**INTERNAL DOCUMENT ONLY**

APAL

GROW YOUR LEARNING

EDUCATION MANUAL

THE ORCHARD AT MONTAGUE

PILOT PROGRAM

Welcome to the Apple and Pear Australia Limited (APAL) Education manual. The manual provides a guideline to the “Grow your Learning” education programs offered by APAL at The Orchard at Montague. The manual is divided up into the following tours and curriculum areas.

**TOUR NAME: Land to Lunchbox**

Kindergarten to Grade 2, The Early Years, Levels A – D, Foundation – Level 2

**TOUR NAME: STEM in the Orchard**

Grade 3 to Grade 6, Level 3 – Level 6

The Victorian Curriculum F-10 incorporates the Australian Curriculum and reflects Victorian priorities and standards. The Victorian Curriculum sets out what every student should learn during their first eleven years of schooling. The curriculum is a common set of knowledge and skills required by students for life-long learning, social development and active and informed citizenship. All Education programs at APAL are directly linked to The Victorian Curriculum.

The manual contains individual plans, which provide an outline of the content required to deliver a program. We recommend you read the program plans thoroughly and undertake further research to develop your own teaching style. To gain confidence in your delivery we recommend you shadow a Tour Leader, which will provide you with some further tips and tricks. APAL and Montague staff are also a wealth of information and will happily share their stories.

Risk assessments, maps, code of conduct and child safety and wellbeing policies are also included in the manual. The document reflects the dynamic nature of APAL and the Montague team and will be updated as programs evolve, and new tours are created.

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**CHILD SAFETY AND WELLBEING POLICY**

**MAKING CONNECTIONS**

At Montagues our relationships are important to us. Tour groups are excited to spend a day of adventure at the Orchard and we need to be as equally excited to welcome them. Bring your A game! Every interaction requires respect, courtesy, and must align with the Montagues vision and core values.

Our vision “To share our passion for quality produce with local and global communities through healthy, fun experiences with our people and our products”, we are an Australian owned business, passionate about creating and promoting a sustainable horticulture industry.

And being family owned and managed, we are a company that truly values relationships – whether that be with our customers, our suppliers or our most important asset – our employees.

This focus on relationships, along with our commitment to delivering quality produce in an environmentally sustainable way, is reflected in Montague’s Core Values:

* Family Owned
* Authentic Relationships
* Honesty and Integrity
* Obsessed with Fresh
* Product Excellence
* Community
* Sustainability

These values are the foundation of everything we do – everyday.

**SHARING OUR KNOWLEDGE**

Our tours provide a unique opportunity for visitors to immerse themselves in the horticultural industry, with curriculum learnings in food production and specialisation. All tours are guided by our values and should demonstrate a passion for product excellence, community and sustainability.

When addressing our tour groups, the following points need to be included.

* **Your name and position**

*“My name Hannah and I am your Tour Leader, my other roles include ….. ”.*

* **Acknowledgement of Country**

**An Acknowledgement of Country can be said by anyone, Indigenous or non-Indigenous.** This is because it is about respecting the Traditional Custodians, their Country and their history. When you acknowledge Country, you also acknowledge the Elders of that mob, promising to respect them and their land while you are on it.

**A Welcome to Country can only be given by a Traditional Custodian of the land you are on.**It signifies the Traditional Custodians inviting you onto their land and granting you safe passage.

*“I would like to begin by acknowledging and paying my respects to the Bunurong people, the Traditional Custodians of the land on which we are gathered today. I would like to pay my respects to their Elders, past, present and emerging, and acknowledge all Aboriginal and Torres Strait Islanders here today, also paying my respects to your Elders, past, present and emerging.”*

**BACKGROUND INFORMATION**

The name Narre Warren is of Aboriginal origin, one of the various interpretations being small hills. Narre Warren (then Narree Worran) was described in the 1903 Australian handbook:



Reference: https://www.victorianplaces.com.au/narre-warren

**LAND TO LUNCHBOX PROGRAM**

“Land to Lunchbox” is an active learning program. It includes a sequence of curriculum linked activities each building on existing knowledge to engage students in multiply creative ways. The unit of work includes pre and post learning resources that can be accomplished in the classroom and a fully guided excursion to The Orchard at Montagues. The single day excursion includes an Orchard workshop, with fruit to take home and a tour of the state of the art, packing and distribution facility. Post resources encourage a deeper understanding of the curriculum content continue student learning after the excursion.

