

MLA Virtual Farm Visit Teacher's Guide

Technology



This teacher's guide includes curriculum links and activities relevant to:

ACT	Technology
NSW	Technology, Agricultural Technology, Food Technology and Industrial Technology
NT	Technology and Design
QLD	Technology
SA	Design and Technology
TAS	Vocational and Applied Learning
VIC	Design, Creativity and Technology
WA	Technology and Enterprise

Links with Curriculum

Video content in this module links with the Australian secondary school curriculum on *Technology* in the following areas.

STATE OR TERRITORY	SUBJECT	AREA	COURSE DESCRIPTION
ACT	Technology	25.LA.2	Factors affecting design (e.g. function, form, end user context, quality, trends, resource availability, safety).
NSW	Agricultural Technology		Students investigate the viability of Australian agriculture through the careful management of issues relating to the sustainability of agricultural systems, as well as the relationships between production, processing and consumption.
NSW	Food Technology		The study of Food Technology provides students with a broad knowledge and understanding of food properties, processing, preparation and their interrelationship, nutritional considerations and consumption patterns.
NSW	Industrial Technology		Industrial Technology develops students' knowledge and understanding of materials and processes in a range of technologies. They develop knowledge and skills relating to the selection, use and application of materials, tools, machines and processes through the planning and production of quality practical projects. One of 11 focus areas is Farm Maintenance.

STATE OR TERRITORY	SUBJECT	AREA	COURSE DESCRIPTION
NSW	Technology		Technology (Mandatory) develops in students an understanding of design and design processes and the technologies that can be employed to produce creative and innovative solutions to identified needs.
NT	Technology and Design		Examine products/ processes/ systems in terms of function, performance, quality and safety, e.g. ball bearing game, production of child's garment, drenching/ pasture management program on goat health.
NT	Technology and Design		Analyse and assess the impact of community and social needs on the development and design of technologies, e.g. vandal proof materials in the construction of public venues.
NT	Technology and Design		Investigate effects of technological changes on production and use of materials in various industries, e.g. electronics, robotics.
QLD	Technology	Technology as a human endeavour	New products and technologies are designed and developed to meet changing needs and wants of intended audiences, and include artefacts, systems, environments, services and processes.
QLD	Technology	Technology as a human endeavour	People can influence decisions made about the design, development and use of technology to change the impact on people, their communities and environments at local and global levels.

STATE OR TERRITORY	SUBJECT	AREA	COURSE DESCRIPTION
QLD	Technology	Technology as a human endeavour	People can influence decisions made about the design, development and use of technology to change the impact on people, their communities and environments at local and global levels.
SA	Design and Technology	Critiquing	4.1 Explains the decisions and choices made in designed and manufactured products, processes and systems and identifies alternative possibilities. [In] [T] [KC2] [KC6].
SA	Design and Technology	Critiquing	5.1 Examines critically the competing values embodied in designed products, processes and systems, clarifies relationships amongst people, products and quality of life and presents ethical analyses of various possible technological futures. [F] [In] [T] [KC1].
TAS	Vocational and applied learning	Innovation and design	Research, plan, trial and modify.
TAS	Vocational and applied learning	Systems and processes	Appraise the work of others; Explore systems, materials and technologies.
TAS	Vocational and applied learning	Applications and solutions	Identify and propose solutions.
TAS	Vocational and applied learning	Futures planning	Learn about life and work.




STATE OR TERRITORY	SUBJECT	AREA	COURSE DESCRIPTION
VIC	Design, Creativity and Technology	Level 5	They describe and analyse the social and environmental impacts of their own and others' designs, products and technological systems.
VIC	Design, Creativity and Technology	Level 6	They synthesise data, analyse trends and draw conclusions about the social, cultural, legal and environmental impacts of their own and others' designs and the products/systems, and evaluate innovative new technology in the manufacturing industry.
WA	Technology and Enterprise	Technology in Society	Students understand how cultural beliefs, values, abilities and ethical positions are interconnected in the development and use of technology and enterprise.

Technology and Design




Relevant Videos

These are the videos which are relevant to students of Technology and Design.




