Seasons in Australian Vineyards

LESSON 1: Teacher Guide and Student Worksheets

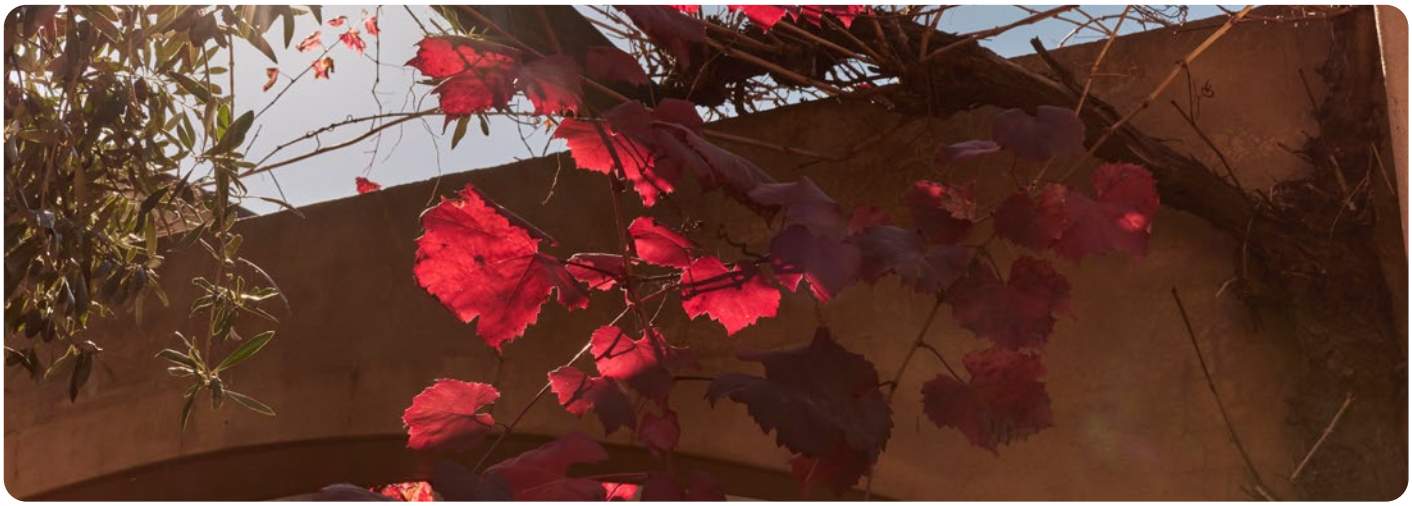


Image credit: Wine Australia

Year Level

7-8

Australian Curriculum Content

Design and Technologies

- Analyse how people in design and technologies occupations consider ethical and sustainability factors to design and produce products, services and environments (AC9TDE8K01)
- Analyse the impact of innovation and the development of technologies on designed solutions for global preferred futures (AC9TDE8K02)
- Analyse how food and fibre are produced in managed environments and how these can become sustainable (AC9TDE8K04)

Lesson Objective

Students will understand the impact of Australia's seasonal variations on vineyard operations and grapevine growth. They will explore how viticulture practices and technologies are adapted to each season to optimise grape quality, manage environmental challenges, and promote sustainability in Australian vineyards. Through collaborative activities, students will develop insights into the various occupations involved in vineyard management and how these roles contribute to the economic, environmental, and social sustainability of the Australian wine industry.

Lesson Overview

- Activity 1.1 - Where Are Wine Grapes Grown? (10-15 minutes)
- Activity 1.2 -Seasons in Australian Vineyards (20-25 minutes)
- Activity 1.3 - Vineyard Occupations Through the Seasons (30-35 minutes)

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ATTRIBUTION, CREDIT & SHARING

This resource was produced by Primary Industries Education Foundation Australia (PIEFA) in collaboration with Wine Australia. Primary Industries Education Foundation Australia's resources support and facilitate effective teaching and learning about Australia's food and fibre industries. We are greatful for the support of our industry and member organisations for assisting in our research efforts and providing industry-specific information and imagery to benefit the development and accuracy of this educational resource.

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Resources and Equipment

ACTIVITY 1.1 - Where Are Wine Grapes Grown?

