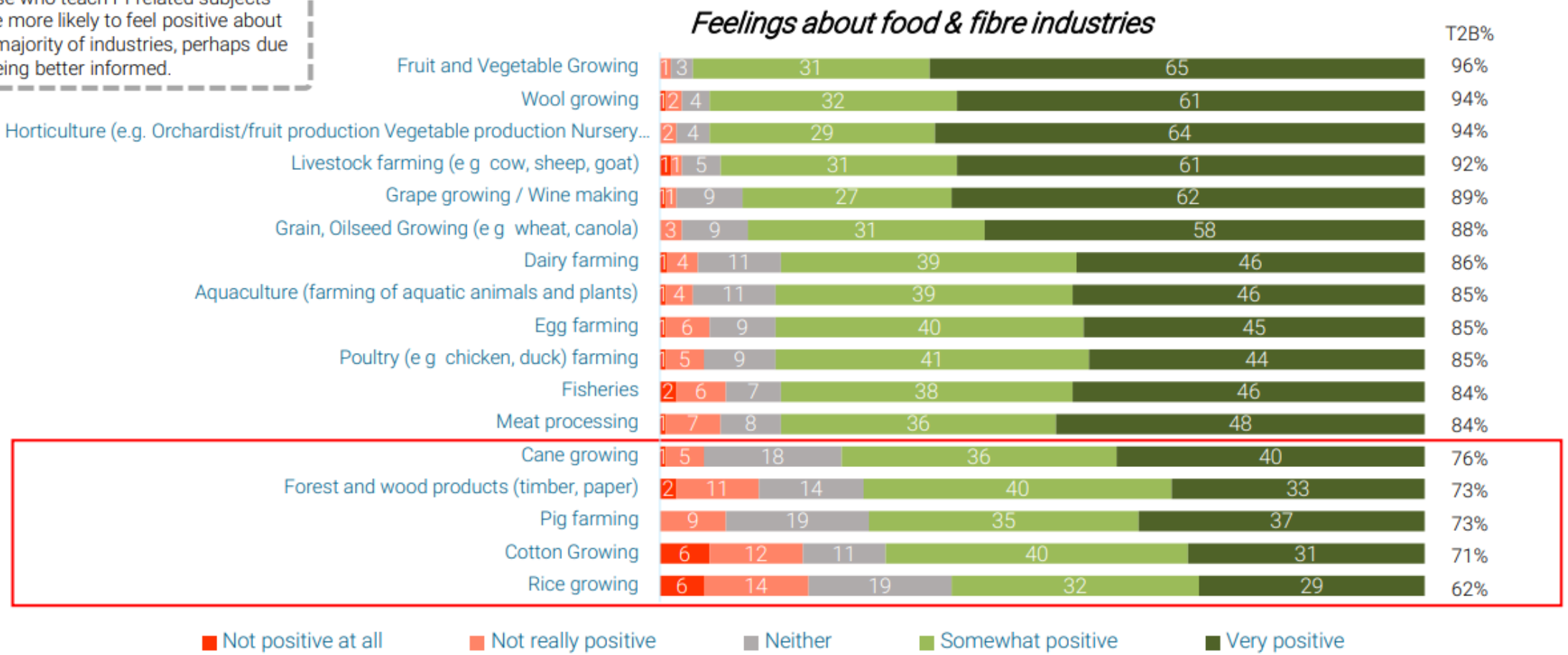
Working from an evidence base -

2021 FULL REPORT HERE -
https://www.piefa.edu.au/uploads/9/8/9/8/98986708/piefa_teachers_survey_report.pdf

FORESTLEARNING TEACHER FEEDBACK SURVEY – OPENING THIS WEEK FOR TEACHERS

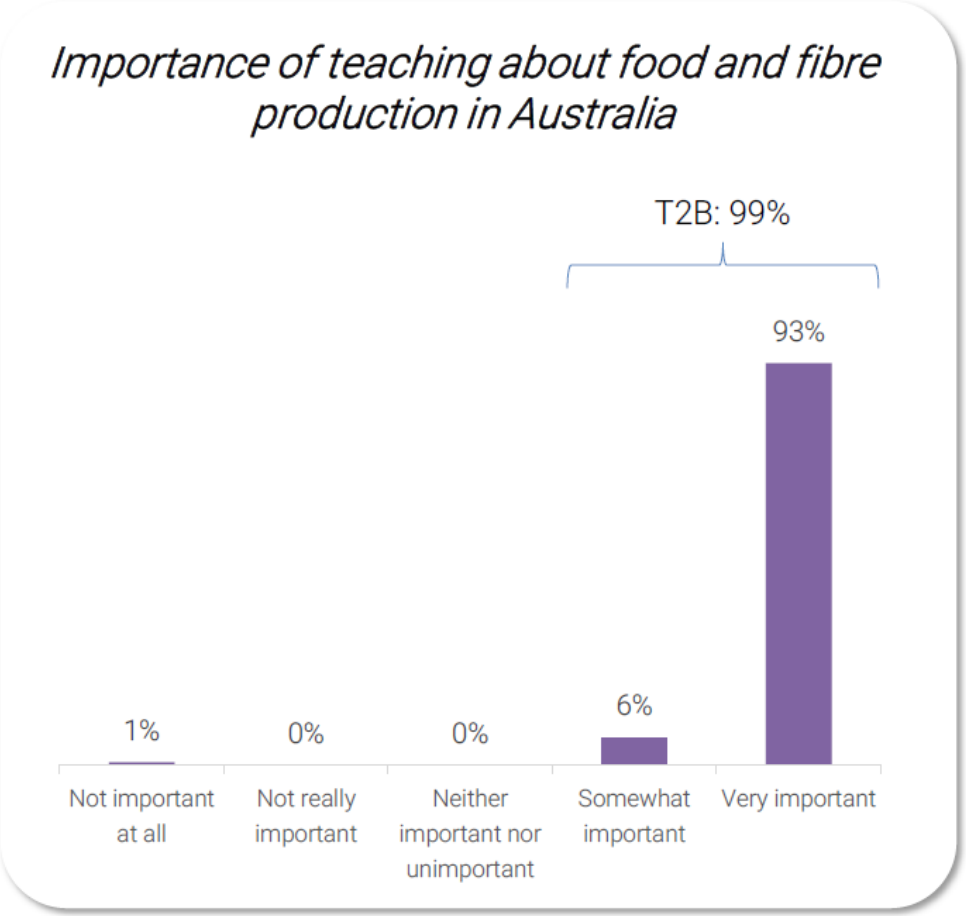
Teachers' negative perceptions of food and fibre industries are based on latent environmental concerns

Those who teach PI-related subjects were more likely to feel positive about the majority of industries, perhaps due to being better informed.



Q16. How do you feel personally about the following industries involved in producing food and fibre products in Australia? Total Base: n=139. No significant differences by key demos in T2B @ 95% CI
Examples of Horticulture given - Horticulture (e g Orchardist/fruit production Vegetable production Nursery production Cut flower production)

Teachers' perceptions of the importance of teaching about f&f are driven by a desire to help students to understand global perspectives and the value in local, sustainable and responsible production



*"I have come from a **migrant background** where my parents knew **real food shortages**. Consequently, I have a huge recognition of the need to support a viable and vibrant farming sector."*

"Finding a balance between human needs and the needs of the natural environment are things that need real understanding in order for future generations to make sound, informed decisions."

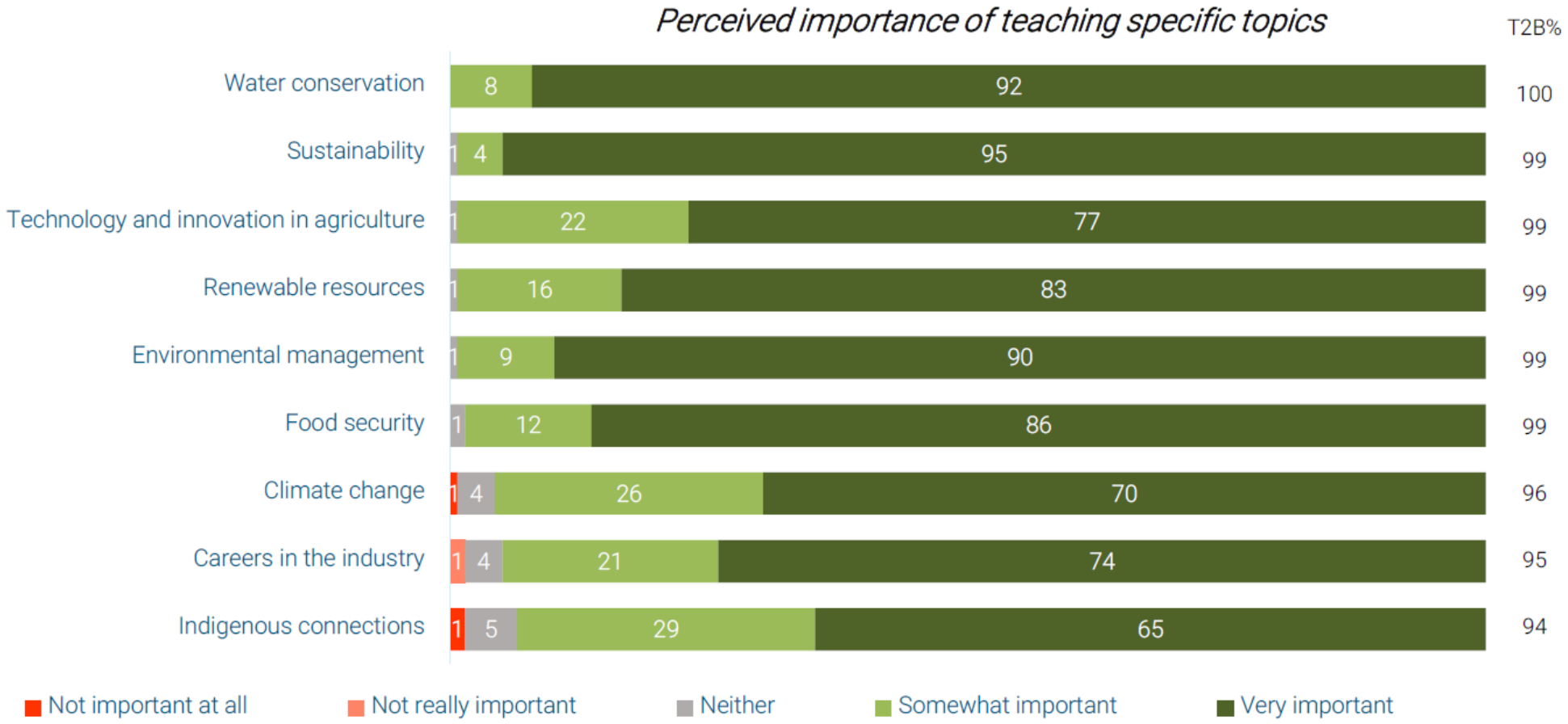
"The world has a rapidly growing population. Agriculture, science and technology will play a vital role in meeting the population's requirements in terms of food, clothing and shelter, energy and sustainability for human survival."