From Kalyeeda

<p><i>Changing for the future</i> <i>Dur 0:50</i></p> 	<p>Summary</p> <p>Changes in farming at Kalyeeda and how the markets and climate have affected the station.</p>	<p>Location</p> <p>Kalyeeda/The Land</p>
<p><i>Farming progressing with technology</i> <i>Dur 1:34</i></p> 	<p>Summary</p> <p>The importance of technology in managing crops and conserving energy.</p>	<p>Location</p> <p>Kalyeeda/The Helicopter & The Solar Panel</p>
<p><i>Satellite and the internet</i> <i>Dur 0:43</i></p> 	<p>Summary</p> <p>Keeping up to date with the latest communications and technology.</p>	<p>Location</p> <p>Kalyeeda/The Homestead</p>

From Iona

<p>Chemicals and the boom sprayer <i>Dur1:39</i></p> 	<p>Summary</p> <p>The importance of technology to farming in helping to manage crops more effectively and in conserving energy.</p>	<p>Location</p> <p>Iona/The Boom Sprayer</p>
<p>Soil Management <i>Dur1:20</i></p> 	<p>Summary</p> <p>The benefits of direct drilling for a healthy soil structure and water preservation.</p>	<p>Location</p> <p>Iona/The Boom Sprayer</p>
<p>Animal Health <i>Dur 1:31</i></p> 	<p>Summary</p> <p>Importance of drenching animals to protect them from parasites.</p>	<p>Location</p> <p>Iona/The Shed</p>

From Malabar

<p>Woolpress Dur1:26</p> 	<p>Summary</p> <p>The use of technology in the shearing shed to increase production efficiency.</p>	<p>Location</p> <p>Malabar/ The Shed</p>
<p>Using solar energy Dur 1:07</p> 	<p>Summary</p> <p>Advantages of using solar power to run electric fences across the farm.</p>	<p>Location</p> <p>Malabar/The Solar Panel</p>
<p>Technology and farm maintenance Dur0:42</p> 	<p>Summary</p> <p>The importance of technology in farm maintenance.</p>	<p>Location</p> <p>Malabar/The Solar Panel</p>

Agricultural Technology


Relevant Videos

These are the videos which are relevant to students of Agricultural Technology.




From Kalyeeda

<i>Farming Communities</i>	<i>Dur 0:34</i>	Summary	Location
		Keeping up to date in farming techniques through industry groups and the community to ensure the station is effectively managed.	Kalyeeda/The Homestead

From Iona

<p><i>Crop and pasture management</i> <i>Dur1:34</i></p> 	<p>Summary</p> <p>The importance of sustainable farming through crop and pasture management.</p>	<p>Location</p> <p>Iona/The Land</p>
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From Malabar



<p><i>Sustainability techniques</i> <i>Dur1:44</i></p> 	<p>Summary</p> <p>Importance of maintaining sustainability through shelter belts.</p>	<p>Location</p> <p>Malabar/ The Land</p>
<p><i>Soil health</i> <i>Dur 1:40</i></p> 	<p>Summary</p> <p>The soils on the farm and their continued testing and management to ensure soil health and sustainability.</p>	<p>Location</p> <p>Malabar/The Land</p>
<p><i>Pasture management</i> <i>Dur1:59</i></p> 	<p>Summary</p> <p>Managing pasture through rotational grazing to avoid overgrazing and ensure soil nutrients are maintained.</p>	<p>Location</p> <p>Malabar/The Land</p>

Food Technology




Relevant Videos

These are the videos which are relevant to students of Food Technology.

From Iona

<p><i>Crop and pasture management</i> <i>Dur1:34</i></p> 	<p>Summary</p> <p>The importance of sustainable farming through crop and pasture management.</p>	<p>Location</p> <p>Iona/The Land</p>
<p><i>Protecting crops</i> <i>Dur 1:32</i></p> 	<p>Summary</p> <p>The importance of herbicides in protecting pastures and crops from insects which may affect them during certain parts of the year.</p>	<p>Location</p> <p>Iona/The Land</p>

