

# Where might a career in red meat processing take you?

A Year 9 & 10 Educational Resource for Schools



#### Acknowledgements

This online curriculum-linked resource was produced by the Australian Meat Processing Corporation (AMPC).

The curriculum-linked resource is designed to introduce young people to the production and processing of red meat in Australia.

This work is licensed under a Creative Commons Attribution-NonCommercial 4.0 International license (CC BY-NC 4.0) https://creativecommons.org/licenses/by-nc/4.0/



Under this license you can share and adapt but must give appropriate credit, provide a link to the license and indicate if changes were made. The material may not be used for commercial purposes.

The following statement must be used on any copy or adaptation of the material.

Copyright: Australian Meat Processor Corporation 2017, except where indicated otherwise. This work is licensed under a Creative Commons Attribution-NonCommercial 4.0 International license.

The materials in this educational resource have been developed by Angela Colliver from Angela Colliver Consulting Services, Pty., Ltd.

AMPC would like to acknowledge and thank sincerely the teachers who shared their comments on the draft educational resource.

While reasonable efforts have been made to ensure that the contents of this educational resource are factually correct, AMPC does not accept responsibility for the accuracy or completeness of the contents, and shall not be liable for any loss or damage that may be occasioned directly or indirectly through the use of, or reliance on, the contents of this educational resource.

All links to websites were accessed in January 2017. As content of the websites used in this unit is updated or moved, hyperlinks may not always function.

# Contents

2	Introduction
3	The Learning Process in this Unit
5	Teacher Notes
6	Australian Curriculum Content Descriptions
8	Additional Teacher Notes
9	Assessment
12	Meat Matters: Facts and Figures about the Australian Red Meat Processing Industry
15	Step 1: The essential guestion and scenario
17	Step 2: Define understandings
19	Step 3: Discover
21	Step 4: Dream
22	Step 5: Design
23	Step 6: Deliver- produce
24	Step 7: Debrief
25	References and Resources
27	Student Project Files
28	Resource 1.1 – The essential question
30	Resource 1.1.2 – Australian Meat Processor locations
	Resource 1.1.3 – What jobs can you do
31	in the meat industry?
34	Resource 1.2 – Define
35	Resource 1.3 – Discover
39	Resource 1.3.1 – Discover the scholarships the AMPC makes available

- Resource 1.4 Dream 43
- Resource 1.5 Design 44
- Resource 1.7 Deliver 47
- Resource 1.8 Debrief 48

# Introduction

The aim of this online curriculum-linked educational resource is to help teachers and students in secondary schools investigate and understand more about the Australian red meat processing industry.

The objectives of the educational resource are to:

- Support AMPC and its members in expanding awareness about the red meat processing industry in Australia by engaging and informing teachers and students about the role and importance of the industry in the Australian economy, environment and wider community.
- Engage and inform teachers and students regarding state-of-the-art processing facilities and best practice red meat production.
- Provide resources which help build leadership skills among teachers and students so they can communicate about red meat production and the industry in Australia.
- Increase knowledge and understanding about the complexity and innovative nature of Australia's red meat processing industry.
- Provide encouragement, information and practical teaching advice that supports teachers to educate their students about red meat production processes and the red meat processing industry.
- Educate school students about innovation and environmentally sustainable practices implemented in the red meat processing industry.
- Expand awareness of the broad range of career pathways available through the red meat processing industry and broader supply chain.
- Develop engaging learning programs using an inquiry process and the Project Based Learning (PBL) approach aligned with the Australian Curriculum.

These online curriculum-linked educational resources provide practical support for teachers and students learning about food and fibre production and primary industries in schools.

# The Learning Process in this Unit

This educational resource is a unit of work that uses an inquiry-based and integrated approach to learning. It is also student-centred and interactive.

It makes extensive use of the student's existing knowledge, questions and investigations. It uses a teaching and learning model based on the current philosophy that scientific knowledge is a social construction, highlighting how people's ideas and explanations create new knowledge. The teaching and learning model is also based on the idea that learning is a process of personal construction and reconstruction of ideas, rather than the absorption of a hierarchy of taught facts and concepts.

In practical terms, this means that teachers are not seeking to instil in students a selection of understandings, but are teaching and supporting them to experience and use creative ways of thinking to develop understandings of issues around them.

The interactive teaching and learning approach is based on the 21<sup>st</sup> Century Fluencies created by Crockett et al. (2011), and are outlined extensively in the book *'Literacy Is Not Enough'* by Crockett et al. (2011). See <u>https://globaldigitalcitizen.org/</u>. It uses the *solution fluency* through six phases: **Define; Discover; Dream; Design; Deliver and Debrief**. The phases of the model are based on based on

The fluencies are:

- **Define:** The 'Define 'phase begins with lessons that intellectually engage students with a challenge, problem, question and task. This phase captures their interest, provides an opportunity for them to express what they know about the topic, share understandings being developed, and helps them to make connections between what they know and the new ideas.
- **Discover:** The 'Discover' phase includes activities in which students can explore, investigate, research, read, discuss, gather, organise and compare knowledge and data. They grapple with the challenge, problem, question or phenomenon and describe it in their own words. This phase provides a context and enables students to acquire a common set of experiences that they can use to help each other make sense of the new knowledge or understandings.
- **Dream:** The 'Dream' phase enables students to imagine and develop possible solutions and explanations for the challenge, problem, question and task they have experienced. The significant aspect of this phase is that the students' explanations follow substantive conversations and higher order thinking experiences.
- **Design:** The 'Design' phase provides opportunities for students to apply what they have learned to new situations, to map production processes and so develop a deeper understanding of the challenge, problem, question or phenomenon. It is important for students to extend explanations and understandings, using and integrating different modes such as diagrammatic images, written language and media.
- **Deliver:** The 'Deliver' phase has two stages production and publication or presentation. In the production phase, the task comes to life this is the doing phase. At the end of this phase, the student task should be completed. Next, they present or publish their work sample to an audience.
- **Debrief:** The 'Debrief' phase provides an opportunity for students to revisit, review and reflect on their own learning and new understanding and skills. This is also when students provide evidence for changes to their understanding, beliefs and skills.

Source: Solution Fluency https://globaldigitalcitizen.org/

Throughout this educational resource the emphasis is on providing teachers with ideas and activities that enable them to:

- Provide a supportive classroom environment by valuing what students already know; meeting individual and collective needs; providing scaffolding and supporting all students to be successful.
- Be a resource person by collecting resources and materials, and suggesting strategies for investigation.
- Be a fellow investigator by advising on appropriate investigations; modelling ways of learning and identifying learning opportunities.
- Challenge students' ideas and learning strategies by encouraging further inquiry, providing the stimulus for investigating real life situations and alternative viewpoints, and empowering students to investigate and respond to a challenge, task or project (commonly called 'Project-Based Learning').
- Co-evaluate what students know, can do and understand; using a range of assessment strategies including self assessment and peer assessment; negotiated assessment tasks, learning logs, observation and conferencing. (Note: The unit of work contains a 'Student Task' which is well suited for assessment, as it is the summation of the work undertaken by the students in the unit of work).

The unit of work can has been designed as a sustained sequence of activities, based on the content descriptions of the Australian Curriculum identified in Year 9 and Year 10 in Work Studies.

Note, that in each fluency phase, several activities are suggested from which teachers are encouraged to select the most appropriate for their purposes. Not all activities in each stage of the unit need to be used. Alternatively, teachers may adapt, modify, add to or complement the suggested activities with ideas to suit the needs of the students with whom teachers are working.

Also note, digital tools including YouTube videos and Apps are utilised in the unit, both for the teacher and students' use. The unit also offers options for how the unit can be implemented in high, low, and non-technical environments. Teachers' decisions will need to be based on what technology is readily available in their teaching environment. Students may have many ideas regarding the digital tools they might wish use in their work samples.

# **Teacher Notes**

### Resource description

The aim of this unit is to help teachers and students in secondary schools investigate and source information and resources about careers in the Australian red meat industry and expanded supply chain.

The unit explores the 'paddock to plate' pathways that are available for the students' consideration.