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| **LAND TO LUNCHBOX UNIT OF WORK** |
| **LINKS TO THE CURRICULUM** | **Design and Technologies****Food Specialisation** | **Design and Technologies****Food Production** | **Science** | **The Humanities****Geography/History** |
| **PRE - RESOURCES** | **My Food Journey**Buying local/where does my food come fromMind map/Road map | **The Seasons**SeasonsMonths of the yearWeatherBlooms Taxonomy | **Lifecycles**The Life Cycle of a PlantComprehension Sequencing | **My Family**Story of the Montague Family Connecting to place & peopleFamily Tree, Past and Present |
| **ONSITE EXCURSION** | ProcessingTransportDistributionInnovation in Acton | Scientific ResearchGrowing, HarvestingTaste, Texture, Smell, Shape, Colour, Food Waste | Soil, Water, Rainfall, TemperatureAdaptations | Meet the Characters of the Orchard Passionate Workers/Jobs |
| **ONSITE WORKBOOK (including Scavenger Hunt)** | Tools and Equipment | Scavenger Hunt | Living and Non-living | Use your Senses |
| **POST RESOURCES** | **My Innovation**Ideas and innovationsQuestions Stems | **Healthy Choices** Making MuffinsHealthy Snacks | **Rockstar Bugs**Insects (good and bad)HabitatsRockstar Art | **Farm Footprint**Importance of FarmingFuture of Farming Communities |

**LAND TO LUNCHBOX**

**LOCATION:** The Orchard at Montagues

**DURATION:** Half Day (approx. 10am – 2pm)

**TAKE HOME MESSAGE:** From land to lunchbox fruit is passionately grown, carefully harvested, packed and distributed to deliver the best produce in the world. Enjoy every bite!

**RESOURCES**

Backpack

Mobile phone

First aid kit

Orchard – Gloves, Take home branded paper bags for fruit, Fruit crates with different fruit varieties, Fruit cutters, High vis vests, shovel. Worksheets/Scavenger hunts, clipboards, pencils.

Engagement Centre – Hair nets, close toed shoes, hand washing facilities

**PRE- ACTIVITY PREPARATIONS**

Confirm booking details and group numbers

Check uniform and name badge

Safety check of locations

Check Weather

Read all pre- and post-resources

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| **PLAN FOR THE DAY** |
| **Where?** | **Timing** | **Guided** | **Suggested Topics** |
| The Orchard at MontaguesBus Carpark(Stella’s Restaurant) | 15 mins | Lead teacher check-in with Tour LeaderStudent WelcomeAcknowledgement of Country | Overview of today’s adventureLand to Lunchbox – Food JourneyTune into senses - look up, down and all around |
| RotationsOrchardWorkbook/LunchEngagement Centre | 45 mins | Guided Orchard WorkshopFruit Selecting or Picking (depending on season)Fruit Tasting | Scientific ResearchGrowing and HarvestingTaste, Texture, Smell, ShapeFood WasteEnjoy every bite!Be a conscience consumer |
| 45 mins | Self-guided exploration with teacherScavenger Hunt(Student Workbook)And Lunch | Tools and EquipmentScavenger HuntUse your SensesLiving and Non-living  |
| 45 mins | Guided Behind the Scenes TourPacking and Distribution Facility  | Innovation in ActionTechnologyRoboticsProcessesDistributionTransport |