From Malabar



<p><i>Sustainable breeding techniques</i> <i>Dur 2:06</i></p> 	<p>Summary</p> <p>Sustainable breeding techniques. Timing lambing season with grain season so the lambs can feed while the grass is plentiful.</p>	<p>Location</p> <p>Malabar/ The Land</p>
<p><i>Cattle for the region</i> <i>Dur 2:13</i></p> 	<p>Summary</p> <p>The type of cattle suited to the environment and the affects of markets on breeding selection.</p>	<p>Location</p> <p>Malabar/ The Cow & The Land</p>
<p><i>Responding to consumers</i> <i>Dur 1:37</i></p> 	<p>Summary</p> <p>The importance of environmental management and animal welfare in meeting consumer expectations and market demands.</p>	<p>Location</p> <p>Malabar/The Land</p>

Industrial Technology

Relevant Videos

These are the videos which are relevant to students of Industrial Technology.

From Kalyeeda

<p><i>Farming machinery</i> <i>Dur 1:03</i></p> 	<p>Summary</p> <p>The importance of technology and machinery in managing the station efficiently.</p>	<p>Location</p> <p>Kalyeeda/The Tractor</p>
<p><i>Satellite and the internet</i> <i>Dur 0:43</i></p> 	<p>Summary</p> <p>Keeping up to date with the latest communications and technology.</p>	<p>Location</p> <p>Kalyeeda/The Homestead</p>

From Iona

Farming progress through technology Dur 1:33





Summary

The use of technology in machinery and communications to ensure the farm is managed as efficiently as possible.

Location

Iona/The Land & The Boom Sprayer

From Malabar


<p><i>Machinery improves efficiency and safety</i> Dur 2:03</p> 	<p>Summary</p> <p>The use of machinery to ensure the farm is managed efficiently and to improve health and safety conditions for workers.</p>	<p>Location</p> <p>Malabar/The Tractor</p>
<p><i>Woolpress</i> Dur 1:26</p> 	<p>Summary</p> <p>The use of technology in the shearing shed to increase production efficiency.</p>	<p>Location</p> <p>Malabar/The Shed</p>

Technology

Relevant Videos

These are the videos which are relevant to students of Technology.



From Kalyeeda

Satellite and the internet	Dur 0:43	Summary	Location
		Keeping up to date with the latest communications and technology.	Kalyeeda/The Homestead

From Iona

<p><i>Managing livestock</i> <i>Dur0:49</i></p> 	<p>Summary</p> <p>The importance of technology to farming in helping manage livestock effectively and efficiently.</p>	<p>Location</p> <p>Iona/The Cows & The Sheep</p>
<p><i>Farming progress through technology</i> <i>Dur 1:33</i></p> 	<p>Summary</p> <p>The use of technology in machinery and communications to ensure the farm is managed as efficiently as possible.</p>	<p>Location</p> <p>Iona/The Land & The Boom Sprayer</p>