Students undertake virtual tours using videos provided by a selection of meat processing companies, butcher shops, and supermarkets, and discover the 'paddock to plate' pathways that may assist in career decision-making.

Students research some of the careers currently available and learn more about how and why the industry is seeking to employ personnel with 21<sup>st</sup> Century skills in computer science, engineering, environmental science, logistics, business analysis, marketing, economics and business, in order to advance the industry's business strategies and deliver quality red meat products to its customers.

Students discover how a selection of Australian meat processing plants are using hi-tech robotics and automated systems within their plants, and hear about the training and qualifications required to use and maintain such systems in the industry.

Students also learn about the interdisciplinary skills required to scope, design, build, install, operate, monitor and maintain the robotic machines and automated systems, and analyse the data provided by them back to the processor.

Students are encouraged to analyse and critique careers available in the industry, and are tasked with creating a portfolio of possible career profiles.

Finally, students are asked to use their understanding of three or more careers in the industry to write both a blog post and a review about them, with examples to illustrate their point.

Year level: Years 9 & 10

### Curriculum objectives

In this unit, students:

- Explore a range of careers available in the Australian red meat processing industry and broader supply chain;
- Examine the skills and qualities associated with occupations in the industry and broader supply chain;
- Research and filter career information resources for study options;
- Develop a more future-orientated perspective of Australian meat processing;
- Identify and envision future careers in the Australian meat processing industry;
- Exercise their critical thinking skills and creative imagination;
- Create a portfolio of career profiles;
- Write a blog post and a review about careers in the industry; and
- Reflect and evaluate what they know about career profiles and study options in the processing, production and marketing of red meat products.

Based on Australian Curriculum, Assessment and Reporting Authority (ACARA) materials downloaded from the Australian Curriculum website in January 2017. ACARA does not endorse any changes that have been made to the Australian Curriculum.

# Australian Curriculum Content Descriptions

### Work Studies

#### Year 9

#### Career and life design/career development and management

Source career information and resources ACWSCL014

Elaborations include:

- researching and filtering a range of career information and services designed to help with career and decision-making
- creating a portfolio of possible career profiles
- identifying diverse learning pathways into preferred career destinations

Describe the nature of work in Australia and the implications for current and future work opportunities **<u>ACWSCL015</u>** 

Elaborations include:

- collecting and interpreting data about how people work
- exploring initiatives to build employment and enterprise opportunities in their community/region
- researching the types of work available, the changes occurring at a local level and the implications for future employment

#### Year 10

#### Career and life design/career development and management

Apply knowledge of self to career decision-making processes ACWSCL032

Use career decision-making processes to filter career scenarios ACWSCL033

#### Work skills

Explain the range of skills and attributes necessary to work effectively in the 21<sup>st</sup> century **ACWSCL025** 

### General Capabilities

#### Literacy

This unit's learning experiences enable students to develop literacy capabilities that relate to everyday living contexts that students face throughout their lives. For example:

- contexts that students face throughout their lives. For example:
- Comprehending texts through listening, reading and viewing;
- Composing texts through speaking, writing and creating;
- Developing skills in reading, interpreting and analysing information; and
- Developing oral language skills as students ask questions, seek advice, present viewpoints and discuss their practical tasks.

#### **ICT Capability**

This unit's learning experiences enable students to develop the capacity to both manage and use information technology safely and responsibly, including the capacity to evaluate sources and their reliability, accuracy and validity of information and use digital technologies in academic, practical, collaborative and creative pursuits. For example:

- Applying social and ethical protocols and practices when using ICT;
- Investigating with ICT;
- Creating with ICT;
- Communicating with ICT;
- Managing and operating ICT; and
- Developing skills to undertake effective searches online and locate appropriate information in a timely manner.

#### Critical and Creative Thinking

This unit's learning experiences enable students to develop the capacity to solve problems, think critically and creatively, or generate new ideas. Students will also identify alternative explanations, see links and find new ways to apply ideas in the context of meat processing as they engage in analysing and designing a portfolio of career profiles. For example:

- Inquiring identifying, exploring and clarifying information;
- Generating innovative ideas and possibilities;
- Reflecting on thinking, actions and processes; and
- Analysing, synthesising and evaluating information.

Source: Australian Curriculum, Assessment and Reporting Authority (ACARA), downloaded from the Australian Curriculum website in January 2017.

# Additional Teacher Notes

### Selecting activities

At each stage of the learning sequence, several activities are suggested from which teachers are encouraged to select the most appropriate for their purposes. Not all activities in each stage of the unit need to be used. Alternatively, teachers may add to or complement the suggested activities with ideas of their own.

### Adapting the unit

The unit is targeted at junior secondary students. This is a suggested age range only and teachers are encouraged to modify activities to suit the needs of the students with whom they are working.

At each stage of the unit, a number of activities are listed. Teachers are not expected to do them all. Instead, the units are designed such that a selection of activities can be made at each stage. Teachers should select the activities according to the needs and interests of their students and the time, relevance to the existing school curriculum and resources available to them.

### Suggestions from review teachers

Teachers who trialled and reviewed these materials encouraged others to 'put your own spin on it and be sure it is suited to your class'. Here are some of their ideas about how they did this:

- Start by finding out what students' attitudes and knowledge is of the supply chain.
- Condense the unit to suit your needs
- Take time to really explore the resources for yourselves, keeping in mind the perspective of your students and their learning needs and style. Immerse yourself in the programs first to appreciate the material that is contained in them.
- Watch all the videos first if you have no background in livestock production or no knowledge of red meat processing. Download the videos if you are in a poor download speed area (also saves school funds if downloaded once!!)
- A visit to a processing plant or a butcher would be an advantage- gives the students a better understanding of all the processes involved. Or have a guest speaker. Maybe show one of the Dr Temple Grandin videos (watch first to select the suitable parts for your own class)
- Be open-minded and you'll be surprised. Try them. Give it a go, Jump in.

### Time allocation

This will, of course, depend on particular circumstances but generally, four to six weeks is suggested.

### Moodles, Wikis and e-Learning Systems

It is suggested that the 'Student Resources' at the rear of this unit be made available to students on the school's e-learning system or other e-platforms such that students can access the materials and drive their own learning.

# Assessment

The assessment methodology is based on using two rubrics, one specifically for the task set in this unit, and the other based on the learning process. The **assessment rubrics** provided in this resource, are the summation of the student's learning tasks. The rubrics provide:

- A common language for discussing student achievement in relation to the tasks undertaken, and
- A means of engaging with, and communicating student achievement, to the student and his/her parents or caregivers.

### The rubric columns: levels

Each of the rubrics is divided into four levels.

Level 1: Basic

Level 2: Sound

Level 3: High

Level 4: Outstanding

#### The rubric rows: aspects of the task

Each of the rubrics is divided into rows, with each row representing critical aspects of the student task.

The task in this learning sequence involves students:

Learning about the range of careers available in the Australian red meat processing industry and broader supply chain, and examining the skills and qualities associated with occupations in the industry.

Students are tasked with completing an analysis of skills and qualities associated with occupations in the industry and broader supply chain, with a specific emphasis on how these occupations need skills in science, technology, engineering or maths, in order to be able to operate and design systems and technologies.

The students are then tasked with creating a portfolio of career profiles to share in a mock 'Careers Day' presentation.

Students are required to use their understanding of three or more careers in the industry to write both a blog post and a review about them, with examples to illustrate their point.

Students are also required to make a five minute presentation of their career profiles to an audience in which they explaining where red meat processing could take them in the future.

### Overall project rubric

This rubric is designed to specifically evaluate what has been asked of the students from the scenario presented to the class.