"More kids than ever are disconnected with where food and fibre comes from. Environmentally and politically, we should be aiming to produce as much of our own food in particular, in Australia. For Australians to value local production they need to know something about it."

How important do you feel it is to teach students a about food and fibre production in Australia? / And why do you say that?Total Base: n=139. No significant differences by key demos in T2B @ 95% CI

But teachers rank the importance of these issues as essential

Teachers regard all key areas related to food and fibre production as being important with water conservation ranking as most important

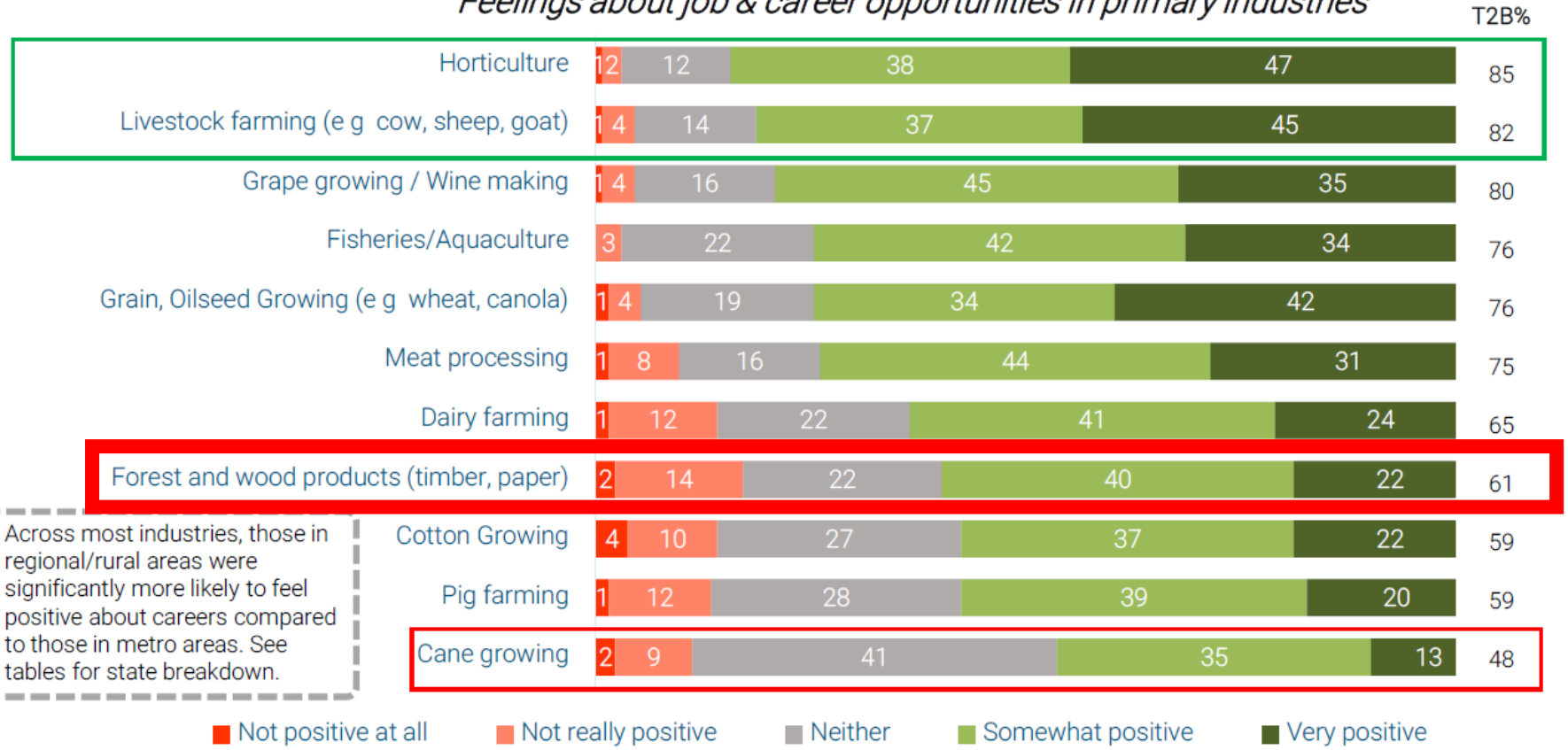


21. How important do you believe it is to teach students about the following in school today? Total Base: n=139. No significant differences by key demos in T2B @ 95% CI

Careers are unknown/misunderstood

Perceptions of job and career prospects are relatively strong and are led by horticulture, livestock farming and grape growing – driven by those in regional/rural areas

Feelings about job & career opportunities in primary industries



Across most industries, those in regional/rural areas were significantly more likely to feel positive about careers compared to those in metro areas. See tables for state breakdown.

Those in Rural and Remote schools were significantly more likely to have positive perceptions of jobs in many of these industries than those in Metro schools.

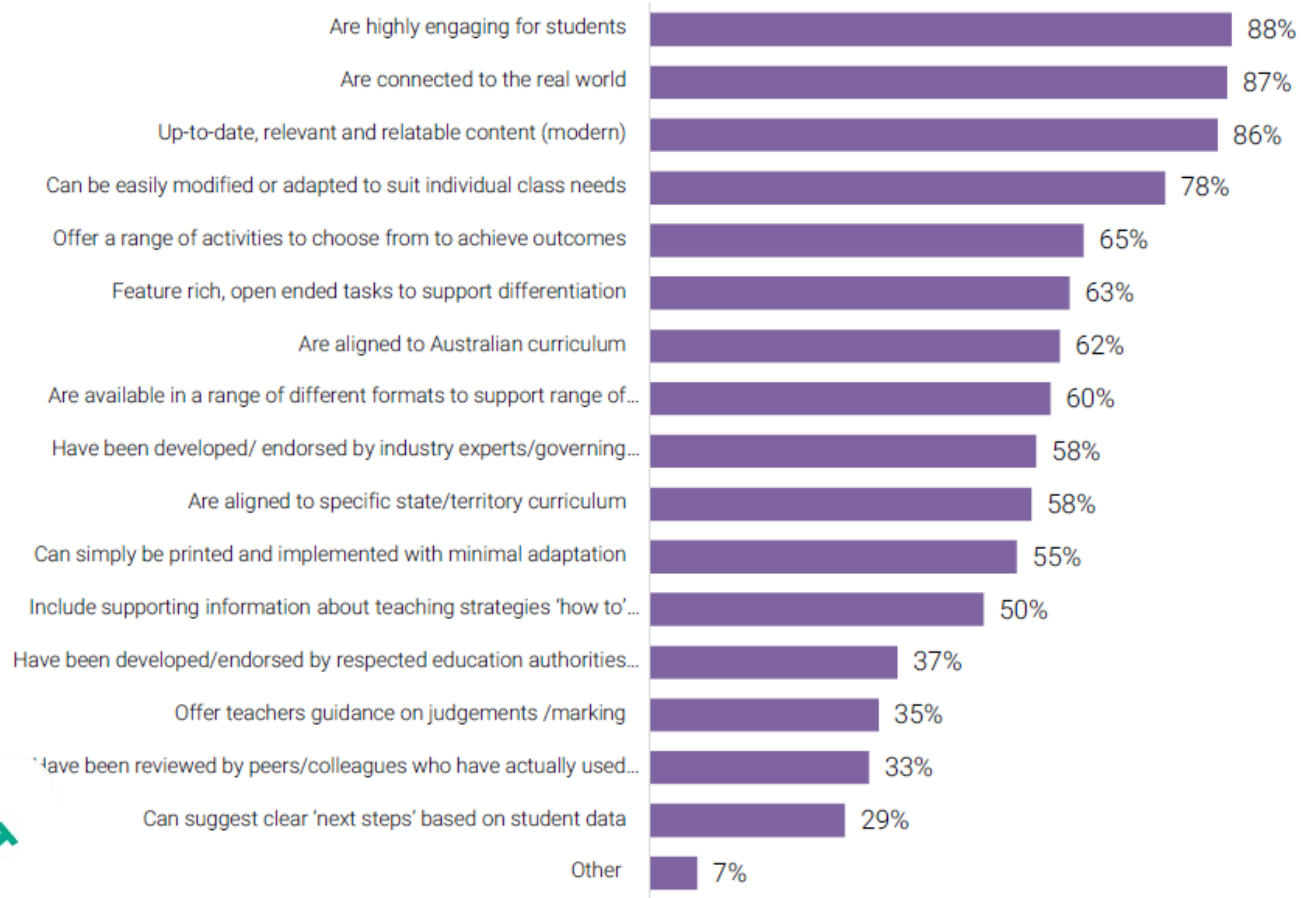
As do those who teach food and fibre regularly or more often as part of their classes, those who studied agriculture at university, and those who have worked in related industries.