- Discover Australian Wine video (3:58)
- Seasons at the Taylors Winery (2:19)
- Wine Regions of Australia Map

ACTIVITY 1.2 - Seasons in Australian Vineyards

Worksheets 1.2a - Seasons in Australian Vineyards

- Digital device access

SPRING

- Digital Vineyards – Made Possible by Melbourne (1:52)
- Frost September 2024 at Kies Family Wines in the Barossa Valley (2:30)

SUMMER

- Wet year provides valuable comparison in netting trial
- Harvest optimisation technology to remove Matter Other than Grape (MOG) (2:57)
- Infield Grape Sorting Technology Makes its Way to Murray Valley Wineries

AUTUMN

- Our Vineyard Floor Scarborough Wine Co | Hunter Valley (1:22)
- OXIN - Autonomous multi-tasking vineyard and orchard tractor (2:30)

WINTER

- ABC Countrywide Waste from suburban green bins from across Melbourne is being reused as mulch on vineyards in central Victoria with results showing more vibrant grape growth (14:07-18:05)
- Using data to inform vine management

Worksheet 1.2b - Seasons in Australian Vineyard | Response

ACTIVITY 1.3 - Vineyard Occupations Through the Seasons

Worksheet 1.3a - Vineyard Occupations Through the Seasons

- Digital device access
- Careers in Viticulture and Wine VR Tour

Lesson Guide

ACTIVITY 1.1 - Where Are Wine Grapes Grown?

Students will view a short stimulus video to consider and discuss how each season impacts vineyard operations. They will view a map of Australia's wine regions to understand how the climate of wine-growing regions impacts seasonal production and management practices.

a. View the Discover Australian Wine video on the Careers in viticulture and wine website to learn about Australia's wine regions, history and climate.

b. View the Seasons at the Taylors Winery (2:19) video to introduce students to the seasonal changes in vineyards and how these affect vineyard operations.

c. After viewing the videos, facilitate a class discussion using the following questions as a guide:
   - What changes occur to the grapevines in each season?
   - What tools, technologies, or innovations are used in each season?
   - What operations (jobs) are performed in each season?
   - Would all Australian vineyards follow the same growth patterns each season? Why/why not?
   - Would all Australian vineyards perform the same type of operations in each season? Why/why not? (Suggested answers page 6)

d. Display the Wine Regions of Australia Map on a shared screen and encourage students to turn and talk to a partner to discuss what they notice about the distribution of Australia's wine regions and possible reasons these locations have been selected for wine production.

e. After five minutes of discussion, reconvene as a class and explain that Australia's main wine-growing regions are found in the cooler southern parts of the country, including South Australia, Victoria, New South Wales, Tasmania, and southern Western Australia, where the climate is ideal for wine grape growing. These regions benefit from a Mediterranean-like climate, with four distinct seasons, including warm, dry summers and cool, wet winters. In contrast, northern Australia's tropical climate, with high humidity, intense heat, and heavy seasonal rainfall, poses challenges for increased impacts of fungal diseases and unpredictable weather that affect grape quality. People working in vineyards perform different operations in each of the four seasons to meet the needs of grapevines throughout the growth cycle.

ACTIVITY 1.2 - Seasons in Australian Vineyards

In pairs, students will read and view source materials to examine one of the four seasons to understand how different seasons impact vineyard operations and grape growth.

a. Divide the students into pairs and assign each pair one of the seasons – Spring, Summer, Autumn, Winter (2 pages per season) from **Worksheets 1.2a - Seasons in Australian Vineyards** (pages 11–18). Ensure that each of the four seasons is evenly represented across the class.

b. Provide pairs with a copy of **Worksheet 1.2b - Seasons in Australian Vineyard | Response** and digital device access (pages 19–20).

c. Students read and view the information about one of the four seasons on a vineyard, recording their responses to the questions on **Worksheet 1.2b - Seasons in Australian Vineyard | Response**. (Answers pages 7–8).

d. Reconvene as a class and facilitate a discussion about the seasonal changes that occur in vineyards, inviting students to share examples of vineyard operations, technologies, and innovations that are commonly adopted throughout the four seasons. Encourage them to share their ideas about the occupations that would be involved in managing the vineyard in each of the four seasons.