Syllabus	Level 4	Level 3	Level 2	Level 1
ACWSCL014 ACWSCL015 Weighting 25%	A design of six or more career profiles has been created, that is informed by an analysis of careers available in the Australian red meat processing industry and broader supply chain.	A design of 3-5 career profiles has been created, that is informed by an analysis of careers available in the Australian red meat processing industry and broader supply chain.	A design of three career profiles has been created, that is informed by an analysis of careers available in the Australian red meat processing industry and broader supply chain.	A design of two career profiles has been created, that is informed by an analysis of careers available in the Australian red meat processing industry and broader supply chain.
	They also show evidence of extensive research of the subject matter.	They also show solid evidence of research of the subject matter.	They also show evidence of some research on the subject matter.	They show evidence of little research of the subject matter.
ACWSCL014 ACWSCL015 Weighting 25%	The content of the career profiles, blog post and reviews showed clear evidence of research and understanding about careers available in the Australian red meat processing industry and broader supply chain.	The content of the career profiles, blog post and reviews showed some evidence of research and understanding about careers available in the Australian red meat processing industry and broader supply chain.	The content of the career profiles, blog post and reviews showed limited evidence research and understanding about careers available in the Australian red meat processing industry and broader supply chain.	The content of the career profiles, blog post and reviews showed little research and understanding about careers available in the Australian red meat processing industry and broader supply chain.
ACWSCL014 Literacy 10% Critical & creative thinking Weighting 10%	The design and layout of the career profiles makes it very easy to understand and interpret the information provided.	The design and layout of the career profiles makes it easy to understand and interpret the information provided.	The design and layout of the career profiles makes it possible to understand and interpret the information provided.	The design and layout of the career profiles makes it difficult to understand and interpret the information provided.
ACTDEK041 Critical & creative thinking Weighting 10% ICTs Weighting 10%	The presentation of the career profiles to an audience which explains where red meat processing could take them in the future was communicated with a logical flow and without pauses.	The presentation of the career profiles to an audience which explains where red meat processing could take them in the future was communicated with a logical flow and with few pauses.	The presentation of the career profiles to an audience which explains where red meat processing could take them in the future was communicated with a mostly logical flow and with some pauses.	The presentation of the career profiles to an audience which explains where red meat processing could take them in the future was communicated with a little logic and many pauses.
Literacy Weighting 10%	The student answered all questions clearly and accurately.	The student answered most questions clearly and accurately.	The student answered some questions clearly and accurately.	The student answered a few questions clearly and accurately.

### Learning process rubric

Each of the learning progressions in the learning sequence has a prerequisite for progression – a list of what the student needs to accomplish in order to proceed to the next step in the process. The text from those areas is duplicated in this rubric and can be used with students to guide their progress with feedback, in a mini-debrief, helping them to refine their process and product at critical points throughout the learning sequence.

Level 4	Level 3	Level 2	Level 1
A clear definition of the task was provided.	definition of the A somewhat clear An average definition of the task was provided. An average definition of the task was provided.		A definition of the task could not be provided.
Research and analysis was completed with no prompting.	Research and analysis was completed with minimal prompting.	Research and analysis was completed with some prompting.	Research and analysis was completed with significant prompting.
Careers available in the Australian red meat processing industry and broader supply chain were identified with no prompting.	Careers available in the Australian red meat processing industry and broader supply chain were identified with minimal prompting.	Careers available in the Australian red meat processing industry and broader supply chain were identified with some prompting.	Careers available in the Australian red meat processing industry and broader supply chain were identified with significant prompting.
A clear visualisation of the tasks was provided.	A mostly clear visualisation of the tasks was provided.	A reasonable visualisation of the tasks was provided.	No clear visualisation of the tasks was provided.
An extremely clear plan of what the career profiles will contain was provided.	A very clear plan of what the career profiles will contain was provided.	A clear plan of what the career profiles will contain was provided.	A somewhat unclear plan of what the career profiles will contain was provided.
An extremely clear plan of the accompanying blog post and reviews was provided.	A very clear plan of the accompanying blog post and reviews was provided.	A clear plan of the accompanying blog post and reviews was provided.	A somewhat unclear plan of the accompanying blog post and reviews was provided.
The career profiles have been created and presented to an audience with a logical presentation explaining where red meat processing could take them in the future.	The career profiles have been created and presented to an audience with a mostly logical presentation explaining where red meat processing could take them in the future.	The career profiles have been created and presented to an audience with a somewhat logical presentation explaining where red meat processing could take them in the future.	The career profiles have been created and presented to an audience with little logic explaining where red meat processing could take them in the future.

# Meat Matters:

### Facts and Figures about the Australian Red Meat Processing Industry

The following basic information may be helpful when teachers interact with their school students.

### The Meat and Livestock Industry

- There are approximately 29 million head of cattle, 70 million sheep and millions of bush goats in Australia.
- Australia is one of the world's most efficient producers of cattle and the world's third largest exporter of beef.
- Australia is also one of the world's leading producers of lamb and mutton, the world's largest exporter of mutton and the second largest exporter of lamb.
- Australia is a relatively small producer of goat meat, yet is the world's largest exporter of goat meat.

Source: Meat and Livestock Australia http://mla.com.au

### The Red Meat Industry

From farm to plate, around 200,000 people are employed in the Australian red meat industry, including onfarm production, transporters, processing and retail activities.

Australian cattle, sheep and goat farmers, livestock transporters and processors value highly the health and wellbeing of their stock.

Farmers have an attachment to their cattle, sheep and goats, as they have often raised animals from birth and they know that healthy and well cared for stock also produce better quality, beef, lamb, mutton and goat meat. It is widely acknowledged that consumers want their red meat produced humanely and ethically. As such, Australian cattle, sheep and goat producers are recognised around the world for their animal husbandry and farm management techniques.

### Careers in the Australian Meat Processing Sector

Australian Meat Processors and Butchers are passionate about delivering top quality, safe and nutritious products to market.

The Australian Meat Processing sector is a world leader in processing beef, lamb and goat meat and processing plants employ the latest technologies to ensure superior levels of meat product.

Australia has approximately 300 abattoirs (including boning rooms) with a workforce of around 34,000 people. The red meat processing industry is estimated to contribute just under \$23 billion of value adding to the Australian economy. It includes flow-on impacts equivalent to 1.5 percent of Australia's Gross industry through value adding and by generating 134,000 jobs equivalent to 1.4 percent of full-time equivalent (FTE) employment when flow-on effects are taken into account.

Source: Heilbron, S.G. 2016. Evaluating the Socio-economic benefit of the red meat processing industry in regional Australia, pages 14 and 20. (Unpublished)

The meat processing sector provides career opportunities in a range of areas including stock handling, slaughter floors, boning rooms, meat inspection, packing rooms, mechanics, fork lift driving, operating equipment, data entry, finance, administration, and human resources.

Staff at meat processing plants are trained in animal welfare, husbandry and handling, so that the safety and comfort of the livestock is maintained.

Red Meat Processors trim and prepare the beef, sheep and goat carcases to specific standards. They grade the carcasses for colour, tenderness, fat, age, sex and bruising according to AUS-MEAT standards and weigh and brand each carcase. The weight is used to calculate how much farmers are paid.

Meat Processors who work in abattoirs include Trimmers, Boners, Graders and Packers. A 'Trimmer' skins, cleans, trims, dresses, hangs and prepares the beef, lamb or goat carcasses to specific standards. Each carcass is cut in half and carefully chilled in the chiller room. The chiller room keeps the meat at the correct temperature to ensure the red meat is tender and fresh.

After chilling, meat 'Graders', grade the beef, lamb and goat meat for colour, tenderness, fat, age, sex and any bruising on the meat. Each carcass is tagged by the 'Graders' to show the classification, the date of processing and the brand of meat, as well as the plant in which it was processed.

After chilling for at least 24 hours, the 'Boners' cut the beef, lamb and goat meat into different cuts of meat or prepare the carcasses to be sent to a butcher who will prepare the smaller cuts of meat. Meat 'Packers' pack the varying cuts of beef, lamb and goat meat ready for sale and delivery to local, regional, interstate and overseas customers.

Red meat products are transported from the processing plant to butchers, wholesalers, restaurants and supermarkets, in refrigerated trucks. There are Australian Standards that must be followed during transportation to make sure that the red meat is kept hygienic for people to eat.

Red meat for export markets is packed into large refrigerated containers and delivered to ports and airports for transport overseas. Stringent food safety standards are applied by the Quality Assurance teams to ensure the meat is hygienic to eat by consumers in Australia and overseas.