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| **LOCATION/TIMING** | **CONTENT** |
| **The Orchard at Montagues****Bus Carpark****(Stella’s Restaurant)****15mins** | **Check in with Lead teacher –** Group numbers, rotations, toilets, recess and lunch breaks, departure time, workbooks, confirm student numbers and groups, additional requirements.**Student Welcome****Acknowledgement of Country**“I would like to begin by acknowledging and paying my respects to the Bunurong people, the Traditional Custodians of the land on which we are gathered today. I would like to pay my respects to their Elders, past, present and emerging, and acknowledge all Aboriginal and Torres Strait Islanders here today, also paying my respects to your Elders, past, present and emerging.”**Overview of the Excursion**“Today you will be participating in the “Land to Lunchbox” program. Throughout the day we will stay together as a group. Firstly, we will undertake a workshop in the Orchard. Then we will have lunch/scavenger hunt and you can enjoy the outdoor areas. After lunch we are going on a guided tour of the packing and distribution facility. When we have finished exploring, the school bus will be waiting for us in the carpark, ready to drop you safely back at school”.**Introduce Theme**Today we are learning about the journey of fruit from land to lunchbox. By the end of the excursion, you will discover that fruit varieties are developed by clever scientists, grown by passionate orchardists, each piece of fruit is carefully harvested, packed with love and distributed with care. Australia produces the best fruit in the world.Back at school you have had time to explore some of **our pre visit activities**. You may have already learnt about Seasons, Lifecycle of a plant or The Montague family. We are going to do some more exploring today.Before we head to the Orchard, I want you to prepare you to get to know the place/world around you. The way we are going to do this is by using our senses. We need to warm up our senses to get them ready to use today! Can anyone help me out – what are our five senses? * Eyes for seeing
* Ears for hearing
* Hands for feeling
* Nose for smelling, and;
* Tongue for tasting

Today we will taste delicious fruit and enjoy every bite! |
| **Guided Orchard Workshop****Fruit Tasting****Fruit Selecting or Picking (depending on season)****45mins** | *NOTE: Students are far more engaged if they hear a personal story rather than a list of facts, so tell a story that includes all the facts and they will be eager to hear more.*Guide students into the Orchard safely and take a special item with you (piece of equipment/tool, small wooden crate or a piece of fruit) to draw the groups attention.“You wouldn’t believe that this piece of fruit came from this Orchard would you! When the Montague first came to this land there was only the natural bush around us and some open space. Have a look around you. What do you see today?The Montague family was looking for a place to establish an orchard to grow fruit but it needed special requirements. It needed healthy soil (dig up some soil to show the group) and the right amount of rain and temperatures throughout the seasons. Can anyone tell me what the different seasons are?That’s right, Summer, Autumn, Winter and Spring!Apple trees produce the largest volumes of fruit in the Autumn months they do not produce fruit all year round.Let me tell you about my apple journey I remember trying to grow my first apple tree. Apple breeding is a very long process. It actually takes the scientists approximately 15-25 years to be able to produce a new apple variety that starts from a seed and over time grows into a mature tree. The best trees are kept for future crosses or propagation to produce clones.From a single seedling to a healthy tree and then to produce many clones a large scale to an incredible achievement and a lot of hard work!I was given an apple seedling by a scientist to grow myself. The scientists told me it had a new variety called “Jazz” grafted onto it. So, I found a spot here in the Orchard to plant the young Apple tree. Then I cared for the tree for the next 3 years, slowing watching it grow. Sometimes it rained a lot, other times only a little, it was hot in summer and so cold in winter. I was so worried it wasn’t going to make it. There were bugs around and lots of birds landing on my tree and pecking at the branches.I was so excited one Spring when for the first time my tree produced blossom, started to flower, it looked incredible. Then I noticed some bees buzzing around doing a great job of pollinating the flower. Then over the next month the very first time I could see the fruit starting to form. As the fruit slowly became bigger, the temperature got warmer and the colour of the fruit changed from green to red.Towards the end of Summer there was lots of fruit on my tree. I carefully harvested every piece of fruit, so I didn’t damage or bruise it.That is the story of my apple journey, but it really was only the beginning.You can see I have a piece of fruit with me today, let’s take look. Is fruit a healthy eating choice? DiscussInform the students of the variety, texture, smell, shapeUsing the cutters, cut up some samples for the students to taste.Explore the taste, texture, sound, smell.Then introduce the concept of Food WasteWhat happens if we don’t eat all of the apple today?Where does the remaining apple go?What can you do about food waste?If the apple was a different shape, could we still eat it?Would it have the same taste?What can you do at school to reduce food waste?What can you do at home to reduce food waste?Do we give the apples to charities and people in need?Can we turn the waste into other products?Then distribute the Montague Apple paper bags for the students to pick or select (depending on the season) their own fruit. Tell the students they can select 6 pieces of fruit each to take home. |
| **Self-guided exploration with teacher****Scavenger Hunt****(Student Workbook)****And**  **Lunch** | Guide students over to picnic table area or meet them at the historical farming equipment, towards Stella’s café.Distribute the workbooks, clipboards, pencils which include the scavenger hunts. In small groups students stay on the pathways and complete their scavenger hunts. Topics included in the scavenger hunts are:* Tools and Equipment
* Living and Non-living
* Using your Senses
 |
| **Guided** **Behind the Scenes Tour****Engagement Centre****Packing and Distribution Facility****45mins** | Guide students to the entrance of the Community Engagement Centre/ Packing and Distribution facility.Outline the safety procedures to the group, ensuring all participates have closed toes shoes, stay together as a group, listen to instructions. Ensure you have a teacher/adult in the middle and at the end of the group. Explain how exciting and how lucky we are to have access to the facility.Explain our first stop will be remove any harm that we could bring into the facility as a biosecurity measure. We are protecting the horticultural industry by:* Making sure we have closed toed clean shoes
* Putting on a hair net
* Wearing a high vis vest
* Walk in single file
* Washing hands