From Malabar

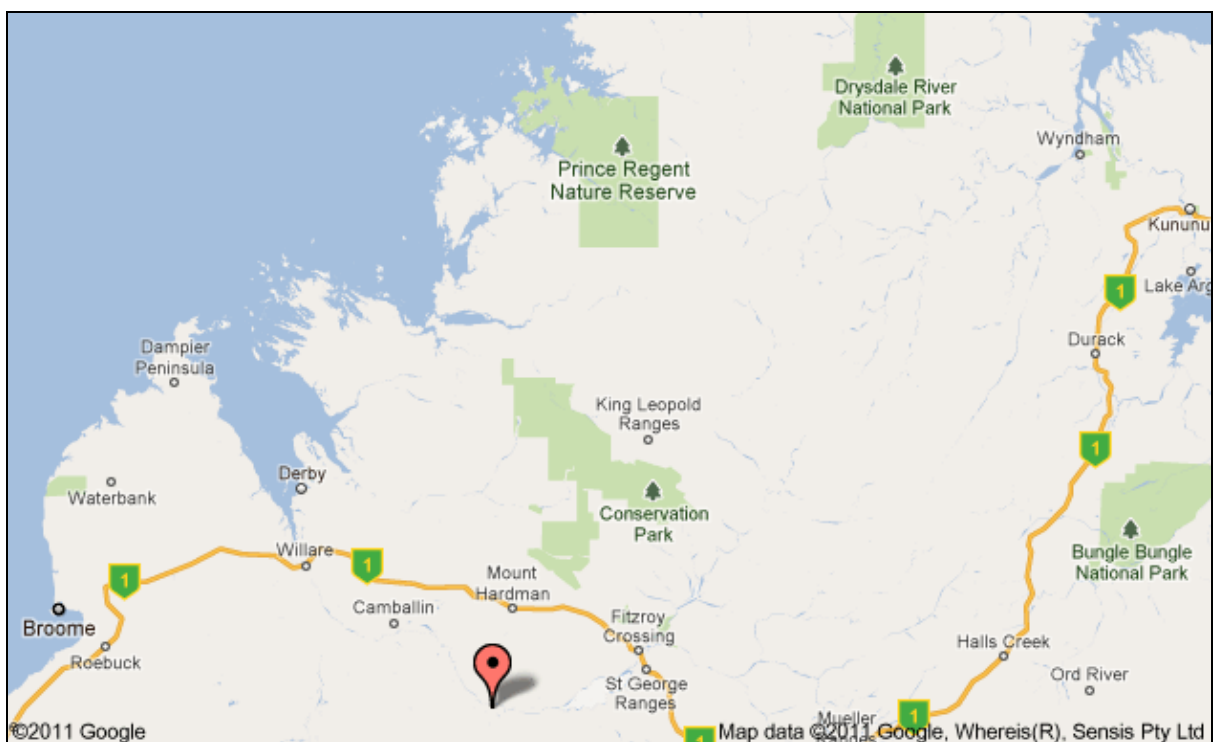
<p>Using solar energy</p>  <p><i>Dur1:07</i></p>	<p>Summary</p> <p>Advantages of using solar power to run electric fences across the farm.</p>	<p>Location</p> <p>Malabar/ The Solar Panel</p>
<p>Technology and farm maintenance</p>  <p><i>Dur0:42</i></p>	<p>Summary</p> <p>The importance of technology in farm maintenance.</p>	<p>Location</p> <p>Malabar/The Solar Panel</p>

Background Information

Kalyeeda Station

The Kimberley, Western Australia

Kalyeeda is a 140,000 hectare cattle station in the Kimberley region of WA. It's 3 hours drive south of Derby, which is the nearest town. On Kalyeeda's northern boundary is the Fitzroy River and to the south is the edge of the Sandy Desert.



Source: Google Maps

(Approximate location of Kalyeeda station)

Iona

Yeoval, New South Wales

Iona is in central western NSW. It's around 1,100 hectares and is a mixed farming property that grows crops, as well as running beef cattle and sheep for wool and meat. The area is very diverse which lends itself well a variety of agricultural businesses.