ACTIVITY 1.3 - Vineyard Occupations Through the Seasons

Students will use the Careers in Viticulture and Wine VR Tour to identify and describe various occupations in vineyard management, understanding how different roles adapt to seasonal demands and support vineyard sustainability.

a. Explain that in Australian vineyards, the changing seasons bring variations in temperature, rainfall, and sunlight, which influence grapevine growth and fruit quality. People working in Australia's viticulture industry manage the productivity, profitability, and environmental sustainability of vineyards throughout the seasons by adapting their management practices and using technology and innovation to meet the seasonal needs of the vines, protect vine health, and maintain productivity.

b. Distribute a copy of **Worksheet 1.3a - Vineyard Occupations Through the Seasons** and give students digital device access (page 21).

c. Working in the same pairs from Activity 1.2, students access the Careers in Viticulture and Wine VR Tour, responding to the questions on the worksheet to identify occupations that contribute to managing vineyards during their allocated season. (Suggested answers page 9)

Answers

ACTIVITY 1.1 - Where Are Wine Grapes Grown?

c) Student answers will vary. Suggested responses:

What changes occur to the grapevines in each season?

- Spring: Dormancy ends, and budburst and flowering begin.
- Summer: The grapes undergo rapid growth and ripening, with the onset of veraison (grapes changing colour). Grapes reach full ripeness and are ready for harvest.
- Autumn: Late harvest continues in some regions and leaves change colour as vines prepare for dormancy.
- Winter: Vines enter a dormant phase, dropping leaves and conserving energy.

What tools, technologies, or innovations are used in each season?

- Spring: Frost fans are used to protect the emerging buds from the effects of frosts.
- Summer: Nets may be applied to protect fruit from bird damage. Mechanical harvesters can be used during this period as harvest can commence as early as February in some vineyards. Harvest optimisation technology to remove Matter Other than Grape (MOG). Optical sorting technology used during harvest to improve grape quality.
- Autumn: Sorting and crushing technologies.
- Winter: Not applicable to video.

What operations (jobs) are performed in each season?

- Spring: Not applicable to video.
- Summer: Harvest can start as early as February and continue until May. Grapes may be hand-picked or a mechanical harvester may be used.
- Autumn: Irrigation is checked, cover crops are planted. Grapes are sorted, crushed, and ready for fermentation.
- Winter: Grapevines are hand pruned. In vineyards, vines are pruned, vineyard infrastructure is checked and repaired, mulch is applied.

Would all Australian vineyards follow the same growth patterns each season? Why/why not?

Not all Australian vineyards would follow the same growth patterns, as different climatic conditions, grape varieties, and management practices would occur in different vineyards, which would impact how the vines grow and ripen over time. However, the Mediterranean-like climate of most Australian wine-growing regions would see some similarities between all vineyards in the four distinct seasons throughout the year.

Would all Australian vineyards perform the same type of operations in each season? Why/why not?

While many seasonal tasks are similar, individual vineyard needs, local climates, and available technology can influence operations. Some regions might rely on specific pest control methods or irrigation techniques based on local conditions and environmental regulations. Similarly, organic or biodynamic vineyards may adopt alternative practices to manage their crops sustainably.

ACTIVITY 1.2 – Seasons in Australian Vineyards

Worksheet 1.2b – Seasons in Australian Vineyard | Response

Student answers will vary. Example answers:

Season	Question 1: Weather Conditions	Question 2: Vineyard Operations	Question 3: Technology and Innovation	Question 4: Sustainability
Spring	Warmer temperatures and moderate rainfall help start grapevine growth with ideal conditions for budburst and flowering.	Budburst and flowering monitoring: Protecting buds from frost. Canopy management: Pruning and shaping the canopy to optimise light and air exposure. Vineyard spraying: Applying pesticides, fungicides, and other crop treatments to vines for pest and disease management.	Frost fans: Circulate warmer air to prevent frost damage. Drones: Monitor vine health by identifying early signs of disease, water stress, or pests. Recycle sprayers: apply pesticides, fungicides and other crop treatments to protect vines from pests and diseases.	Recycle sprayers: reduce chemical waste and improve efficiency when applying pesticides, fungicides, and other crop treatments, promoting environmental and economic sustainability.
Summer	High temperatures and long days promote rapid grape growth and ripening. Grapes reach full ripeness, making it an ideal time for harvest.	Harvesting: Picking grapes at peak ripeness for quality wine production. Pest management: Using IPM to control pests with minimal chemical inputs.	Mechanical harvesters: Efficiently harvest grapes, saving time and labour. Optical sorters: Ensure high-quality grape selection by sorting out underripe or damaged grapes.	Optical sorting technology: Helps to maximise yield and minimising grape waste during harvest. This technology helps to make the sorting process faster and more accurate, improving productivity.