Those who teach PI-related subjects were the most likely to feel positive across these industries, followed by STEM teachers and then followed by teachers of other subjects.

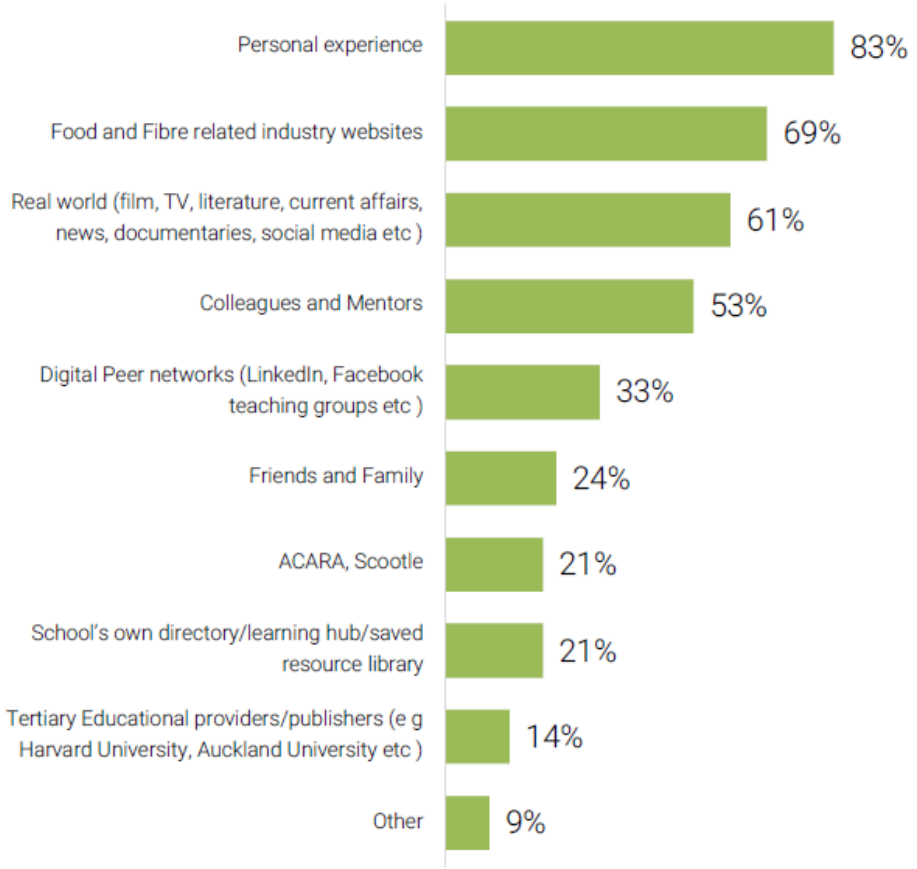
. And how do you feel about the future job and career opportunities for school leavers in the following Primary Industries? Total Base: n=139. Significant differences by key demos in T2B @ 95% CI

Teachers seek resources that are engaging, connected to the real world (relevant), and easily adaptable to their class needs. They are inspired by personal experience, industry news and the real world

Key requirements from resources sought



Source of inspiration for lesson plans



searching for teaching and learning resources related to food and fibre production, which of the following are important factors for you when considering which resources to use? 37. How and where do you get the come up with the activity ideas for your lesson plans around food and fibre lessons? Total Base: n=139 No significant differences by key demos in T2B @ 95% CI

Talk with a group of 2-3 on your table for 4 minutes

1. Are teacher perceptions in New Zealand similar to that found in Australia? Are there any differences?
2. What stories from the forest, and work being done, could help shed light on some of these issues of concern raised?

- Water conservation
- Sustainability
- Technology and innovation in agriculture
- Renewable resources
- Environmental management
- Food security
- Climate change
- Careers in the industry
- Indigenous connections

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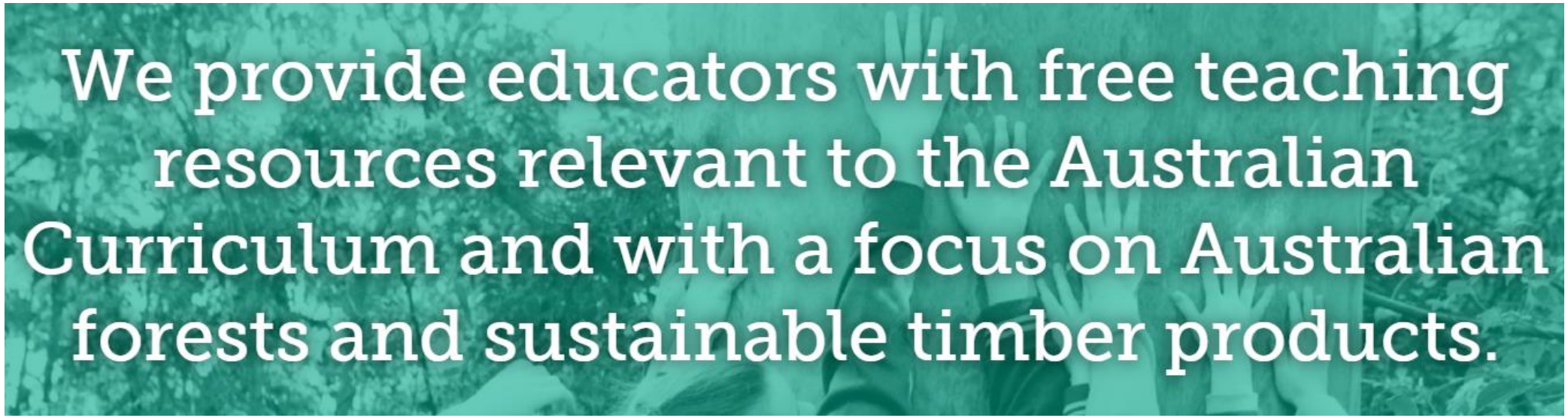


ForestLearning website - 71 (+ growing) F-12 teaching and learning resources aligned to the Australian Curriculum – audit + refinement underway

FOREST LEARNING

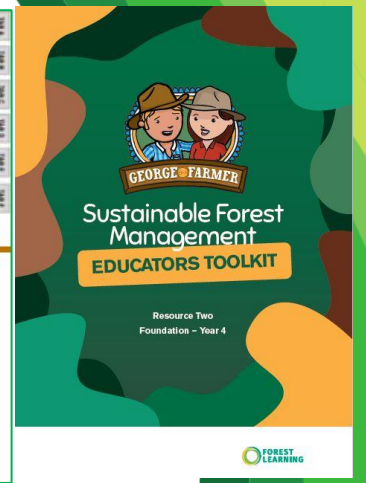
Forest & Wood Products Australia

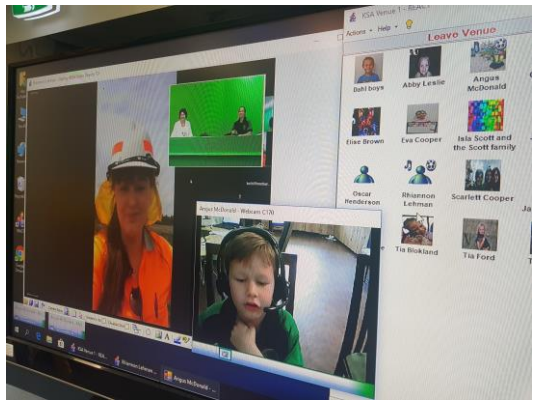
forestlearning.edu.au

- From disconnected ‘SILO’ beginnings to a national collaborative agenda via the **Australian Forest Education Alliance**
  - Evolution of ForestLearning teaching resources
  - Evolution of the teacher one-stop-shop website **forestlearning.edu.au**

FOREST LEARNING

- Robust Resources – free F-12 teaching resources aligned to the Australian Curriculum
- Productive Partnerships – Education and Industry collaborators, including Australian Forest Education Alliance, ForestLearning Industry Education Champion Program (150+), member of PIEFA since its inception 2009.
- Communication – 8200+ teachers currently on the quarterly e-newsletter distribution list, 2273 Facebook Followers, free teacher packs mailed to schools