Australian meat processing plants also employ people in environmental monitoring, animal welfare, equipment maintenance, truck dispatching, cleaning, quality assurance, finance, procurement, office administration and human resource management.

A number of other industries also provide services to the Australian meat processing industry. These include the:

- Meat and livestock industry (farmers and primary producers)
- Transport industry
- Warehousing and distribution industry
- Animal feed industry
- Veterinary industry
- Graphic design industry
- Packaging industry, and
- Engineering industry.

When a meat processor exports product overseas, a number of other industry sectors and their staff also provide services, including:

- Health Inspectors
- Road Transporters
- Rail Transporters
- Aviation Transporters
- Warehousing and Logistics
- Procurement Officers
- Transport Recording and Dispatch Clerks
- Shipping Clerks
- Truck Dispatchers
- Container Loading Clerks
- Distribution Clerks
- Stevedores
- Export Clerks

- Freight Forwarders
- Custom Clearance Officers
- E-Logistics Officers, and
- Supply and Distribution Managers.

### Careers in Meat Retailing

The Australian meat retailing sector offers career opportunities in independent butcher shops, meat departments in supermarkets and wholesale meat enterprises. The sector employs apprentice butchers as required.

Apprentice meat retailers are trained in selecting, cutting, trimming, preparing and displaying meat for sale. They are also trained how to value-add to meat products (by adding marinades, seasonings and pre-preparing some elements); providing advice to customers about how to prepare and cook different cuts of meat; display and present cuts of meat, market and advertise meat; and provide meat safety and nutritional information. Apprentices also gain experience in specialised techniques such as making mince, sausages, corned and smoked meats.

### Smallgoods Manufacturing

The smallgoods sector provides career opportunities in the preparation and manufacture of a wide range of smallgoods products, laboratory work, machinery operation and management.

People working in the industry may work in areas such as operating production lines, smoking and drying meat, food safety, quality assurance, logistics, sales and marketing and finance.

Source: Mintrac. 2016Careers in the Australian Meat Industry (Brochure)

### Food Services

The Food Services industry provides career opportunities in meat retailing shops, meat departments in supermarkets or in wholesale boning rooms in meat processing plants, which prepare bulk meat supplies for customers.

Apprentices learn about meat safety, hygiene and meat quality, preparing specialised cuts of meat, packaging techniques, in addition to providing nutritional and cooking advice to customers.

Source: Mintrac. 2016Careers in the Australian Meat Industry (Brochure)

### Other Career Options

A qualification as a Butcher or Small Goods maker can offer a number of other career pathways including:

- Food Processing Technician
- Food Technologist
- Primary Products Inspector
- Cook or Chef
- Management and Quality Assurance.

Source: FTH Skills Council. (2013) Career and Personal Learning Plan Information for the South Australian Meat Industry (Brochure)

# Step 1: The essential question and scenario

#### Objective: Define the main question and share the scenario that is the focus of the unit.

**Ask** students to brainstorm ideas about what they know about how beef, lamb or goat meat might be processed in Australian meat processing plants. Display these for future reference.

**Talk** with students about how Australia has approximately 300 meat processing plants, some of which are small local plants and others which are much larger processors supplying beef, lamb and goat meats for both national and international markets.

**Ask** students to develop a concept map describing what they know about red meat production, what it is, what it comprises, who produces and processes red meat, like beef, lamb and goat meat and why.

**Talk** about meat processing and production and 'Paddock to Plate' career pathways in more detail. Discuss the many careers involved in processing and producing red meat products.

**Form groups** and ask students to select one particular type of red meat that is produced in Australia, and brainstorm what careers are involved in producing it, processing it, packaging it, distributing it, marketing it, retailing it and enabling overseas and local consumers' access to it.

**Set the task** and explain to the class that in this unit, their task is to learn about and examine the range of careers available in the Australian red meat processing industry and broader supply chain.

Share the following question and scenario with the class. See **<u>Resource 1.1</u>**.

### The essential question:

What benefits accrue to students and processors when we have an understanding of the current and future work opportunities in the Australian meat processing industry?

#### Step 1: The scenario

The Australian Meat Processor Corporation (AMPC) is preparing for the future leaders in Australia's red meat processing industry, by announcing new opportunities to engage young people in the fascinating possibilities within it.

The Chairman of AMPC, Mr. Peter Noble said, "It is not only the expanding demand of processing and production technologies that are increasing; employees' know-how must also grow, in particular in relation to their knowledge of Industrial Information Technology (IIT). Interdisciplinary skills are in demand, because right now modern technologies are being developed, defined and modified, so that they can serve as a template for marketable processing systems. The solutions are hi-tech at its finest. They perceive their environment via 3D cameras and optical sensors. Robots in meat processing systems can determine their exact positions and grasp and move a carcass with their gripping tools.

Training and qualifications will therefore play a key role in meat processing careers in the future".

Gain an insight into some interesting and passionate people working in their dream careers. Students will gain insights that can't be read in brochures, textbooks or even Googled. In addition, students will hear firsthand about the diverse careers that can start with meat processing and pursued through combinations of meat processing with other industries.

Take a personalised tour of two meat processing plants and observe the work that goes on behind the scenes. Get to understand the stages involved in meat processing and production and the "Paddock to Plate" pathways that are available.

Investigate career profiles in the meat processing sector by witnessing them at work!

What makes red meat processing plants and careers of those who work in them interesting to study is their wide diversity and commonalities throughout the world. Some processing plants are highly mechanised, others aren't. Some use robotics, others don't. Some are using automated meat processing systems that reduce manual handling and provide a consistent flow of product, while others are using x-ray technology to measure carcass dimensions to optimise cutting accuracy.

Learn how processing plants are continuously changing and evolving, with the integration of high-tech robotics and automated systems. As a result, these systems offer new career options.

Hear from people working in design and engineering occupations about the services they deliver and the high-tech robotic and automated processing systems they have designed and installed in meat processing plants.

Importantly, learn from people working in meat processing plants, about their processing techniques, technologies and processes, and the collaborative environment it offers those interested in seeking career pathways within the meat processing industry.

Students are tasked with completing an analysis of the skills and qualities associated with occupations in the industry and broader supply chain, with a specific emphasis on how these occupations need skills in science, technology, engineering or maths, in order to be able to operate and design systems and technologies to:

- treat livestock ethically,
- reduce manual handling and repetitive work,
- reduce the risk of injuries,
- manage water, energy and waste productively,
- maintain equipment,
- collect data for the processor, and
- make money or save money, and help meat processors market a quality product.

Become a Career Advisor and use a range of activities, videos, images, information and websites containing information about careers in red meat processing in Australia to create a portfolio of career profiles. Use students' understanding of three or more careers in the industry to write both a blog post and a review about them, with examples to illustrate those careers. Share the portfolio in a mock 'Careers Day' presentation, in which students explain current and future work opportunities in the Australian meat processing industry.

What investigations can assist students researching current and future work opportunities in the Australian meat processing industry? Will students investigate some of the careers currently available? Will students investigate the possibilities in meat processing with additional skills and qualifications in computer science, engineering, environmental science, logistics, business analysis, marketing, economics and business?

AMPC and other meat processors can help out with lots of information, images and videos on their websites. <u>http://www.ampc.com.au/education-training/school-resources/careers</u>

The challenge is to use the websites and a range of activities and videos to help understand how Australian meat processors produce an array of different beef, lamb and goat meat cuts for local, national and international markets, while using highly skilled people in addition to innovative automated technology systems and robotics. How will students create their portfolio of career profiles in this project? How might students present their Careers Day presentation to others?

# Step 2: Define understandings

# Objective: Have students illustrate their understanding of the challenges set out in the scenario by providing an oral definition of the task.

**Capture student interest** and find out what they know about the careers involved in producing red meat, processing it, packaging it, distributing it, marketing it, retailing it, and enabling overseas and

meat, processing it, packaging it, distributing it, marketing it, retailing it and enabling overseas and local consumers' access to it.