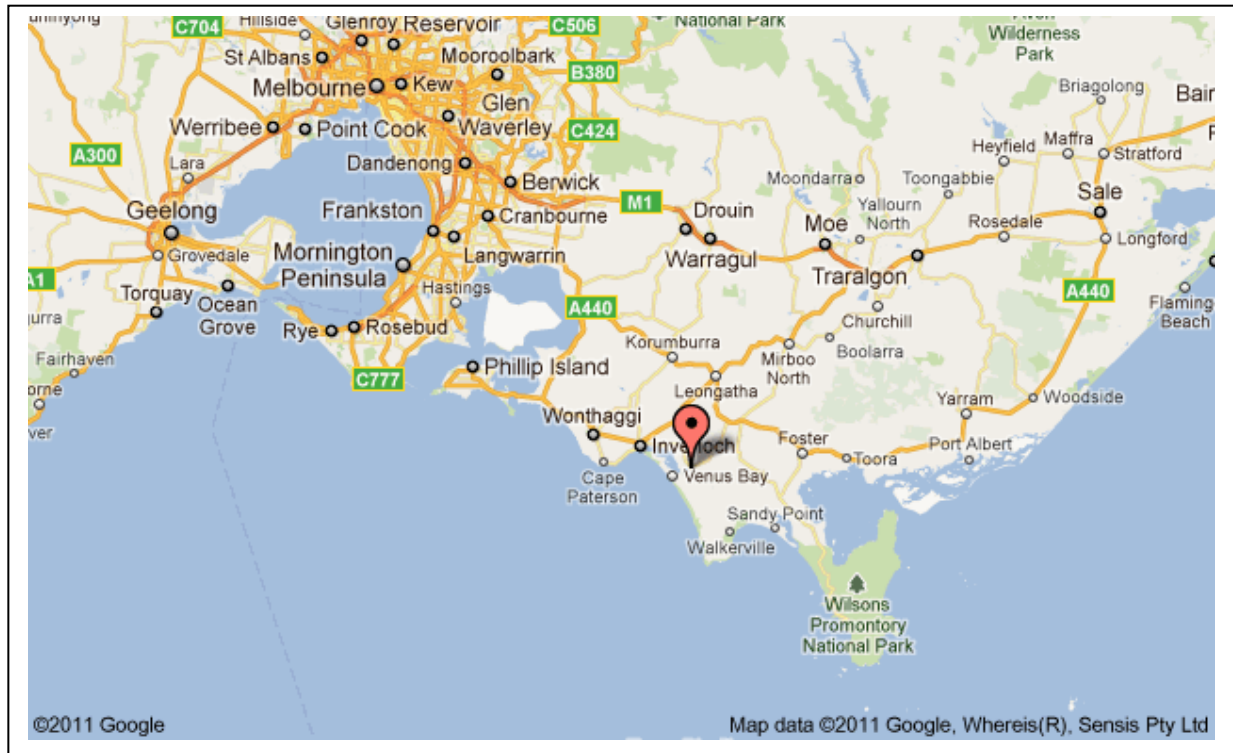


Source: Google Maps

Malabar

Gippsland

Malabar farm is a 640 hectare beef and sheep farm in South Gippsland Victoria. It's situated 2 hours drive south east of Melbourne and is 2 kilometres from the coast.



Source: Google Maps

Questions for Technology and Design students

The following questions may assist in guiding students through the module video content.

Describe the products, process and systems the farmer uses for pasture management. How does this approach impact on the environment? How does it influence the health of the farmer's livestock?

At Kalyeeda

At Iona

At Malabar

Can you identify any social trends that have led the farmer to change the way he does things on the farm? (For example, the trend towards lean meat). Has this in any way altered the kind of equipment or technology the farmer uses on the farm? (Ask for a demonstration/show the equipment/what is its function? etc)

At Kalyeeda

At Iona

At Malabar

Are there any examples of technology used on the farm that have revolutionised the way farmers do things? Explain the purpose of the technology and how its implementation has benefited the business, the animals, working conditions or the environment.

At Kalyeeda

At Iona

At Malabar

Questions for Agricultural Technology students

The following questions may assist in guiding students through the module video content.

How have the farming techniques changed due to the issue of sustainability?

At Kalyeeda

At Iona

At Malabar

How does the farmer ensure he is up-to-date with the latest techniques? Do they share information with others in the farming community?

At Kalyeeda

At Iona

At Malabar

Questions for Food Technology students

The following questions may assist in guiding students through the module video content.

How are the practices on the properties influenced by demands from the market? For example, have the farmers changed breeds or the way you raise the animals to cater to social trends? (eg organic, lean, wagyu, grain-fed etc)

At Kalyeeda

At Iona

At Malabar

Questions for Industrial Technology students

The following questions may assist in guiding students through the module video content.

What recently developed tools and/or machinery do the farmers commonly use on the farm that they would find hard to live without?

At Kalyeeda

At Iona

At Malabar

How did these tools/machinery come about and can you describe how they are used?

At Kalyeeda

At Iona

At Malabar

Are these tools/machinery hard to maintain?

At Kalyeeda

At Iona

At Malabar

How do the farmers find out about the latest tools and machinery available?

At Kalyeeda

At Iona

At Malabar

Questions for Technology students

The following questions may assist in guiding students through the module video content.

What are some examples of farm technology that are absolutely indispensable to the farmer's business? Why do they need them; What do they do and What's so good about them?

At Kalyeeda

At Iona

At Malabar