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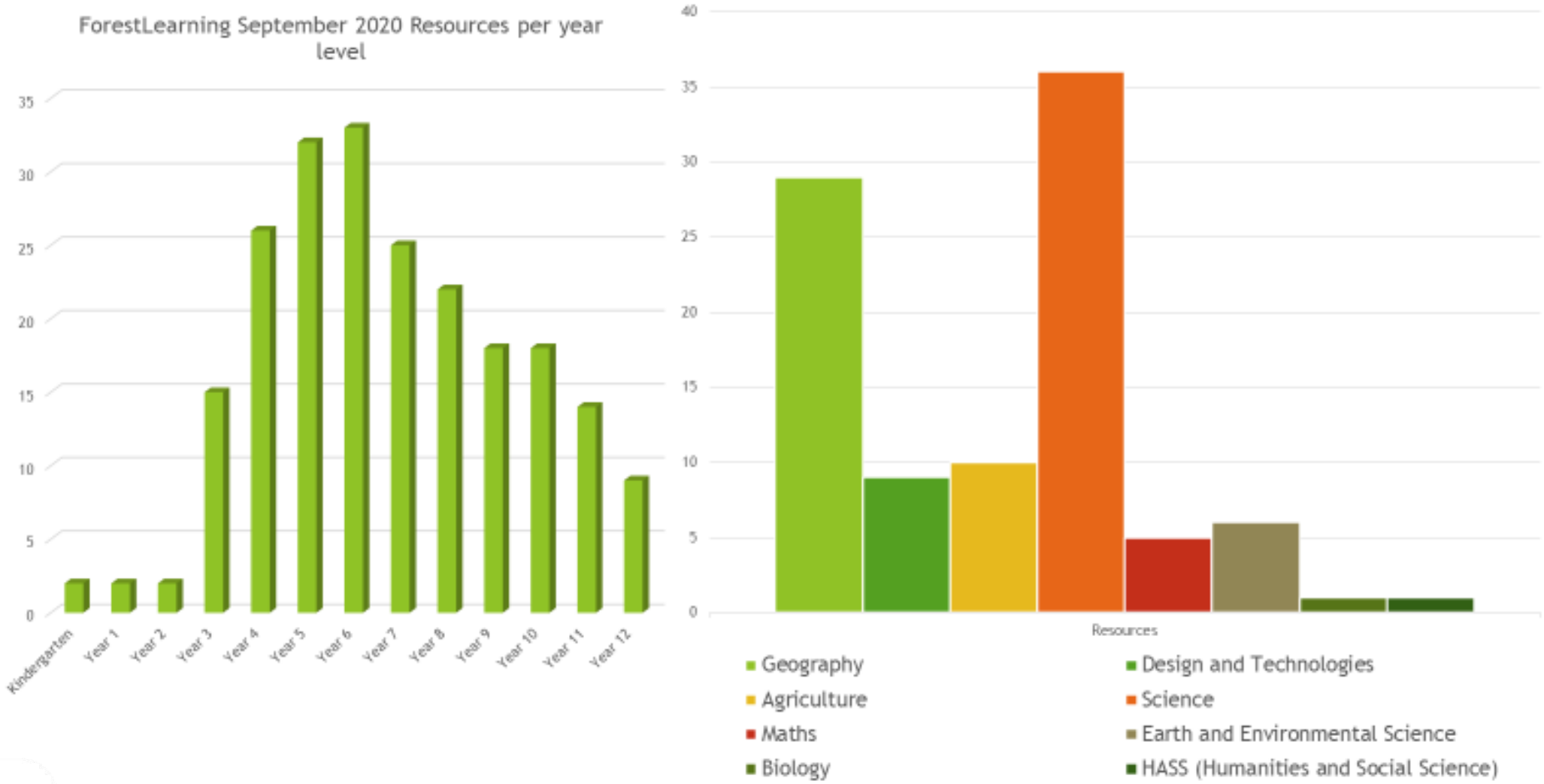
Current Resources on forestlearning.edu.au



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All resources on the ForestLearning website have been:

- **Developed** by classroom experienced educators / professional teacher association groups
- Aligned with the **Australian Curriculum**
- **Supported** by all members of the Australian Forest Education Alliance.

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Robust Resources

- Desire is for adoption not the unending development of new
- Audit, evaluation + refinement
- Partnering with trusted sources
- Design layout easy for teachers to use and branding – building trust, consistency and reliability

myfuture

AGFORCE

SIPP
SCHOOL TO INDUSTRY
Partnership Program

DATTA VICTORIA
Design And Technology Teachers Association

GEOGRAPHY TEACHERS' ASSOCIATION OF VICTORIA INC.
ASIA EUROPA AFRICA

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SHE Maps

www.primezone.edu.au
primezone
The place for all your food and fibre resources

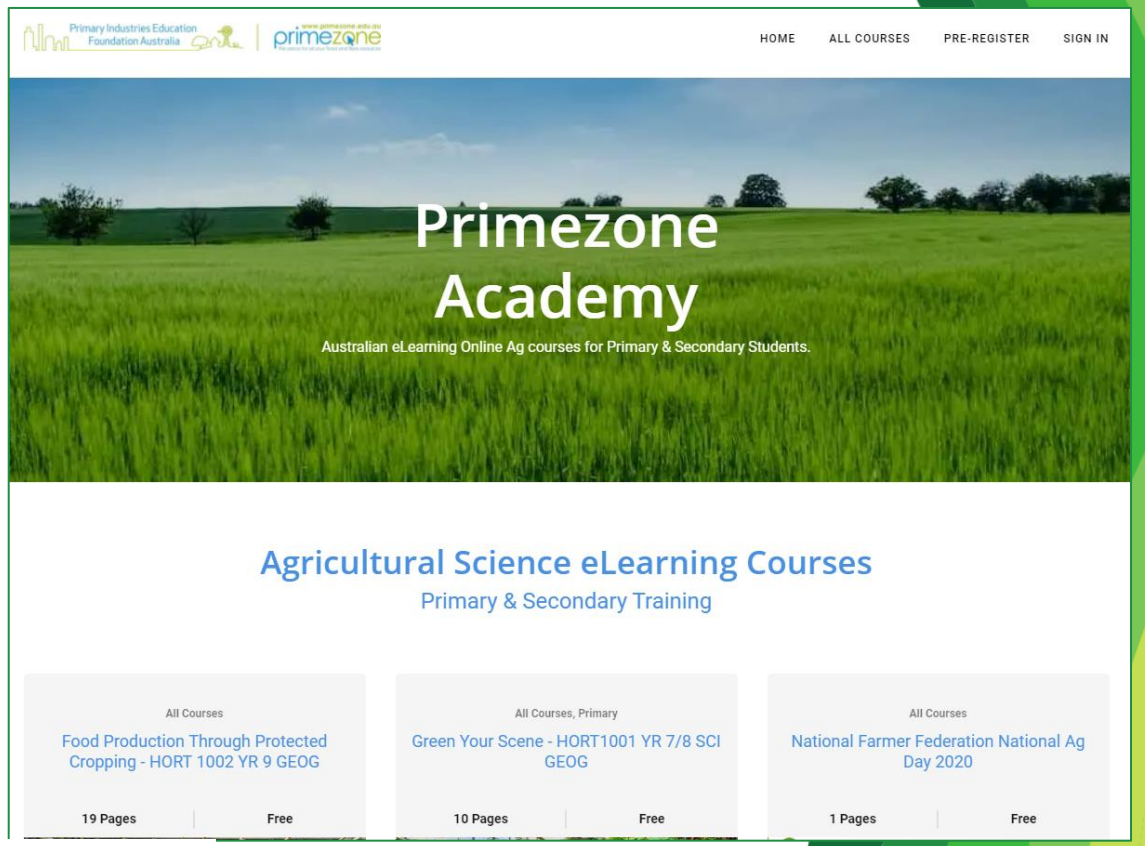
AUSTRALIAN SCIENCE TEACHERS ASSOCIATION

FOREST LEARNING

Design and Branding refresh following teacher consultation and feedback surveys

Future Projects 2021:

- Teacher Professional learning videos – 3-4 minutes for each website flagship resource to help inspire and upskill teachers
- Primezone academy courses – fully online lessons in e-learning style with PIEFA
- Indigenous linkages across all resources – building connections
- Virtual Classrooms with ‘known children entities’ e.g. George the Farmer for online learning



WOOD The Ultimate Renewable™

Forest & Wood Products Australia

Linkages with industry wide campaigns

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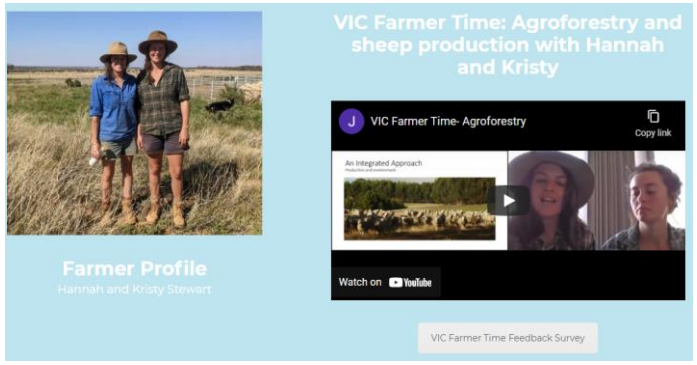
Find resources on forestlearning.edu.au using simple but powerful search tools

Emerging projects

- **ForestVR teacher toolkit** – VR experiences, Teacher tools, PowerPoint lesson slides, KMZ files Google Earth, VR Tours
- Federally funded **Kids to Farms projects** in every state since 2020 – partnering to build in forestry to the program:
  - **Agroforestry resources + Agroforestry Forester Time** partnerships – Vic
  - **George the Farmer:** primary school resources including Video, VR, Teacher and student activity based workbook, Online Classroom
  - **Ag Inspirations and conferences** – Qld (sharing with other states)
  - **Ag teacher conferences** and links with industry – NT/Qld/National
- **Virtual Classrooms** – Kimberlin Education partnership (MLA, Eggs, Dairy etc), with George the Farmer live + Expert Forester
- **Forestry Hubs in WA, SA, QLD, NNSW, Vic** - education engagement outcomes.