Proceed through the entrance of the Engagement Centre adjoining the lunchroom providing the easiest access.Assist students with their hair nets and hand washing etc**Key Stops and Topics –** Tell students they are going to share something they have seen or learnt or something that sparked their curiosity at the end of the facility tour with the whole group.(5mins on each)1.Past and Present Technology 2. Robotics3. Processing4. Distribution5.Transport6. Innovation in Action Exit the facility safely, remove hair nets and lead the group out to the front of the building.Ask students to put up their hands if they would like to share something they have seen or learnt or something that sparked their curiosity.Can anyone tell me in your own words how a single piece of fruit gets from land to your lunchbox?*Note: Access to Cold Storage facility will be included in STEM in the Orchard program for older students.* |
| **Farewell** | **REITERATE TAKE HOME MESSAGE:** From land to lunchbox fruit is passionately grown, carefully harvested, packed and distributed to deliver the best produce in the world. Enjoy every bite! |

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| **CURRICULUM LINKS** |
| **Critical and Creative Thinking** React to the world around them (VCCCTQ055)**Geography** React to an element of a place (VCGGC006)**The Technologies - Design and Technologies**Experience how people create familiar designed solutions to meet their needs (VCDSTS001)Explore the characteristics and properties of familiar designed solutions in at least one technologies context (VCDSTC005)Examine and indicate the characteristics and properties of familiar designed solutions in at least two technologies contexts (VCDSTC008)Explore and communicate the characteristics and properties of familiar designed solutions in at least two technologies contexts (VCDSTC011)Food and fibre productionExplore how plants and animals are grown for food, clothing and shelter (VCDSTC015)Food specialisationsExplore how food is selected and prepared for healthy eating (VCDSTC016)**Science**Living things are part of the world around us (VCSSU002) Living things can look and feel different (VCSSU012)Living things have different names and parts (VCSSU022)Living things can be plants or animals (VCSSU032)People use science in their daily lives (VCSSU041)Living things have a variety of external features and live in different places where their basic needs, including food, water and shelter, are met (VCSSU042) |

**STEM IN THE ORCHARD PROGRAM**

“STEM in the Orchard” is an active learning program focusing on engaging students in Science, Technology, Engineering and Maths. The program is a unit of work that includes a sequence of curriculum linked activities including pre learning resources that can be accomplished in the classroom prior to the excursion. A fully guided single day excursion to The Orchard at Montagues immersing students in hands on learning workshops and tour of the packing and distribution facility including a student workbook. A series of post resources continues student learning after the excursion, deepening knowledge of STEM concepts.