Season	Question 1: Weather Conditions	Question 2: Vineyard Operations	Question 3: Technology and Innovation	Question 4: Sustainability
Autumn	Cooler temperatures and shorter days see the leaves on the vines start to turn shades of yellow, orange, and red as they prepare for dormancy.	Irrigating vines: Irrigtaing vines to support vine recovery after harvest. Soil preparation: Planting cover crops to protect and improve soil for next season.	Robotic seeders: Efficiently plant cover crops at the correct depth and spacing to save time, reduce labour costs, and ensure better seed placement for optimal growth. Drip irrigation: Efficiently delivers water to roots, reducing water loss from evaporation and runoff.	Cover crops: Prevent soil erosion, add organic matter, and improve soil structure for long-term sustainability.
Winter	Cold temperatures, increased rainfall, and short days lead grapevines into dormancy, conserving energy for spring growth.	Pruning: Trimming back old wood to prepare vines for strong spring growth. Infrastructure maintenance: Checking and repairing vineyard equipment.	Electric secateurs: Reduce physical strain and make pruning faster and more precise. Soil moisture sensors: Provide real-time data to inform management decisions about vine health and vineyard infrastructure. Mechanical pruners: Trim vines mechanically, improving efficiency and reducing labour costs.	Electric secateurs: Increase efficiency and reduce labour costs, contributing to both economic sustainability and worker well-being.

ACTIVITY 1.3 - Vineyard Occupations Through the Seasons

Worksheet 1.3a - Vineyard Occupations Through the Seasons

1. **Student answers will vary. Example answers:** Viticultural Agronomist, Vineyard Hand, Vineyard Manager, Viticulturist, Biosecurity Officer, Agroecologist, Entomologist, Plant Geneticist, etc.
2. **Student answers will vary. Example answers:** Platfarm software, drones, laptops, side-by-side vehicles, camera technology, sensors, motorbikes, phones, irrigation systems, etc.
3. **Student answers will vary. Example answer for summer:** Vineyard Hands assist with vineyard tasks such as pruning, leaf trimming, and monitoring vine health and managing pests and disease. In summer, they focus on maintaining the vineyard canopy, ensuring that leaves are trimmed to allow adequate sunlight and airflow around grape clusters.

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Seasons in Australian Vineyards

Spring: September - November

As spring arrives in Australia, the warmer weather signals the beginning of the vineyard growing season. Temperatures and daylight hours increase, providing ideal grapevine growth and flowering conditions. Rainfall is usually moderate during spring, providing the right amount of water to encourage healthy new growth on grapevines without causing issues like waterlogging, which can limit the amount of oxygen reaching the roots and increase the risk of disease.

During spring, grapevines enter the **budburst** and **flowering** stages. Budburst is when tiny buds on the grapevines start to swell and open. This is followed by flowering, where grape bunches begin to develop.

Vineyard Operations

During this stage, vineyard workers carefully monitor the vines to protect the delicate buds from **frost**. Vineyard managers may use **sprinkler irrigation** to moisten the soil and the buds. As temperatures drop, the water applied around the buds freezes, releasing latent heat (the heat energy absorbed or released when a substance changes state) that helps protect them from frost damage. Moist soil conducts heat more effectively than dry soil, radiating more warmth around the vines and helping to increase temperatures in the vineyard.

Vineyard spraying for pest and disease management starts in spring and continues throughout the growing season as required in many vineyards. Special machinery is used to apply pesticides and fungicides to crops to ensure the young buds develop into healthy grape bunches.