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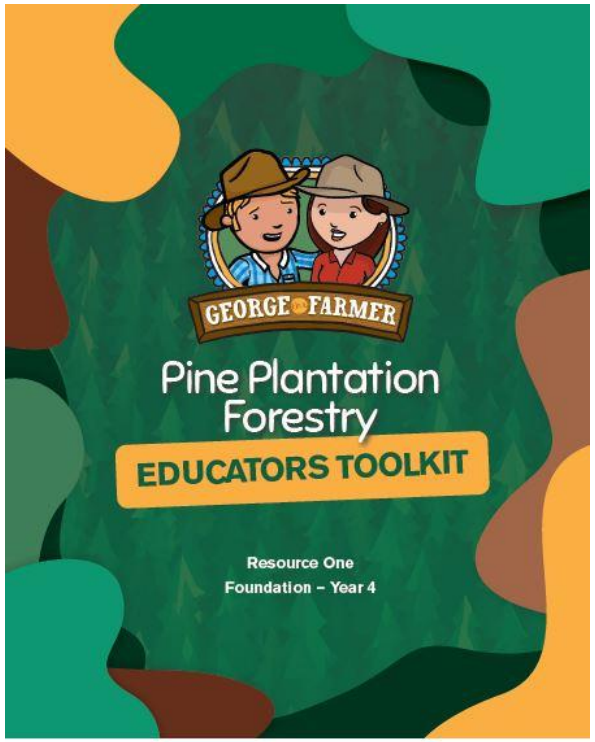
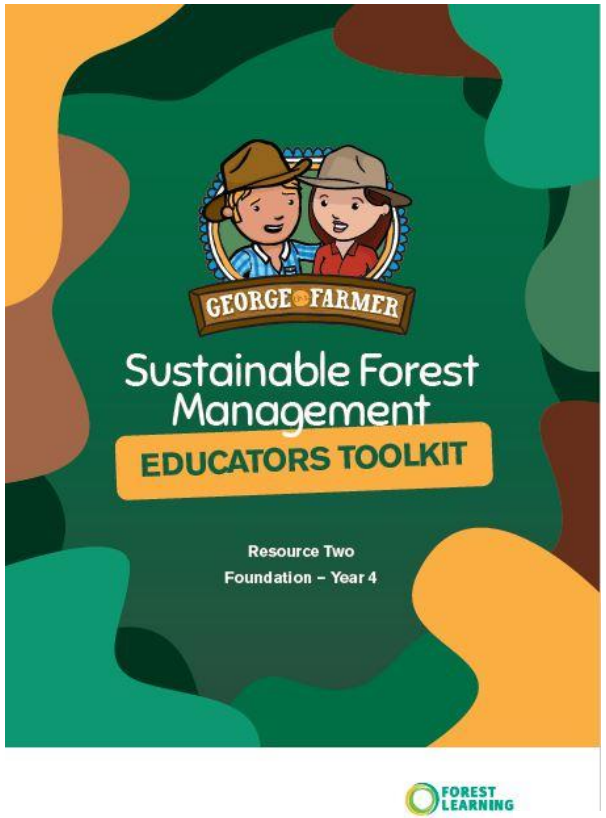
Industry and ForestLearning Partnership Snapshot: George the Farmer





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Emerging Leaders Program

ONEFORTYONE PLANTATIONS

TIMBERLANDS Pacific

Green Triangle Forest Products

SFM forest products

Green Triangle Forest Industries Hub

Foundation – Year 4 Teaching Toolkit

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https://youtu.be/9V_f4P4bYNE

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Tapping in to emerging tech in schools + meeting teacher/student online learning needs:

Education Field Trips – 2020+ Barriers

SCHOOLS → Field Work:

Skills, Landscapes, Forest environments, Mapping, Biomes, Environmental Change & Management….

Image: Victorian National Park Association

BUT …

- Covid19!
- Social distancing
- Industry contacts?
- Distance? Bus costs?
- OH&S? PP&E?
- Permissions to visit (e.g. harvesting site, mill….)?
- Confidence - lower understanding of forestry/deforestation?

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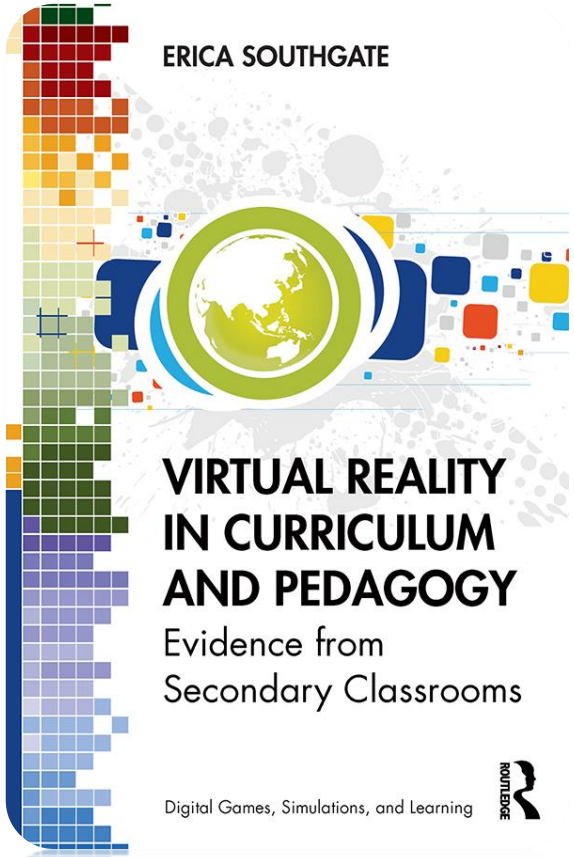
ForestVR – meeting the rise of tech in schools

2020/21…. Covid19 and the call for educational VR

Virtual reality enhances limited physical environments
(e.g. during school lockdown, no excursions)

" …educators should leverage the established instructional strategies of their field, and their deep pedagogical knowledge of this, to create immersive learning experiences that resonate with the curriculum and students"
Erica Southgate, University of Newcastle



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MAZENOD COLLEGE

Immersive Technology Applications in Geography

Instructional

- "How to do something"
- Can be Passive and/or Interactive)

Virtual Field Trips

- "Visit locations in Virtual Reality"
- Undertake field surveys using 360-degree photos and video experiences

Begin by considering the purpose of the field trip.

- What will students do when they've completed the experience?
- How does the experience connect to curriculum goals and the development of an information fluent (student)?

Field Trip intro/ reflection

- "Great for taster or revision pre- or post-field trip"
- Helps to fill in the gaps to a 'cycle' or system, rather than a field trip 1 day in time

Student Created Content

- "Ask students/ participants to create their own"
- Use as an extension activity
- Use as an assessment piece with hotpots
- Post field trip revision

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Benefits of Virtual Technology in the Classroom

- Engaging, creates interest
- New/ Innovative - doesn't feel like school 'work'
- Safe
- Practical
- Links to curriculum outcomes
- Greater student interaction to learning cp 2D video

ForestVR™ Toolkit for schools

Written by teachers - for teachers!

Teacher Workbook

Student Workbook

ForestVR 360-degree Google expedition tour of world forests

.kmz files for Google Earth Pro

ForestVR™ 360-degree video experiences + virtual 360-degree photo tours (via ForestLearning website, ForestVR Apps, YouTube, Vimeo, Roundme)

Video Tutorial Files (via YouTube, Vimeo, ForestLearning website)

Lesson PowerPoint presentations



FOREST VR

7 Virtual Expeditions

FOR STUDENTS

Explore Australia's Forests Today

www.forestlearning.edu.au/forestvr



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ForestVR Toolkit = 360-degree Video Experiences + 360-degree photo tours + teaching resources

	A. Forestry Management	B. Milling	A + B Full Forest and Wood Cycle	C. Additional End Product milling
Pine Story - Softwood	1. Pine Forest Story	2. Log to Lumber	3. Seed to Shelter	4. Pine Plantation to Paper
				
Spotted Gum Story - Hardwood	5. Spotted Gum Forestry Story	6. Tree to Timber	7. Forest to Fine Flooring	
				