**Talk** with students about Australian meat processors who supply red meat products for domestic consumption and export.

**Investigate** red meat processors who may have work experience or vacancies in the local region. See **Resource 1.1.2**.

**List processors** in your region, view and read their websites and social media pages. Explore how they process, market and promote their product.

Re-visit local processors' websites and look for career information and resources.

**Talk** with students about careers in meat processing and the broader supply in more detail. Using the notes on pages 14-18 and the graphic in **Resource 1.1.3**, discuss the many aspects and possible careers involved in:

- processing and packing red meat
- reducing any bio-security risks
- handling livestock ethically
- managing resources sustainably
- maintaining clean and healthy flooring and equipment surfaces
- maintaining quality assurance standards throughout carcass processing
- operating automated meat processing systems to enhance labour efficiency and eliminating many physically demanding tasks from the production line
- designing or using robotic sensing and cutting to enable highly accurate cutting
- designing or using x-ray systems and scanners to create 3D maps of bones in the carcass, and then guide cutting robots that cut with an improved cutting accuracy
- designing, maintaining or operating robots that vacuum any bone dust from bandsaws
- designing or using automated packaging and labelling systems
- operating the technology associated with driverless forklifts that can lift and carry pallets of boxed red meat products, and
- managing the business.

**Brainstorm** what career profiles could be available in meat processing plants and the broader supply chain. Share the teams' ideas.

**Talk** with students about responsible digital citizenship in online environments. Work with students to have them understand that during this unit they will be using a range of websites, gathering a range of information, therefore students need to continuously check that the research is correct by using reliable sites. Similarly discuss the use of free and open sources for images, and videos and the need to request the use of software and media others produce.

**Remind** students that there are high-tech; low-tech and no-tech options that they can consider when designing and creating their portfolio of career profiles to then share in a mock 'Careers Day' presentation.

Might they use:

- PicArtia **www.makeuseof.com/dir/picartia** where students can create photo mosaics
- Glogster <u>www.glogster.com</u> where students can mash up media
- Voice Thread <u>http://voicethread.com</u> where students can upload video, record audio, add still images and create a digital story
- Canva https://www.canva.com where students can create designs using a range of templates

**Remind** students that they also need to use their understanding of three or more careers in the industry to write both a blog post and a review about them, with examples to illustrate their points of view.

**Invite** students to recall the focus of the task that AMPC has invited them to undertake. See <u>Resource 1.1</u> and invite students to define the task they have been asked to address using <u>Resource 1.2</u>.

**Ask** students what they might need to know more about, in order to undertake the task set by AMPC. Might they need to know something about the different careers that design, build, maintain or use processing systems used by red meat processors? Might they need to research careers that can lead to a pathway in the red meat processing industry? Might they need to research why the industry is seeking to employ personnel with 21<sup>st</sup> Century skills in computer science, engineering, environmental science, logistics, business analysis, marketing, economics and business, in order to advance the industry's business strategies and deliver quality red meat products to its customers? Might they need to know where to find information about current and future careers in the industry? What might they have to do to create a portfolio of career profiles? What tools, equipment and procedures might be needed? How might they evaluate their portfolio and the information it communicates?

#### Prerequisite for progression:

Ask students to articulate their understanding of the task/challenge through oral conversation and if appropriate, a written (scribed) statement using **Resource 1.2**.

Note: The Prerequisite for Progression are the checkpoints that occur at the end of each stage of the learning sequence. This is the time when formative feedback is given to the students about what they have accomplished in that stage. It describes what the students must complete before they move onto the next phase of the unit. (*Crockett, et, al*)

# Step 3: Discover

Objective: Have students research, read, view, listen to, discuss, gather, organise ideas about current and future work opportunities in the Australian meat processing industry.

Ask students to consider the questions:

- 'What do all Australian meat processors need, in order to be productive?';
- 'What careers are available in the industry?';
- 'What careers might be needed in the industry?'; and
- 'What skills might students considering a career in the industry need to make a great impression, a genuine connection and have maximum impact when applying for work experience or a position in the industry?

**Capture students' interest** and view a sample of website materials, videos, print materials and social media tools that cover various careers in the meat processing industry.

Share **<u>Resource 1.3</u>** for students' use during the 'Discover' phase.

Examples include:

- Thomas Foods International http://thomasfoods.com/
- Gundagai Meat Processors http://www.gmpgundagai.com.au/careers/
- Fletchers International Exports http://www.fletchint.com.au/
- JBS Australia http://www.jbssa.com.au/
- The Australian Agricultural Company http://aaco.com.au/people-careers/our-jobs/
- Teys Australia <u>http://www.teysaust.com.au/</u>

**Take a virtual tour** of meat processing plants via videos and discover the wide range of jobs available in them. View videos about the main processing systems used by other red meat processors in Australia.

For example:

- Thomas Foods International, an international and domestic processor and supplier located in South Australia <a href="https://vimeo.com/62319210">https://vimeo.com/62319210</a>
- Gundagai Meat Processors, a national processor and supplier to some of Australia's largest supermarkets <a href="https://youtu.be/bZKSsHXO6rc">https://youtu.be/bZKSsHXO6rc</a> and
- D & S Afflick, a smaller domestic processor who supplies markets in New South Wales <u>https://youtu.be/y2mPEqIuLVY</u>

**Hear** from a range of people, from CEOs to processors and butchers, who work within the industry about their processing techniques, work they undertake, and how there are a range of careers available in the modern meat processing plant. Listen to a podcast and hear from Mr. Will Barton, the CEO of Gundagai Meat Processors about the range of careers available in modern meat processing plants. <u>https://youtu.be/PF8jHBixh1Q</u>

**Play a video** from Thomas Foods International, and record all the possible careers that could be available in a 'Paddock to Plate' pathway in the red meat industry. See <u>https://vimeo.com/62319210</u>. For example: butcher, packer, transporter, meat inspector, exporter, fork lift driver, truck driver, processor, grader, trimmer, boner, safety officer, MSA Grader, stock handler, farmer, saleyard auctioneer, or business owner.

**Hear** from Alistair Keller who completed an Australian School-Based Apprenticeship in Agriculture, and discover where this qualification took him in the industry. See <u>http://www.youtube.com/</u>watch?v=WU5VZ901Z10&list=PL9CC4BF1401DCA

**Discover** how a retail butcher invests in apprentices in his red meat retailing business <u>https://www.</u> youtube.com/watch?v=dvlBiWRWff8&index=28&list=PLOe\_FXYm1yBV1H6ohnhfFl\_gmRx-Y8I5Z

**Read** about Matthew Papandrea, who qualified with a Certificate III in Meat Retailing <u>https://www.</u> <u>australianapprenticeships.gov.au/australian-apprenticeships-ambassador/matthew-papandrea</u>

**Learn** about David Bridge, and find out where an Advanced Diploma in Meat Processing led him in the industry <a href="https://www.australiantrainingawards.gov.au/finalists/david-bridge">https://www.australiantrainingawards.gov.au/finalists/david-bridge</a>

Find out about the career undertaken by Colin Wilson in the 'Paddock to Plate' pathway, offered by the industry at <a href="https://www.youtube.com/watch?v=AU8dRRx14wQ&index=30&list=PLOe\_FXYm1yBV1H6ohnhfFl\_gmRx-Y8I5Z">https://www.youtube.com/watch?v=AU8dRRx14wQ&index=30&list=PLOe\_FXYm1yBV1H6ohnhfFl\_gmRx-Y8I5Z</a>

**Listen** to a second podcast in which Mr. Will Barton CEO of Gundagai Meat Processors talks about emerging careers in the industry, and what inspired him to get involved in the industry. https://youtu.be/bDQYRj\_bTZM

**Hear** from a meat scientist and discover what is involved in this occupation and the career path that was undertaken <u>https://youtu.be/zgaRXyEVdTM</u>

**Hear** from Project Engineers who design and manufacture meat processing systems that have been installed and maintained in the vast majority of existing meat processing plants. Find out about the science, engineering, logistics, and information technology skills they need in order to undertake their jobs as Project Engineers. Think about the skills and training that would be needed to operate and maintain processing equipment of this type. <u>https://youtu.be/4pKzgbypZGM</u>

**Find out** about the types of careers available at Scott Automation and Robotics and hear about the graduate program they offer students. <u>https://youtu.be/dm3QFoAKIH0</u>

**Listen** to a podcast and hear from Mr. Will Barton, the CEO of Gundagai Meat Processors (GMP) and the systems and technologies used at the plant to ensure sustainable and ethical processing and production of lamb and discover what he says about existing and emerging careers in the industry. <u>https://youtu.be/s-WECeqkI2U</u>

**Read** about a former Merchant Banker, Mr. Mark Hopkinson, who is making a career out of growing, processing and producing his own red meat products at <u>http://www.afr.com/lifestyle/banker-farmer-butcher-mark-hopkinsons-journey-in-ethical-beef-20160915-grhc58</u>

Use the Myfuture website to discover more about careers in the industry and broader supply chain <u>https://</u> myfuture.edu.au/occupations/details?anzsco=831311A

**Discover** the types of scholarships offered by the AMPC and think about whether the AMPC can see a need for young people to enter the industry with skills in science, information technology, design and technology, engineering or mathematics. See **Resource 1.3.1**.