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| **STEM in the Orchard - UNIT OF WORK** |
| **LINKS TO THE CURRICULUM** | **Science** | **Technology** | **Engineering** |  **Maths** |
| **PRE - RESOURCES** | **ADAPTATION IN ACTION**Differences between living, once living and products of living things. | **FOOD WASTE FIGHT**Undertake a food waste audit focusing on your school lunchbox | **WONDERFUL WATER**The importance of water Irrigation Make a Water Filter. | **FOOD FIBRE and Healthy Eating**Food nutrientsHealthy RecipesFood Labels |
| **ONSITE EXCURSION** | Features and Adaptations of Plants Variations in the features of plants, for example, colour and shape of leaves, or types of flowers and fruitInvestigating how changing the physical conditions for plants impacts on their growth and survival. | Food waste alternativesBeing a conscious consumerChanging our behaviour toward the perfect productFoodbankRescue PopsMaking Cider | Investigating production equipment and the use of technologies including digital technologies in the production of food and fibreExplore and compare the efficiency of different irrigation methods in plant production | Weighing and measuring produceFood labelsPackaging and distributionCool Storage Food quality and consistency all year round |
| **ONSITE WORKBOOK**  | **Features and Adaptations for Survival** | **Food Waste Alternatives**  | **Innovations**Identify and describe production equipment | **The future of food** |
| **POST RESOURCES** | **GROW YOUR OWN SEED**Life cyclesGrow your own plant | **RESCUE POPS**Innovative new products to reduce food waste | **KITCHEN GARDEN DESIGN PROJECT**Design, plan and construct a sustainable school vegetable garden | **KEEPING IT FRESH**Cool storage investigationInnovations in action |

**STEM in the Orchard**

**LOCATION:** The Orchard at Montagues

**DURATION:** Half Day (approx. 10am – 2pm)

**TAKE HOME MESSAGE:** STEM **(**Science, Technology, Engineering and Maths) learning and knowledge in Australia have enabled Orchardists to achieve the best industry standards, products and innovations in the world. You are the future of STEM we can’t wait to see what you are going to achieve!

**RESOURCES**

Backpack

Mobile phone

First aid kit

Orchard – Gloves, Take home branded paper bags for fruit, Fruit crates with different fruit varieties, Fruit cutters, High vis vests, shovel. Worksheets/Scavenger hunts, clipboards, pencils.

Engagement Centre – Hair nets, close toed shoes, hand washing facilities

**PRE- ACTIVITY PREPARATIONS**

Confirm booking details and group numbers

Check uniform and name badge

Safety check of locations

Check Weather

Read all pre- and post-resources

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| **PLAN FOR THE DAY** |
| **Where?** | **Timing** | **Guided** | **Suggested Topics** |
| The Orchard at MontaguesBus Carpark(Stella’s Restaurant) | 15 mins | Lead teacher check-in with Tour LeaderStudent WelcomeAcknowledgement of Country | Overview of today’s adventureSTEM in the Orchard – Orchard WorkshopPlant adaptation for survivalFood WastePackaging and Distribution CentreCool Storage FacilityInnovations |
| RotationsOrchardWorkbook/LunchEngagement Centre | 45 mins | **Guided Orchard Workshop**Fruit Selecting or Picking (depending on season)Fruit Tasting | Plant adaptations for survivalPhysical conditions, impacts on their growth and survival.Food Waste alternativesBehaviour change toward the perfect productsBeing a conscience consumer |
| 45 mins | **Self-guided exploration** with teacher to completeStudent Workbook  And Lunch | Features and Adaptations for survivalFood Waste AlternativesInnovationsThe Future of Food |
| 45 mins | **Guided** **Behind the Scenes Tour**Packing and Distribution Facility  | Investigating production equipment and the use of technologies including digital technologies in the production of food and fibreInnovation in ActionCool StoragePackagingDistributionTransport |