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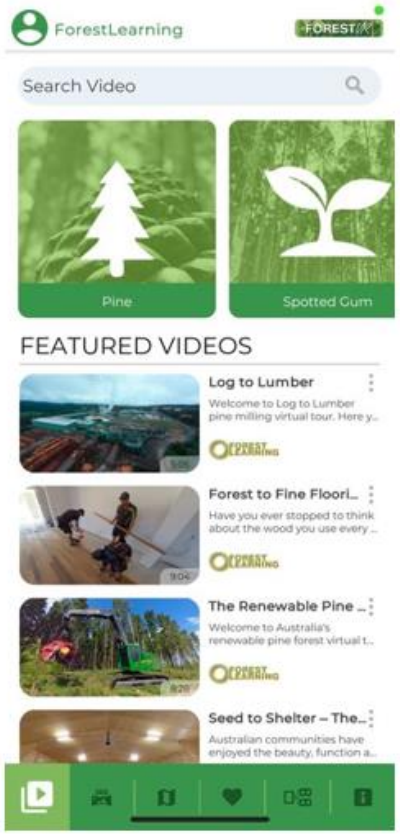
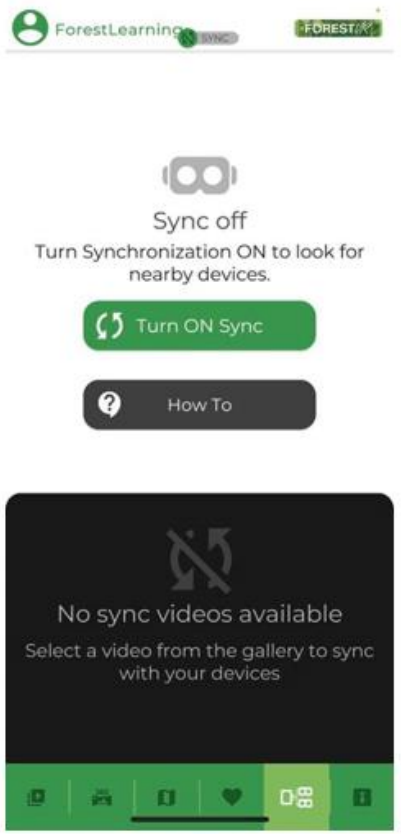
News
ForestVR APPs
now available
Google Play
oculus
FOREST VR
FOREST VR
FORESTVR TOOLKIT FOR SCHOOLS
--> forestlearning.edu.au/forestvr

ForestVR™ App features for classrooms

– IOS, Android and Oculus Go





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Collaborators

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THINK. DIGITAL

Geography Teachers' Association of Victoria Inc.

DATTA VICTORIA Design And Technology Teachers Association

Pine Cycle contributors:

HYNE TIMBER

ONEFORTYONE PLANTATIONS

Green Triangle Forest Products

TIMBERLANDS Pacific

VISY FOR A BETTER WORLD

HQPlantations

Spotted Gum Forest and Wood Product Contributors:

HURFORD hardwood

HURFORD forests

Forestry Corporation

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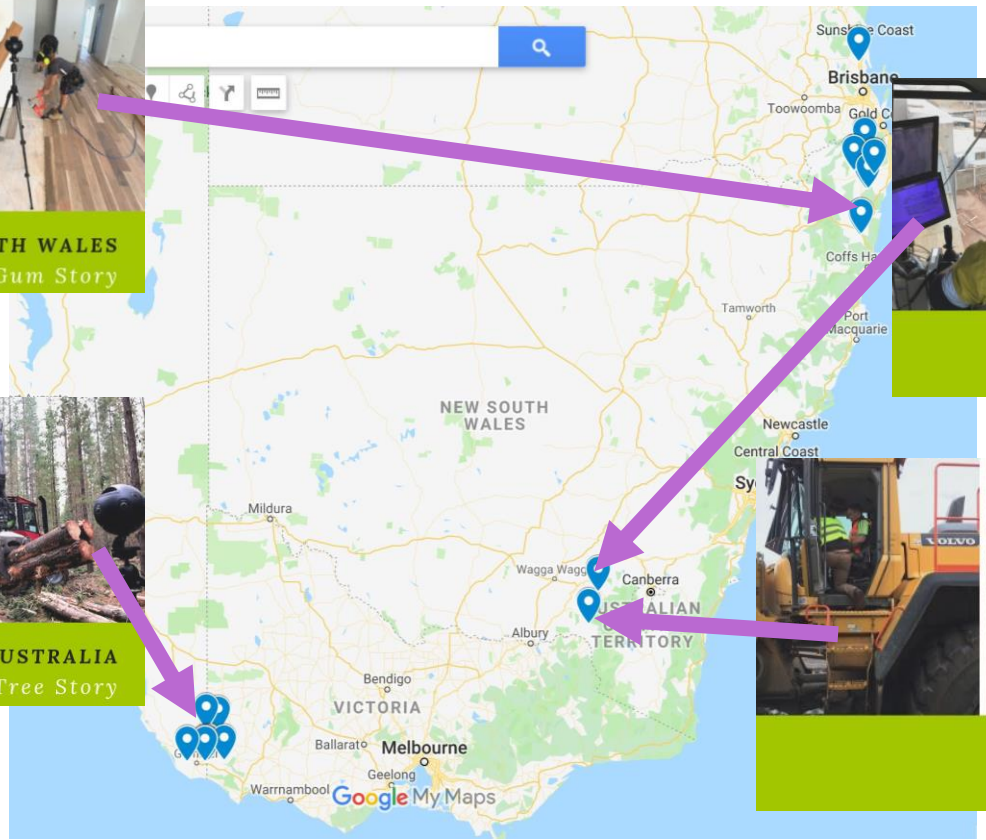
Filming phase

28 filming locations around Australia

NORTHERN NEW SOUTH WALES
The VR Spotted Gum Story



VISY PAPER MILL, TUMUT NSW
The VR Pine Tree Story

MOUNT GAMBIER, SOUTH AUSTRALIA
The VR Pine Tree Story

HYNE MILL TUMBARUMBA, NSW
The VR Pine Tree Story

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New ForestVR tools to come in late 2021 –

- **Forest Science Explorers** - years 3-6: Biomes, Adaptations, forests of Australia
- **Agroforestry** – trees at work on the farm
- **Careers in forests and wood products**
  - Forester
  - Ecologist
  - Mill processing cadet

forestlearning.edu.au

How to access ForestVR™

- **ForestLearning website** - www.forestlearning.edu.au/forestvr
- **ForestVR™ APP for IOS, Android and Oculus:**

https://tinyurl.com/AppStoreForestVRapp

Google Play

https://tinyurl.com/GoogleForestVRapp

oculus

Email info@forestlearning.edu.au to access a one time pass key to download APP.

- **YouTube ForestVR playlist**: https://tinyurl.com/YouTubeForestVR
- **Vimeo Showcases:**
  - The Renewable Pine forest showcase: https://vimeo.com/showcase/6041443
  - Spotted Gum showcase: https://vimeo.com/showcase/6043133
- **ForestVR Roundme 360-degree photo tours:** https://roundme.com/@forestlearning/tours

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Talk with a group of 2-3 on your table for 4 minutes

Try virtual environments on your iPad, smart phone or VR Headset

- YouTube – ForestLearning Channel https://tinyurl.com/ForestVRdemo
- ForestVR™ Website stories – seed to to shelter including VR Tours - www.forestlearning.edu.au/forestvr

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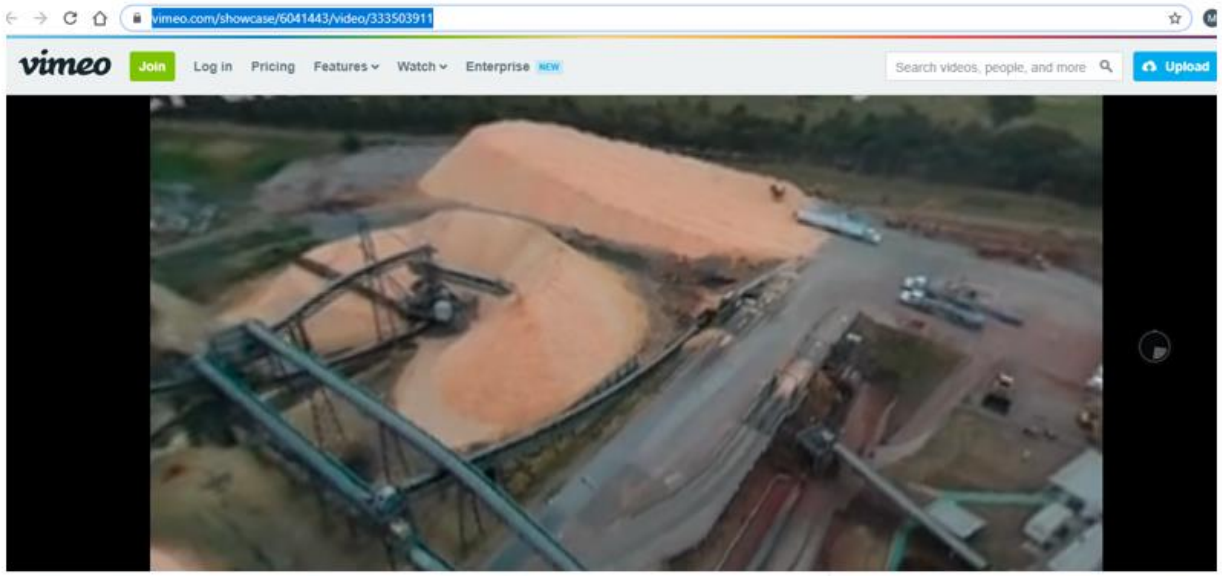
ForestLearning Resources/Activities – Follow up to VR sites

1.Site Preparation Mounding	19/06/2019 7:15 PM	KMZ	1 KB
4 Years	19/06/2019 7:03 PM	KMZ	1 KB
10 Years	19/06/2019 7:05 PM	KMZ	1 KB
15 Years	19/06/2019 7:08 PM	KMZ	1 KB
18 Months	19/06/2019 7:03 PM	KMZ	1 KB
20 Years Thinning Operation	19/06/2019 6:43 PM	KMZ	1 KB
20 Years	19/06/2019 6:47 PM	KMZ	1 KB
30 Years	19/06/2019 7:12 PM	KMZ	1 KB
Pine Mill Snowy Mountains	19/06/2019 7:33 PM	KMZ	1 KB
Pine Mill Tumbarumba	19/06/2019 7:27 PM	KMZ	1 KB



KMZ files of all ForestVR locations can be downloaded from forestlearning.edu.au:

Print Resource:

MAP DATA LAYER FILES

Lesson Overview:

These zipped .KMZ and .KML data layer files for student mapping activities are available to download to accompany ForestLearning ForestVR teaching and learning resources for Geography. These files are compatible to be uploaded as layers for use within Google Earth and other online mapping platforms that support these files.