**Complete** an analysis of skills and qualities associated with occupations in the industry and broader supply chain, with a specific emphasis on how these occupations need skills in science, information technology, design and technology, engineering or mathematics.

Think about where skills in science, information technology, design and technology, engineering or mathematics might be needed in order to be able to:

- operate and design systems and technologies to treat the livestock ethically,
- reduce manual handling and repetitive work,
- reduce the risk of injuries,
- manage water, energy and waste productively,
- maintain equipment,
- collect data for the processor,
- process data from equipment,
- make money or save money, and
- assist meat processors market a quality product.

**Ask each** student to share what their research has told them and what they still have to accomplish within the task with their peers, the teacher and family.

#### Prerequisite for progression:

Students have worked as a class, individually and in teams and collected research on about current and future work opportunities in the Australian meat processing industry. Websites, videos, images and stories are used to contextualise understanding. Students will share their ideas with peers, the teacher and family.

# Step 4: Dream

Objective: Ask students to imagine how they are going to create a portfolio of career profiles about current or future work opportunities in the Australian meat processing industry. Ask students to visualise career profiles that will be featured in their blog and review, and shared in a mock 'Careers Day' presentation.

**Ask** students in their teams, to create a vision for their portfolio of career profiles. Share **<u>Resource 1.4</u>** with students to assist them in their thinking and dreaming.

View existing career profiles <u>http://www.tafesa.edu.au/courses/career-profiles</u> and <u>http://www.dpi.</u> nsw.gov.au/\_\_data/assets/pdf\_file/0011/578324/careers-in-agriculture.pdf

**Ask** students to decide on the careers in the red meat processing industry and broader supply chain that they will feature in their career profiles.

**Ask students to visualise** their career profiles, and create new narratives regarding current or future work opportunities in the Australian meat processing industry.

Develop solutions by brainstorming.

Invite each team of students, to visualise their creative direction for their solutions.

Ask students to imagine the steps involved in designing their solutions.

**Challenge students** to think about the materials, tools, and equipment they will need to design their individual work samples. Will they use digital or non-digital equipment and tools?

**Ask students** how they might communicate their career profiles about current or future work opportunities in the Australian meat processing industry.

### Progressions for Learning:

The class has brainstormed ideas to begin creating their portfolio of career profiles career profiles about current or future work opportunities in the Australian meat processing industry.

# Step 5: Design

Objective: Ask students to explain, prepare and action how they are going to design and create their career profiles about current or future work opportunities in the Australian meat processing industry. They also use their understanding of three or more careers in the industry to write both a blog post and a review about them, and then design a mock 'Careers Day' presentation.

**Ask students** to decide on the careers in the meat processing industry or broader supply chain, they are going to feature in their career profiles, blog post, review and 'Careers Day' presentation.

**Talk** about the importance of a clear layout and structure that makes it easy for an audience to understand and interpret the information given.

Talk about the importance of sourcing graphics, photos and information correctly.

**Review** rules on personal safety, group safety, and classroom and furniture safety with the students. Ask students to establish a workstation and gather the materials and tools they require. Talk about storing their career profiles, blog, review and presentation safely and keeping a record of the processes they used to create them.

**Ask students** to draft the steps involved in making their chosen digital or non-digital designs. See **<u>Resource</u>**<u>**1.5**</u>.

**Ask students** to gather the materials, tools, and equipment needed and then plan each step involved in creating the digital or non-digital solution.

Talk with students about how they might share and present their solutions to an audience?

**Ask students** to explain how they plan to finalise and create their solutions with another peer in the class and seek feedback on their ideas.

### Progressions for Learning:

Students are able to document in oral or written/digital forms how this project is to occur. The understanding is demonstrated by the students explaining their thinking to a peer in the class.

# Step 6: Deliver- produce

Objective: Have students deliver their career profiles regarding current or future work opportunities in the Australian meat processing industry. They also deliver a mock 'Careers Day' presentation.

The Delivery phase has two stages – production and publication. In the production stage the project comes to life – this is the doing phase. At the end of this phase, the publication/presentation of career profiles should be completed. Similarly, the presentation should also be completed.

Ask students to design and create their individual solutions required in this unit, including their:

- career profiles about current or future work opportunities in the Australian meat processing industry, using **Resource 1.6**;
- blog post and review of three or more careers in the industry; and
- mock 'Careers Day' presentation.

In the Publish phase, students get to showcase all of their thinking and planning. This is the time when students present their solutions to each other or an audience. This is also a suggested time for peer or self-assessment.

Ask students to share their careers profiles, blog post, reviews and presentation with others.

**Video student** presentations, where possible and enjoy a day of learning about current or future work opportunities in the Australian meat processing industry.

### Progression for learning:

Students have produced solutions featuring career profiles about current or future work opportunities in the Australian meat processing industry. The students have also written a blog post and a review of three or more careers in the industry, and presented their career profiles as part of a mock 'Careers Day' presentation.

# Step 7: Debrief

Objective: Assess the results of the solutions featuring career profiles about current or future work opportunities in the Australian meat processing industry. Assess the accompanying blog post, reviews and mock 'Careers Day' presentation.

#### Ask students to reflect on their learning. See Resource 1.7.

**Ask students to re-tell** their findings about current and future work opportunities in the Australian meat processing industry.

Invite students to describe the processes they used in:

- designing their career profiles about current or future work opportunities in the Australian meat processing industry,
- writing their blog post and reviews, and
- creating their mock 'Careers Day' presentation.

**Ask students to write** about the quality of their planning, their finished work and whether they enjoyed the task.

### Reflect on the learning

Invite students to complete a self-assessment activity. Ask questions like:

- How has my/our attitude and behaviour changed as a result of my learning?
- How well did I/we contribute to any pair/team learning activities?
- How can I/we apply what I/we have learned to another topic?

# **References and Resources**

Anvill Media Pty Ltd (2016) MINTRAC 2 Greenhams V2. Retrieved from https://www.youtube.com/watch?v=cOrBAd7-Pfo&feature=youtu.be

Australian Agricultural Company (2016) Australian Agricultural Company. Retrieved from <a href="http://aaco.com.au/people-careers/our-jobs/">http://aaco.com.au/people-careers/our-jobs/</a>

Australian Broadcasting Commission (2016) Landline. A Cut Above. Retrieved from http://www.abc.net.au/landline/content/2012/s3615247.htm

Australian Curriculum Assessment and Reporting Authority (2016) Australian Curriculum. Retrieved from <a href="http://wwwaustraliancurriculum.edu.au">http://wwwaustraliancurriculum.edu.au</a>

Australian Government. (2015) Australian Apprenticeships. Butcher: Andrew Papandrea. Retrieved from <a href="https://www.australianapprenticeships.gov.au/australian-apprenticeships-ambassador/matthew-papandrea">https://www.australianapprenticeships.gov.au/australian-apprenticeships-ambassador/matthew-papandrea</a>

Australian Government (2016) Australian Training Awards. David Bridge. Retrieved from https://www.australiantrainingawards.gov.au/finalists/david-bridge

Australian Meat Processor Corporation (2016) The Big Grey Bubble, Oakey Beef. Retrieved from http://www.ampc.com.au/2016/07/The-Big-Grey-Bubble-Oakey-Beef.