Another important task during spring is **canopy management**. As new shoots and leaves emerge, workers **selectively trim and train** the vine canopy to optimise light exposure and airflow around the buds and flowers. This helps prevent disease by improving ventilation and encourages balanced growth. Effective canopy management at this stage sets up the vines for healthier development and higher-quality grape production.

Did you know?

Historically, grape growers used heat to protect their vineyards from frost. As far back as ancient Rome, over 2,000 years ago, growers burned piles of pruned wood and other waste to warm their vineyards during spring frosts. In some regions, more modern heating methods, such as frost pots or smudge pots, are still used for this purpose.



Image credit: Ewen Bell / Wine Australia

Spotlight on Technology and Innovation

Late frosts in early spring can damage young buds and set back vine growth. **Frost fans** are large, powered fans that circulate warmer air from above down to vine level, protecting delicate new growth from freezing temperatures.

In some vineyards, **drones** are used to monitor the grapevines and provide data and images that help map areas showing early signs of **diseases, water stress, or pest infestations.** These drones use special sensors to capture images beyond visible light, providing detailed data efficiently and accurately, allowing vineyard workers to address issues before they affect the harvest. This technology can help to improve **grape quality**, **conserve water**, and **increase profitability** while reducing environmental impact.

Recycle sprayers are spraying systems used in some vineyards to reduce chemical waste and improve efficiency when applying **pesticides**, **fungicides**, and **other crop treatments**. Unlike traditional sprayers that release chemicals into the air or soil, recycle sprayers capture excess spray and reuse it.





- Scan the QR code or click on the link to learn about the impact of frost on grapevines.

Frost September 2024 at Kies Family Wines in the Barossa Valley (2:30)
https://www.youtube.com/watch?v=iuSevSurdOQ

- Scan the QR code or click on the link to learn how drones are being used to monitor water stress in vineyards.

Digital Vineyards – Made Possible by Melbourne (1:52)
https://www.youtube.com/watch?v=yfxbWzjiTC4

Seasons in Australian Vineyards

Summer: December - February

In summer, vineyards experience higher temperatures and longer daylight hours, which promote rapid fruit growth and ripening. Rainfall can vary, and drought conditions sometimes occur, making water management critical. During summer, grape bunches continue to develop, and the berries begin to change colour and soften in a process called **veraison**. When grapes reach **peak ripeness**, they are ready to **harvest**.

Summer is a busy time in the vineyard as growers protect their crop from damage and prepare their vines for harvest. Harvest can take place anytime between January and May, depending on the regional climate and grape variety. In some areas, the harvest may extend into early autumn for late-ripening varieties.

Vineyard Operations

As wine grapes ripen, vineyard workers **monitor** them closely, testing sugar and acid levels to determine the ideal **harvest** time. Selecting the right time for harvest is important for producing high-quality wine, and vineyard staff work quickly to pick grapes at their best.

In summer, irrigation is closely monitored, with workers **adjusting irrigation applications** based on **daily temperature** and **soil moisture** data. Regular checks on grapevine health ensure that the grapes ripen evenly, producing a crop ready for harvest.

Integrated Pest Management (IPM) is an approach to controlling pests in vineyards and other agricultural environments. Instead of relying on one type of pest management method (e.g. chemical pesticides), IPM combines different methods to keep pest levels low. This helps to protect the vineyard ecosystem and reduce the cost of inputs such as sprays to manage pests. During summer, vineyard workers **monitor pest levels** closely and sometimes introduce natural predators, such as ladybirds, to feed on harmful insects.



Image credit: Wine Australia



Image credit: Wine Australia

Spotlight on Technology and Innovation

Nets are used in vineyards in Australia to protect grapes from birds and harsh weather conditions. These nets can also help ensure that grapes reach optimal ripeness, which can lead to a higher quality wine.

Mechanical harvesters are machines used to pick grapes in vineyards. They shake the vines gently to make the ripe grapes fall off, which are then collected in the machine. This process is faster and more efficient than picking grapes by hand in large vineyards where many grapes need to be harvested quickly. Using a mechanical harvester can **save time and labour costs**, reduce grape waste and make vineyard operations more **economically sustainable**.