Data layer locations are provided for the forests, timber mills and processing facilities that are explored in the teaching resources below that accompany ForestVR 360 expriences and virtual 360 tours. Other global and Australian sites referenced within the teaching resources are also available as data layers to download.

Teaching resources linking map data layers - .kmz and .kml files:

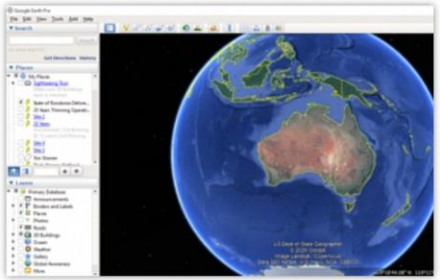
- Geography Year 8: Forest Landscapes

- Geography Year 10: Environmental Change and Forest Management

Year Level/s:

5, 6, 7, 8, 9, 10, 11, 12

Key Curriculum Areas / Subject:



STUDENT RESOURCE

Hinterland Wildlife Corridor Data Layers

Hinterland Wildlife Corridor.kml file (4MB compressed file, 31MB true size)

File Size: 3.93 mb
File Type: ZIP

DOWNLOAD

STUDENT RESOURCE

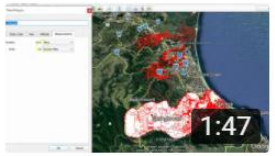
Step by Step Video Tutorials – ForestLearning YouTube Channel: www.tinyurl.com/forestlerningyoutube

Google Tour Creator

This video has been developed as a tutorial to accompany the Geography...

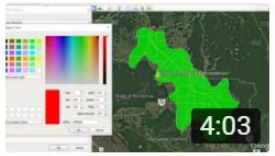
Graphing Tree Coverage

This video has been developed as a tutorial to accompany the Geography...



Hinterland Wildlife Corridor

This video has been developed as a tutorial to accompany the Geography...



Measuring Tree Coverage Change

This video has been developed as a tutorial to accompany the Geography...

National Map

This video has been developed as a tutorial to accompany the Geography...

Padlet Article Analysis

This video has been developed as a tutorial to accompany the Geography..

Plantation Analysis GEP

This video has been developed as a tutorial to accompany the Geography...

Adding KML and KMZ files

This video has been developed as a tutorial to accompany the Geography...

Australias state of the environment

This video has been developed as a tutorial to accompany the Geography...

Changing graph to percentage

This video has been developed as a tutorial to accompany the Geography...

Comparing forests with 360 photos

This video has been developed as a tutorial to accompany the Geography...

Forest & Wood Products Australia

forestlearning.edu.au

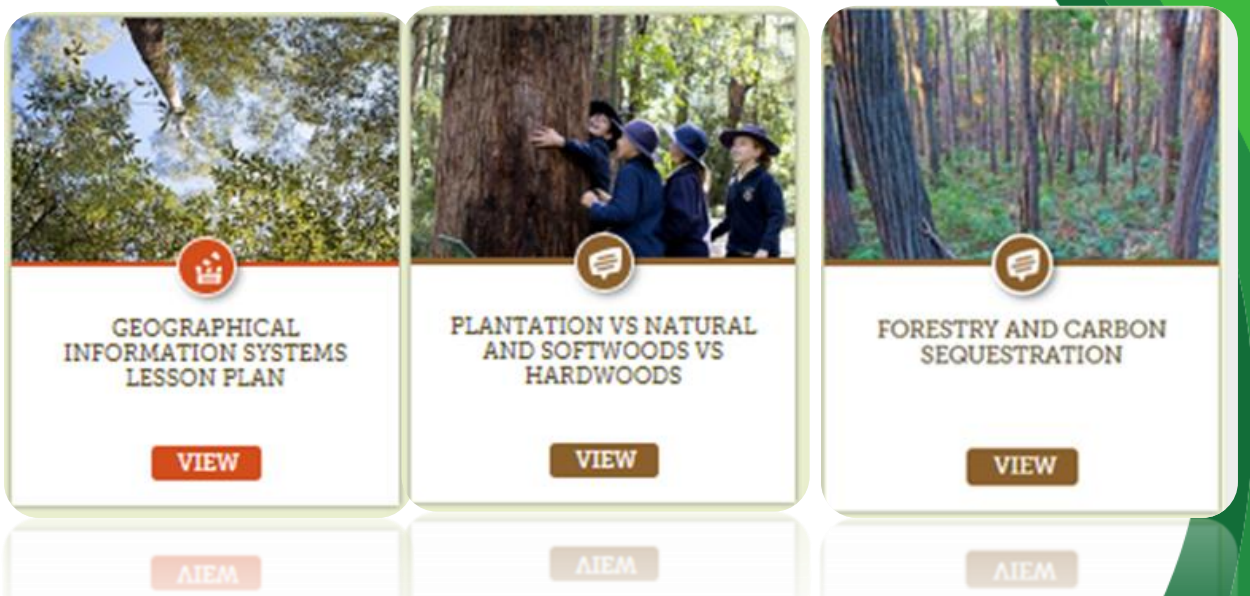
VR and Student Created Content

- 360 Video experiences
- 360 Photos
- Virtual Tours for assessment! E.g. Roundme

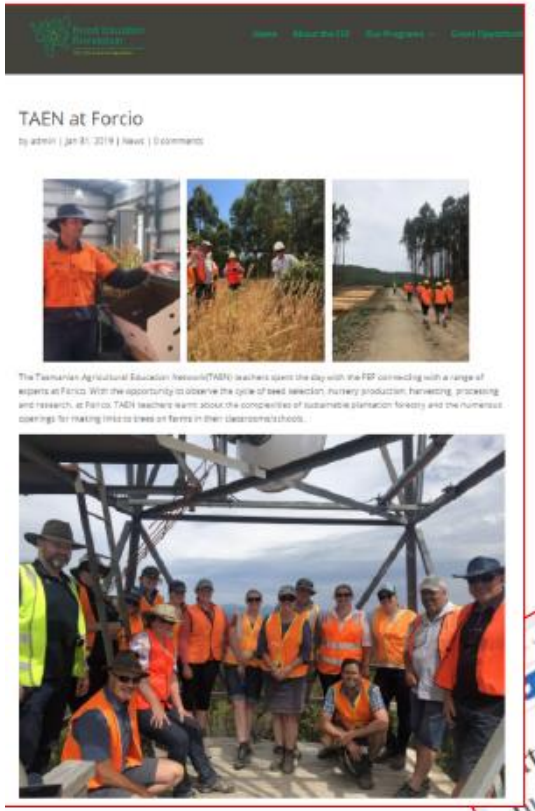
Productive Partnerships 2021–

- **GTAV, PIEFA, ASTA** and **DATTAVic** - audit + refinement of all ForestLearning resources found at forestlearning.edu.au

- 2021 Partnership with **SheMaps** – capturing drones in schools new audience: Teaching resources + case studies + LiDAR mapping tools in forestry + teacher PL + more



ForestLearning Industry Education Champions – the hands and feet



TAEN at Forcio

by admin | Jan 31, 2019 | News | 0 comments

The Tasmanian Agricultural Education Network(TAEN) teachers spent the day with the FEP connecting with a range of experts at Forcio. With the opportunity to observe the cycle of seed selection, nursery production, harvesting, processing and research, at Forcio, TAEN teachers learnt about the complexities of sustainable plantation forestry and the numerous openings for making links to trees on farms in their classrooms/schools.