Australian Government. Department of Agriculture and Water Resources (2016) Animal Welfare Codes of Practice. Retrieved from <u>https://www.agric.wa.gov.au/animalwelfare/animal-welfare-codes-practice</u>

Canva (2016) Canva. Retrieved from https://www.canva.com

Crockett, L. & Jukes, I. & Churches, A. (2011) Literacy is not enough. 21st Century Fluency Project Inc.

Department of Industry, Innovation and Science (2013) The Butchers. The Dardanup Butchering Company. Retrieved from <a href="https://www.youtube.com/watch?v=dvlBiWRWff8&index=28&list=PLOe\_FXYm1yBV1H6ohnhfFl\_gmRx-Y8I5Z">https://www.youtube.com/watch?v=dvlBiWRWff8&index=28&list=PLOe\_FXYm1yBV1H6ohnhfFl\_gmRx-Y8I5Z</a>

Department of Industry, Innovation and Science (2012) The Chef. Colin's Story. Retrieved from https://www.youtube.com/watch?v=AU8dRRx14wQ&index=30&list=PLOe\_FXYm1yBV1H6ohnhfFl\_gmRx-Y8I5Z

Department of Industry, Innovation and Science (2013) The Farmer. Alistair's Story. Retrieved from <a href="http://www.youtube.com/watch?v=WU5VZ901Z10&list=PL9CC4BF1401DCA">http://www.youtube.com/watch?v=WU5VZ901Z10&list=PL9CC4BF1401DCA</a>

Education Services Australia (2015) Myfuture. Meat Processing Worker. Retrieved from https://myfuture.edu.au/occupations/details?anzsco=831311A

Fletchers International Exports (2016) Fletchers International Exports. Retrieved from http://www.fletchint.com.au/

FTH Skills Council. (2013) Career and Personal Learning Plan. Information for the South Australian Meat Industry. Retrieved from <a href="http://www.fthskillscouncil.com.au/">http://www.fthskillscouncil.com.au/</a>

Global Digital Citizenship Foundation (2015) Solution Fluency Activity Planner. Retrieved from <a href="https://globaldigitalcitizen.org/">https://globaldigitalcitizen.org/</a>

Glogster (2016) Glogster. Retrieved from www.glogster.com

Government of New South Wales (2016) Department of Primary Industries. School Propgram Ideas in DPI NSW. Retrieved from <a href="http://www.dpi.nsw.gov.au/\_\_data/assets/pdf\_file/0011/578324/careers-in-agriculture.pdf">http://www.dpi.nsw.gov.au/\_\_data/assets/pdf\_file/0011/578324/careers-in-agriculture.pdf</a>

Government of South Australia (2016) TAFE SA. Career Profile Examples. Retrieved from http://www.tafesa.edu.au/courses/career-profiles

Gundagai Meat Processors (2016) Gundagai Meat Processors. Retrieved from <a href="http://www.gmpgundagai.com.au/careers/">http://www.gmpgundagai.com.au/careers/</a>

Heilbron, S.G. 2016. Evaluating the Socio-economic benefit of the red meat processing industry in regional Australia. (Unpublished)

JBS Australia (2016) JBS Australia. Retrieved from http://www.jbssa.com.au/

Meat and Livestock Australia (2016) About the National Livestock Identification System. Retrieved from <a href="http://www.mla.com.au/meat-safety-and-traceability/red-meat-integrity-system/about-the-national-livestock-identification-system/about-the-national-livestock-identification-system/">http://www.mla.com.au/meat-safety-and-traceability/red-meat-integrity-system/about-the-national-livestock-identification-system/</a>

Meat and Livestock Australia (2014) Target 100. Gundagai Meat Processors. Retrieved from http://www.target100.com.au/Farmer-stories/Gundagai-Meat-Processors Mintrac. Careers in the Australian Meat Industry (Brochure)

Oklahoma Horizon TV (2010) Understanding Animal Rights – Temple Grandin. Retrieved from <a href="https://www.youtube.com/watch?v=Oy-kAW3beqc">https://www.youtube.com/watch?v=Oy-kAW3beqc</a>

Picartia (2016) Picartia. Retrieved from www.makeuseof.com/dir/picartia

Teys Australia (2016) TEYS Australia. Retrieved from http://www.teysaust.com.au/

Thomas Foods International (2016) Thomas Foods International. Retrieved from <u>http://thomasfoods.com/</u> and <u>https://vimeo.com/62319210</u>

Voice Thread (2016) Voice Thread. Retrieved from http://voicethread.com

Winter, M. (2016) Banker, farmer, butcher. Mark Hopkinson's journey in ethical beef. Retrieved from http://www.afr.com/lifestyle/banker-farmer-butcher-mark-hopkinsons-journey-in-ethical-beef-20160915-grhc58

# Student Project Files





Where Might a Career in Red Meat Processing Take You?

# The essential question:

What benefits accrue to students and processors when we have an understanding of the current and future work opportunities in the Australian meat processing industry?

### Step 1: The scenario

The Australian Meat Processor Corporation (AMPC) is preparing for the future leaders in Australia's red meat processing industry, by announcing new opportunities to engage young people in the fascinating possibilities within the industry.

The Chairman of AMPC, Mr. Peter Noble said "It is not only the expanding demand of processing and production technologies that are increasing; employees' know-how must also grow, in particular in relation to their knowledge of Industrial Information Technology (IIT). Interdisciplinary skills are in demand because right now, modern technologies are being developed, defined and modified, to serve as a template for marketable processing systems. The solutions are hi-tech at their finest. They perceive their environment via 3D cameras and optical sensors. Robots in meat processing systems can determine their exact positions and grasp and move a carcass with their gripping tools.

Training and qualifications will therefore play a key role in meat processing careers in the future".

Gain an insight into some interesting and passionate people working in their dream careers. You'll get insights that can't be read in brochures, textbooks or even Googled. In addition, you'll hear firsthand about the diverse careers that can start with meat processing and pursued through combinations of meat processing with other industries.

Take a personal tour of two meat processing plants and observe the work that goes on behind the scenes. Get to understand the stages involved in meat processing and production and the "Paddock to Plate" career pathways available to you.

Investigate career profiles in the meat processing sector by witnessing them at work!

What makes red meat processing plants and the careers of those who work in them interesting to study is their wide diversity and commonalities throughout the world. Some processing plants are highly mechanised, others aren't. Some use robotics, others don't. Some are using automated meat processing systems that reduce manual handling and provide a consistent flow of product, while others are using x-ray technology to measure carcass dimensions to optimise cutting accuracy. Learn how processing plants are continuously changing and evolving, with the integration of high-tech robotics and automated systems. As a result these systems offer new career options.

Hear from people working in design and engineering occupations about the services they deliver and the high-tech robotic and automated processing systems they have designed and installed in meat processing plants.

Importantly, learn from people working in meat processing plants, about their processing techniques, technologies and processes, and the collaborative environment it offers those interested in seeking career pathways within the meat processing industry.

You are tasked with completing an analysis of the skills and qualities associated with occupations in the industry and broader supply chain, with a specific emphasis on how these occupations need skills in science, technology, engineering or mathematics, in order to be able to operate and design systems and technologies to:

- treat livestock ethically,
- reduce manual handling and repetitive work,
- reduce the risk of injuries,
- manage water, energy and waste productively,
- maintain equipment,
- collect data for the processor, and
- make money or save money, and help meat processors market a quality product.

Could your future career be found within the industry?

Become a Career Advisor and use a range of activities, videos, images, information and websites containing information about careers in red meat processing in Australia to create a portfolio of career profiles. Use your understanding of three or more careers in the industry to write both a blog post and a review about them, with examples to illustrate those careers.