Optical sorting technology is used during harvest to improve grape quality. These machines scan grapes as they pass through, using **cameras** and **sensors** to sort out any grapes that are underripe or overripe. Only the highest quality grapes are selected for winemaking, ensuring consistency and helping vineyards **maximise** their **yield** with **minimal waste**. Optical sorters make the sorting process faster and more accurate, improving productivity.

- Scan the QR code or click on the link to learn about harvest optimisation technology.

Harvest optimisation technology to remove Matter Other than Grape (MOG) (2:57)
https://www.youtube.com/watch?v=JEM50O9d-M8

- Scan the QR code or click on the link to learn how infield grape sorting technology is being trialled in Australian vineyards.

Infield Grape Sorting Technology Makes its Way to Murray Valley Wineries
https://www.abc.net.au/news/rural/2023-03-13/infield-grape-sorting-ups-processing-speed-murray-valley-winery/102075298

- Scan the QR code or click on the link to learn how nets help protect grapevines.

Wet year provides valuable comparison in netting trial
https://www.wineaustralia.com/news/articles/netting-trial



Image credit: Wine Australia

In autumn, Australian vineyards experience cooler temperatures and shorter daylight hours. The leaves on the vines may start to turn shades of yellow, orange, and red as they prepare for dormancy.

Vineyard Operations

After harvest, some vineyards begin preparing the soil for the next season by planting **cover crops** between vine rows. Cover crops, like clover and grasses, can help to protect the soil from erosion during winter rains by adding organic matter and improving soil structure. Additionally, fallen grape leaves and other plant materials are often composted and returned to the vineyard soil, enhancing nutrients for the next growing cycle.

Cover crops are grown between vine rows for many reasons: to **protect the soil**, **prevent erosion**, **suppress weeds** and **provide nutrition**. They also support Integrated Pest Management (IPM) by increasing biodiversity, supporting pest predators and providing a natural nutrient cycling system to enhance soil and vine health.

Plant species chosen for cover cropping are usually ones the grower knows well, perform reliably in the local environment, and are easy to source seeds for. Traditionally, this meant using standard crops like cereals, legumes, oilseeds, and pasture grasses. However, in the past decade, the benefits of replacing these with **native cover crop species** have become more widely recognised in Australian vineyards.

In autumn, **irrigation** focuses on maintaining soil moisture levels to support vine recovery after harvest. Workers **adjust irrigation schedules** based on soil moisture data and the needs of the vines as they transition into dormancy. **Regular checks** ensure that the roots remain hydrated, promoting long-term vine health and preparing the plants for the cooler winter months ahead.



Image credit: Wine Australia

Spotlight on Technology and Innovation

Cover crops can be planted using a variety of technologies, including **mechanised equipment**, **broadcast seeding**, and **robotic seeders**.

A **robotic seeder** is an automated machine designed to plant seeds efficiently and accurately without the need for human intervention. In viticulture, robotic seeders can be used to plant cover crops by evenly distributing seeds at the right **depth** and **spacing**. This technology can help to save time, reduce labour costs, and ensure better seed placement for optimal growth. By using a robotic seeder, vineyards can establish cover crops more consistently, improving **soil health**, **controlling weeds**, and **enhancing biodiversity**.

To manage cover crops a machine can be used for rolling and crimping. A **roller crimper** is a heavy steel drum with blunt blades that's attached to a tractor. The crimper rolls over the cover crop, breaking the stems and flattening them.The crimped stems dry out and the flattened cover crop forms a **mulch layer** over the soil. Rolling and crimping cover crops stops competition with vines for resources while creating a mulch that **suppresses weeds**, retains **soil moisture**, and **prevents erosion**.

Drip irrigation is used in many Australian vineyards because it helps to conserve water and ensures grapevines receive enough moisture to grow successfully. This method delivers water directly to the roots of plants, reducing evaporation and runoff, making it an efficient way to keep the vines healthy, especially during hot, dry periods.

- Scan the QR code or click on the link to learn about cover crops and vineyard floor management.