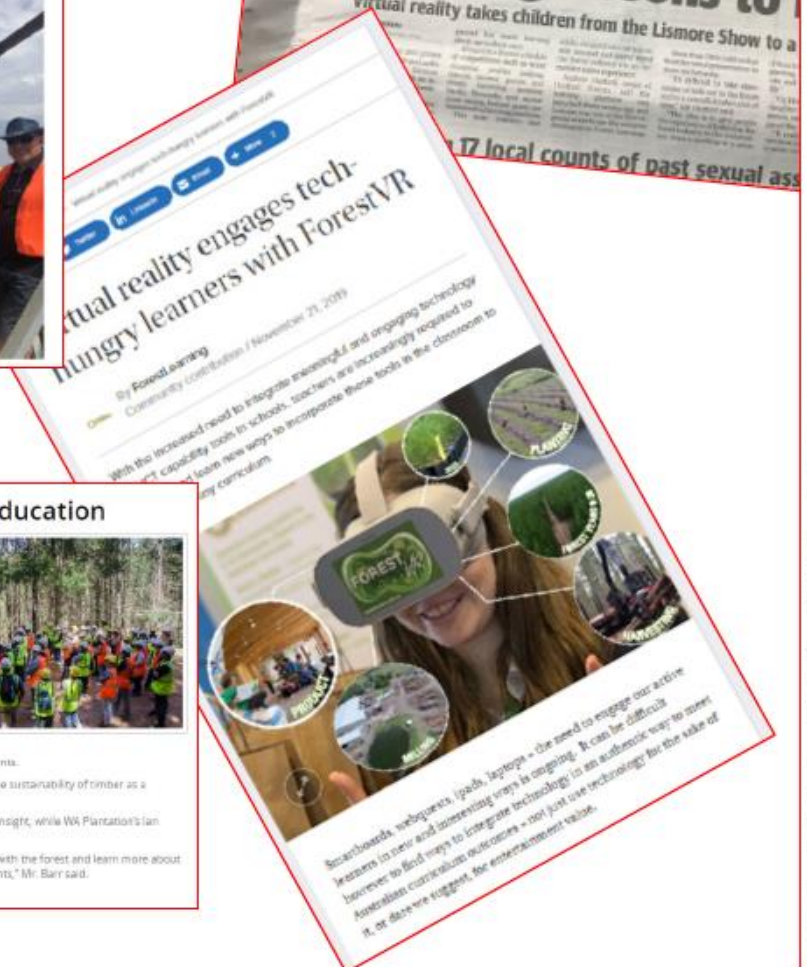
NEWS 03

Lismore pushes to raise cost of info access

Bringing lessons to

Virtual reality takes children from the Lismore Show to a

17 local counts of past sexual ass



tual reality engages tech-hungry learners with ForestVR

By Forest Learning

Community contribution / November 21, 2019

With the increased need to integrate meaningful and engaging technology capability tools in schools, teachers are increasingly required to learn new ways to incorporate these tools in the classroom to curriculum

Searchwords, swingsets, ipads, laptops – the need to engage our active learners in new and interesting ways is ongoing. It can be difficult however to find ways to integrate technology to an authentic way to meet Australian curriculum outcomes – not just use technology for the sake of it, or deliver engage, for entertainment value.

Forest Learning fosters teacher education

6 March 2018

Bunbury teachers are taking forestry knowledge back to the classroom thanks to the latest Forest Learning Day.

Wespine's Brad Barr said the day was organised and funded by the Leschenault Timber Industry Club (LTIC) and gave the teachers an understanding of timber's important role in a sustainable economy.

"We began in an Forest Products Commission pine plantation and saw a first thinning before talking to Forester Jack Kentwell, Assistant Operations Officer Jye Newman and contractor Karl Anderson about career pathways into forestry," Mr. Barr said.

From there the teachers visited the Wellington Discovery Forest and learned about silviculture, harvesting, sustainability, and water catchments.

"We then took the teachers on a tour of Wespine Sawmill and heard more about the sustainability of timber as a construction material," Mr. Barr said.

The commercial aspects of forestry were outlined by Greg Meacham from Timber Insight, while WA Plantation's Ian Telfer discussed the environmental benefits of using wood.

"Feedback from the teachers was positive, with all enjoying the chance to connect with the forest and learn more about timber's role in a sustainable economy, which they can then pass on to their students," Mr. Barr said.

Read more about the day here.

Endangered bandicoots gain protection by ForestrySA

25 July 2019

Tatachilla Lutheran College students work with Department of Environment and Water Senior Ecologist Elisa Sparrow and ForestrySA Ranger Lennan Whiting to install a motion-detection camera within Southern Brown Bandicoot habitat in the Kuitpo Forest Reserve.

ForestrySA is working to protect endangered bandicoots living within the Kuitpo Forest Reserve as part of an eco-education collaboration with local school students. Source: Timberbiz

The nationally endangered Southern Brown Bandicoot (Isoodon obseulus) was rediscovered living in the forest in early 2018 – the first sighting since the Ash Wednesday bushfires in 1983. Source: Timberbiz

Students from McLaren Vale's Tatachilla Lutheran College are assisting in the ongoing monitoring and protection of the typically shy marsupial.

As part of the monitoring program, participating students were briefed by Department for Environment and Water Senior Ecologist Dr Elisa Sparrow, before installing a motion detection camera on ForestrySA land near Kangarilla.

The camera was positioned within bandicoot habitat located in a degraded drainage line overgrown with declared noxious weeds Periwinkle and Blackberry. While both plant species are declared weeds,

Promotions

- **E-newsletter** quarterly – 8200 teachers
- **Social Media** – Facebook + LinkedIn
  - Competitions for prize packs
  - Promote regional initiatives
  - Don’t feed the negative comments – ignore
- **Teacher + Industry Conference workshops**/virtual sessions
- Partners and their promotions
- Education department newsletters – 1 paragraph + URL more

Free Teacher Packs
- 2021 undergoing evaluation survey

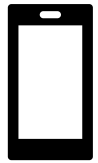
Last FY 312 packs/teachers reaching 13,500+ students

Starting with the end in mind

- Why engage with schools?
- What is currently successful in schools – school landscape survey
- What are the current needs of teachers
- What are the current needs, stories and capacities of industry in the regions
- What resources do we have?
- Who can we bring with us? Education and industry partners

For further information and contacts:

Beth Welden
Program Manager, ForestLearning



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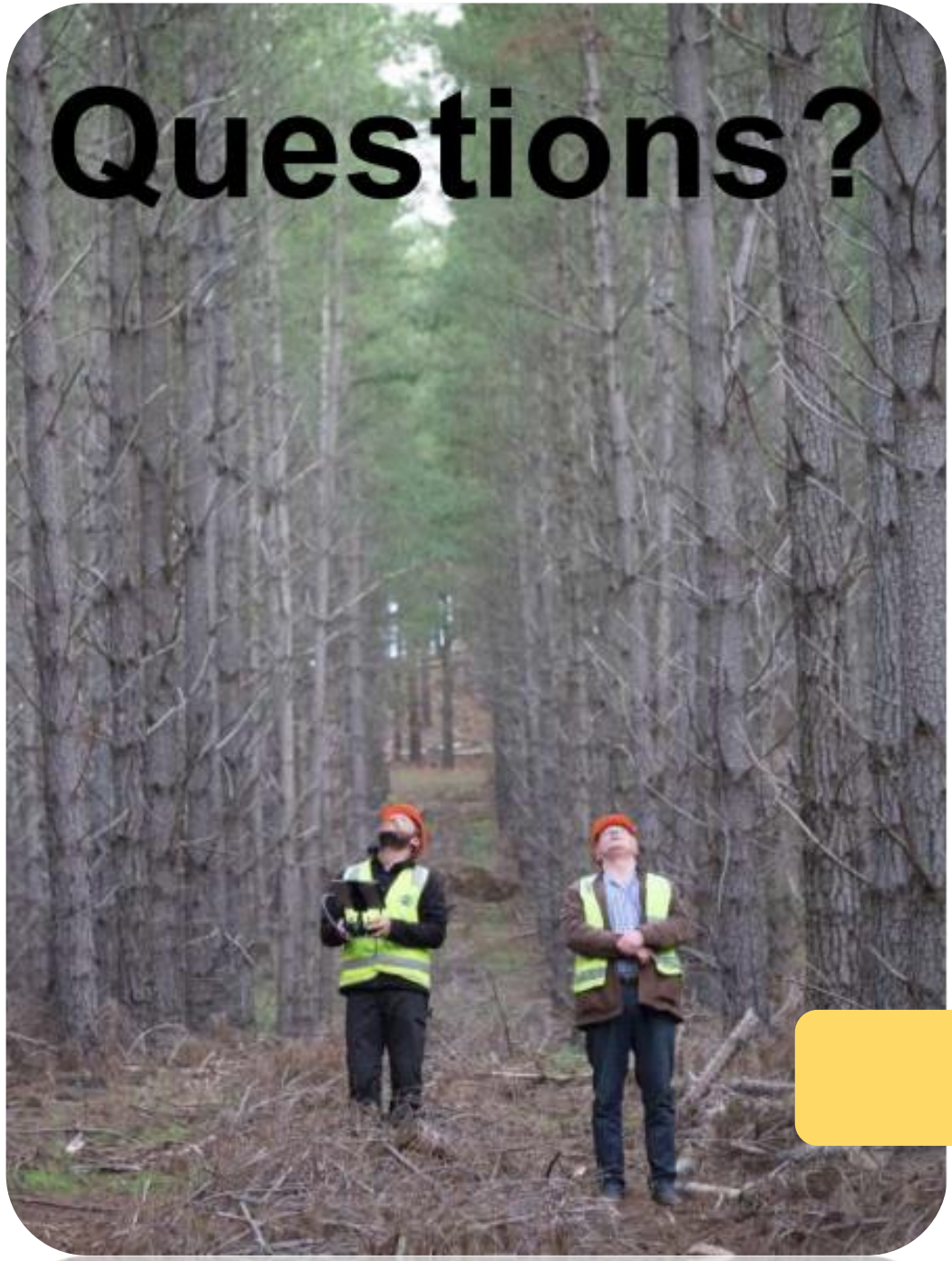

Branch out with ForestLearning →
www.forestlearning.edu.au