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| **LOCATION/TIMING** | **CONTENT** |
| **The Orchard at Montagues****Bus Carpark****(Stella’s Restaurant)****15mins** | **Check in with Lead teacher –** Group numbers, rotations, toilets, recess and lunch breaks, departure time, workbooks, confirm student numbers and groups, additional requirements.**Student Welcome****Acknowledgement of Country**“I would like to begin by acknowledging and paying my respects to the Bunurong people, the Traditional Custodians of the land on which we are gathered today. I would like to pay my respects to their Elders, past, present and emerging, and acknowledge all Aboriginal and Torres Strait Islanders here today, also paying my respects to your Elders, past, present and emerging.”**Overview of the Excursion**“Today you will be participating in the “STEM in the Orchard” program. What does STEM stand for? That’s right Science, Technology, Engineering and Maths. You will be learning about these concepts throughout the day.For our safety we will stay together as a group. All our activities are in rotations, so it doesn’t matter what order you do the activities, everyone will get a chance to do everything. We will undertake a workshop in the Orchard. We will have lunch/scavenger hunt and a change to complete your workbook tasks and you can enjoy the outdoor areas. As part of the rotations, we are going on a guided tour of the packing and distribution facility focusing on the latest technologies and innovations. When we have finished our adventure, the school bus will be waiting for us in the carpark, ready to drop you safely back at school”.**Introduce Theme**STEM (Science, Technology, Engineering and Maths) has been used in the Orchard to product the best fruit products, industry standards and innovations in the world. Australians are world leaders and are at the forefront of new innovations and varieties. You are the future of STEM we can’t wait to see what you are going to achieve!Back at school you have had time to explore some of **our pre visit activities**. You may have already learnt about Plant adaptations for survival, Fight on Food Waste, Wonderful Water and Healthy eating. We are going to do some more learning about these concepts today.Before we head to the Orchard, I want you to prepare yourself by thinking about what is around you. We are predominately surrounded by the natural environment of Lysterfield Lake Park. What are the features of a natural environment?There is the Montague Orchard that has been planted over time? Is this a man-made or natural environment?There is a state-of-the-art packaging, distribution and cool storage facility. What do you expect to see in there?There are many staff in a variety of roles. The people that you see working today are the Scientist, the Engineers, the Mathematician, the Farmers and the innovators just to name a few.Think about what role you would like to be if you worked here. As we do the activities focus on your chosen role and how they would approach the tasks. |
| **Guided Orchard Workshop****Fruit Tasting****Fruit Selecting or Picking (depending on season)****45mins** | Guide students into the Orchard safely and take a piece of fruit.Let the students know that in the Orchard there is a number of different apple and stone fruit varieties and show them examples of each.Show the students a piece of fruit and ask:In your role as either a Scientist, an Engineer, Mathematician, Orchardist/Farmers or an Innovator. What impact did you have on getting this piece of fruit in my hand?**Let’s talk about the Scientist!**Apple breeding is a very long process. There is an enormous amount of research in plant genetics that goes on in the labs and many on farm trials of different varieties before a piece of fruit land in my hand. It actually takes the scientists approximately 15-25 years to be able to produce a new apple variety that starts from a seed and over time grows into a mature tree. There are many failures and successes throughout the process.**Let’s talk about the Engineers!**Agricultural engineering involves designing, developing and improving farm machinery, equipment and technology to improve a farm's efficiency. Their primary goal is to ensure farms are sustainable and environmentally friendly.While they primarily focus on agricultural land and equipment, they may also design and build different agricultural infrastructures, like warehouses, production and processing equipment.**What about the Orchardists/Farmers**Planting, Thinning, grafting, fertilising, monitoring, protecting the crops, just to name a few! And of course, harvesting.Harvesting apples, pears and stone fruit has traditionally been done by hand. Each piece of fruit is carefully picked, processed and packaged ready to be sold to the supermarkets and local grocer. It takes a lot of people power, time and effort to harvest fruit.From a single seedling to a healthy tree and then to produce many clones a large scale to an incredible achievement and a lot of hard work!**What is the role of an innovator?**Innovators think outside the box. They are always thinking about developing new approaches to be more efficient and effective. To produce more varieties, higher quality, more produce. Often this involves new technologies. A robot to pick fruit or fastest distribution and transport.***Plant adaptations for survival***When we look closely at one of the fruit trees lets think about what features/adaptations it has for survival.What feature does it have to take up water and nutrients?What is the colour and shape of the leaves?When it produces flowers, how are the flowers fertilised?Example: Flowers are fertilized, sometimes by animals like bees or by the wind. After a flower is fertilized, most plants make seeds in the form of fruit. The seed inside the fruit can be planted and grow into a new plant, and the cycle starts over again.In the case of an Orchard, specially grown seedling are planted to grow a certain variety.When we look at a fruit tree how do we know it is growing well?**Physical conditions, impacts on their growth and survival.**Ask students what types of things impacts the growth and survival of fruit trees?Discuss any of the following;* Climate
* Soil
* Rainfall
* Pest plant and animals