Our Vineyard Floor Scarborough Wine Co | Hunter Valley (1:22)
https://www.youtube.com/watch?v=jMGyCkVOnH0

- Scan the QR code or click on the link to learn about robots in the vineyard

OXIN - Autonomous multi-tasking vineyard and orchard tractor (2:30)
https://www.youtube.com/watch?v=9rlYg4wQQ8w



Image credit: Wine Australia

Seasons in Australian Vineyards

Winter: June – August

During winter in the southern parts of Australia, temperatures become colder, and rainfall increases. There are fewer hours of daylight throughout the winter months.

Grapevines enter a **dormant** phase where they lose all leaves and temporarily stop growing to conserve energy for the next season. This allows the vines to store nutrients and strengthen their roots, which supports healthy growth and quality grape production in spring.

Vineyard Operations

While the grapevines are dormant, vineyard workers **prune** them, cutting back old wood to remove any unwanted canes, ensuring that the plant's energy is directed to the strongest shoots when growth resumes. This process helps control vine size and shape and increases the potential for better grape quality and yield in the next season. Winter is also the time for **checking, repairing or replacing vineyard infrastructure** (e.g. trellises, posts, irrigation systems) and **assessing soil health** to prepare for the growing season ahead.

On some vineyards, winter is also a time for **mulching**. Vineyard workers spread mulch around the base of the grapevines, which can help to retain soil moisture, prevent weed growth, and add nutrients to the soil as it breaks down.



Image credit: Ewen Bell / Wine Australia



Image credit: Andy Nowell / Wine Australia

Spotlight on Technology and Innovation

In winter, vineyard managers rely on data to **plan** and **budget** for the growing season ahead. Vineyard **software tools** can be used to collate information about the previous year's costs, productivity, and profitability, helping vineyard managers make informed decisions, estimate future costs, and allocate resources efficiently for the year ahead.

Soil moisture sensors provide valuable information and insights that help vineyard managers use resources in the most efficient way. By gathering **real-time data** on soil moisture levels, these sensors can guide modified irrigation schedules and inform decisions about **nutrition** and **groundcover** management programs. They can also help identify necessary **infrastructure upgrades**, such as optimising the design and placement of irrigation systems.

Electric secateurs can make pruning more efficient and precise. Unlike traditional manual shears, electric secateurs are **powered** and require less physical effort, which **reduces strain** on workers and **speeds up** the pruning process. Electric secateurs can also help **reduce labour costs** by increasing pruning efficiency and making large-scale winter pruning more manageable for vineyard teams.

Mechanical pruners are tractor-mounted or handheld machines designed to trim vines efficiently, reducing the labour and time required for traditional hand pruning. They are commonly used in larger vineyards to maintain vine structure, encourage healthy growth, and prepare vines for the next growing season.

- Scan the QR code or click on the link to learn how waste from Melbourne homes is being reused as mulch on vineyards in central Victoria.

ABC Countrywide - Waste from suburban green bins from across Melbourne is being reused as mulch on vineyards in central Victoria with results showing more vibrant grape growth (14:07-18:05)
https://www.abc.net.au/listen/programs/countrywide/countrywide/104378420

- Scan the QR code or click on the link to learn how AgTech is helping to collect data used to inform planning and infrastructure investment for vine management.

Using data to inform vine management
https://www.wineaustralia.com/news/articles/using-data-to-inform-vine-management



Image credit: Wine Australia

Seasons in Australian Vineyards

Spring



Summer



Winter



Autumn



All Images credit: Wine Australia

1. Describe the typical weather conditions during this season and explain how they impact grapevine growth.

2. Identify and describe two main vineyard operations that are important in this season.

3. List two technologies used in vineyard management during this season and describe what they do.

4. Select one of the management practices, technologies, or innovations you have learned about, and explain how it contributes to environmental, economic, and/or social sustainability in Australian vineyards.

Seasons in Australian Vineyards

Vineyard occupations through the seasons

- Scan the QR code or click on the link to access the VR tour.

Careers in Viticulture and Wine VR Tour
https://farmvr.com/virtual-tours/wine-careers/

1. As you move through the tour, record the names of any featured occupations that might be involved in vineyard operations for the season you have learned about.

2. Throughout the tour, take notes on any of the technologies, innovations, or management practices involved in vineyard operations for this season.

3. Choose one of the above occupations and explain how it contributes to managing the vineyard during this season.