Take students over to the pre prepared fruit crates, showcasing different types of Apples and or Pears/Stone fruit depending on what’s available.Inform the students of the varieties, texture, smell, shape. Introduce the topic of **Being a conscience consumer and Behaviour change toward the perfect products.**How are you going to decide which apple to put in your bag today to take home?If the apple was a different shape, could we still eat it?Would it have the same taste?What if it had a small bruise on it? Would you still choose it?Why have we been trained to only select certain pieces?As a consumer it’s your choice, make the right choice!Together how can we make behaviour change of people toward the “perfect products”?Does perfect actually exist?Using the cutters, cut up some samples for the students to taste.Explore the taste, texture, sound, smell.**Food Waste alternatives**Then introduce the concept of Fight on Food WasteWhat happens if we don’t eat all of the apple today?Where does the remaining apple go?What can you do about food waste?What can you do at school to reduce food waste?What can you do at home to reduce food waste?Do we give the apples to charities and people in need?Can we turn the waste into other products?Then distribute the Montague Apple paper bags for the students to pick or select (depending on the season) their own fruit. Tell the students they can select 6 pieces of fruit each to take home. |
| **Self-guided exploration with teacher****Scavenger Hunt****(Student Workbook)****And**  **Lunch** | Guide students over to picnic table area or meet them at the historical farming equipment, towards Stella’s café.Distribute the workbooks, clipboards, pencils which include the scavenger hunts. In small groups students stay on the pathways and complete their workbooks. Topics included in the workbooks are:* Features and Adaptations for survival
* Food Waste Alternatives
* Equipment and Technologies
* Food Labelling
 |
| **Guided** **Behind the Scenes Tour****Engagement Centre****Packing and Distribution Facility****45mins** | Guide students to the entrance of the Community Engagement Centre/ Packing and Distribution facility.Outline the safety procedures to the group, ensuring all participates have closed toes shoes, stay together as a group, listen to instructions. Ensure you have a teacher/adult in the middle and at the end of the group. Explain how exciting and how lucky we are to have access to the facility.Explain our first stop will be remove any harm that we could bring into the facility as a biosecurity measure. We are protecting the horticultural industry by:* Making sure we have closed toed clean shoes
* Putting on a hair net
* Wearing a high vis vest
* Walk in single file
* Washing hands

Proceed through the entrance of the Engagement Centre adjoining the lunchroom providing the easiest access.Assist students with their hair nets and hand washing etc**Key Stops and Topics –** Tell students in their chosen STEM role they are going to share something they have seen or learnt or something that sparked their curiosity at the end of the facility tour with the whole group.(5mins on each)1.Past and Present Technology 2. Processing3. Distribution4.Transport5. Innovation in Action - Cool Storage FacilityExit the facility safely, remove hair nets and lead the group out to the front of the building.Ask students to put up their hands if they would like to share something they have seen or learnt or something that sparked their curiosity.Can anyone tell me in your own words if STEM is important to the Orchard Industry? |
| **Farewell** | **REITERATE TAKE HOME MESSAGE:** STEM (Science, Technology, Engineering and Maths) learning and knowledge in Australia have enabled Orchardists to achieve the best industry standards, products and innovations in the world. You are the future of STEM we can’t wait to see what you are going to achieve! |

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| **CURRICULUM LINKS** |
| **The Technologies - Design and Technologies**Recognise the role of people in design and technologies occupations and explore factors, including sustainability, that impact on the design of solutions to meet community needs (VCDSTS023)Investigate characteristics and properties of a range of materials, systems, components, tools and equipment and evaluate the impact of their use(VCDSTC037)Investigate food and fibre production used in modern or traditional societies (VCDSTC025)Investigate food preparation techniques used in modern or traditional societies (VCDSTC026)Investigate how and why food and fibre are produced in managed environments (VCDSTC035)Investigate the role of food preparation in maintaining good health and the importance of food safety and hygiene (VCDSTC036)**Science**Different living things have different life cycles and depend on each other and the environment to survive (VCSSU058)Living things have structural features and adaptations that help them to survive in their environment (VCSSU074)The growth and survival of living things are affected by the physical conditions of their environment (VCSSU075) |