Share the portfolio in a mock 'Careers Day' presentation, in which you explain the current and future work opportunities in the Australian meat processing industry.

What investigations can assist you to research current and future work opportunities in the Australian meat processing industry? Will you investigate some of the careers currently available? Will you investigate the possibilities in meat processing with additional skills and qualifications in computer science, engineering, environmental science, logistics, business analysis, marketing, economics and business?

AMPC and other meat processors can help out with lots of information, images and videos on their websites. http://www.ampc.com.au/education-training/schoolresources/careers

Your challenge is to use the websites and a range of activities and videos to help understand how Australian meat processors produce an array of different beef, lamb and goat meat cuts for local, national and international markets, while using highly skilled people in addition to innovative automated technology systems and robotics. How will you create your portfolio of career profiles in this project? How might you present your blog, review and 'Careers Day' presentation to others?

Might you use:

- PicArtia <u>www.makeuseof.com/dir/picartia</u> where you can create photo mosaics
- Glogster <u>www.glogster.com</u> where you can mash up media
- Voice Thread <u>http://voicethread.com</u> where you can upload video, record audio, add still images and create a digital story
- Canva <u>https://www.canva.com</u> where you can create designs using a range of templates



# Australian Meat Processor Locations

Locate where Australian meat processors are situated and which ones might offer work experience or job vacancies in your state or territory.



# What jobs can you do in the meat industry?

Read about the variety of jobs that currently exist in the red meat industry.





#### **MEAT MATTERS**

- The Australian meat industry is one of Australia's largest export earners, earning approximately \$8b per year
- Australia is one of the world's largest exporters of red meat and livestock, exporting to more than 135 countries. Over 60% of Australian beef production is exported, primarily to the United States and Japan
  - It employs around 60,000 people from apprentices through to management
  - It has one of the best training systems in the world with over 90% of the workforce holding a qualification or in training

#### WHAT JOBS CAN YOU DO IN THE MEAT INDUSTRY?

#### LABOURERS AND GENERAL WORKERS

Boning Room Packer Stock Handler Processor/Packer Production Labourer Assistant Meat Retailer Cleaner Forklift Driver Storeperson Offal Room Worker Machine Operator Customer Service Assistant Smallgoods Worker Pallet Controller Picker/Packer Truck Driver Finance Clerk/Costing Assistant Cashier Data Entry Operator Storeperson Cash Van Sales Driver **Telesales** Operator Materials Supply Assistant Gatehouse Operator Equipment Operator

#### TECHNICAL, TRADE AND SKILLED WORKER POSITIONS

Quality Assurance Officer Meat Inspector Domestic Boner Slicer Electrician Maintenance Officer Laboratory Technician Refrigeration Technician Butcher Smallgoods Maker Line Leader Bandsaw Operator Meat Worker Rendering Plant Operator

#### TECHNICAL, TRADE AND SKILLED WORKER POSITIONS CONTINUED Slaughter Floor Operator

Smallgoods Production Operator Boutique Meat Producer Health and Safety Officer

Human Resources Officer Mechanical Engineer Mechanical Engineering Apprentice Fabrication Engineering Apprentice

Electrical Engineering Apprentice **Refrigeration Specialist** Smallgoods Manufacturer Team Leader Laboratory Assistant Gardener/ Landscaper Security Officer **OH&S** Assistant System Administrator Stock Controller Load Planner Payroll Officer Draughtsperson Customer Services Coordinator Sales Administrator Workplace Trainer and Assessor Fabrication Engineer Electrical Engineer

#### SENIOR TECHNICAL AND SUPERVISOR POSITIONS

Foreperson Warehouse Supervisor Training Coordinator Human Resources Coordinator OH&S Coordinator Maintenance Shift Supervisor Supervisor Supermarket Meat Dept Manager, Traditional Retail

Outlet

#### SENIOR TECHNICAL AND SUPERVISOR POSITIONS CONTINUED

Manager, Specialist Retail Outlet Laboratory Assistant Quality Assurance Manager Meat Inspector AOIS Export Supervisor Team Leader Environment Officer Office Administrator Small Business Manager Production Supervisor Maintenance Supervisor Accounts Supervisor Executive Assistant **Research and Development** Assistant Fleet Manager Assistant Accountant Chief Purchasing Officer Human Resources Officer Return-to-Work Coordinator Information Technology Support Officer Networks Administrator

#### MANAGEMENT

**Production** Operator Plant/Abattoir Manager Middle Manager in Supermarket Meat Retail Manager Business Manager Enterprise Manager Meat Plant Operations Manager Smallgoods Manufacturing Manager Section Manager Training & Development Manager Safety and Environment Manager Human Resources Manager Maintenance Manager

#### MANAGEMENT CONTINUED Office Manager Manufacturing Manager Operations Manager Production Analyst Special Projects Manager Production Specification Manager By-Products Manager OH&S Manager Warehousing Manager Transport Manager

Accounts Manager Finance Manager Engineering Manager Sales and Marketing Manager Regional Sales Manager Business Development Manager Contracts Manager Information Technology

#### GRADUATE POSITIONS

Manager

Food Technologist Laboratory Manager Environment Manager Horticulturalist Human Resources Manager Chief Financial Officer Senior Manager (All Areas) International Trade Manager Nurse Employee Relations Manager Business Systems Analyst Meat Scientist Environmental Scientist Engineer Software Developer



### WHY CONSIDER A CAREER IN THE MEAT INDUSTRY?

- It is a career and a lifestyle all in one.
- Training is conducted predominantly on-the-job; earn money while you train!
- There are employment opportunities across Australia and internationally.
- Enhance your skills become a supervisor or manager.
- You will develop skills that are applicable across all sectors of the food industry.
- · There is opportunity to specialise.
- Generous industry support is available for further education and training.
- The meat industry offers a dynamic, challenging working environment.

#### MAIN INDUSTRY SECTORS

Meat processing Meat retailing Smallgoods manufacturing Food services

#### WHAT LEVEL OF EDUCATION IS NEEDED FOR A CAREER IN THE MEAT INDUSTRY?

- Careers are available from Certificate I to postgraduate degrees.
- Nearly every new employee can undertake an Apprenticeship or Traineeship.
- Most employees receive the opportunity to undertake additional training beyond their first qualification.
- Many companies provide additional training at Certificate IV and Diploma levels.

#### HOW DO I START MY CAREER IN THE MEAT INDUSTRY?

Australian Apprenticeships are available in abattoir operations, smallgoods manufacture, food services and retail butchery. For more information on obtaining an Australian Apprenticeship go to www.australianapprenticeships.gov.au

For more information on meat industry careers, log on to <u>www.myfuture.com.au</u>

Find a job through job advertisements in newspapers or online – <u>www.jobsearch.gov.au</u> or contact your local butcher or meat processing plant.

Once you have accepted a job, your employer will organise your traineeship/apprenticeship for you.

#### INDUSTRY CONTACTS

National Meat Industry Training Advisory Council (MINTRAC) 1800 817 462 or email <u>mintrac@mintrac.com.au</u>

Australian Meat Industry Council (AMIC) 02 9086 2200 or email <u>admin@amic.org.au</u>

Meat & Livestock Australia 02 9463 9333 or email <u>info@mla.com.au</u>



Do you still want to enjoy your current **LIFESTYLE**?

Do you want to develop lifelong **FRIENDSHIPS** while earning money?

A career in the **MEAT INDUSTRY** is waiting for you!



# Define

Submit a written definition of the challenges you are to undertake.

# Discover

In this stage, the research and digging begins. This involves obtaining the background information that gives the problem its context, and identifying what you need to know and what you need to be able to do to solve the problem.

### Links for Research and Reference

**View** a sample of website materials, videos, print materials and social media tools that cover various meat processing systems, marketing and labelling topics.

**Examples** include:

- Thomas Foods International
  <u>http://thomasfoods.com/</u>
- Gundagai Meat Processors
  <u>http://www.gmpgundagai.com.au/careers/</u>
- Fletchers International Exports
  http://www.fletchint.com.au/
- JBS Australia http://www.jbssa.com.au/
- The Australian Agricultural Company
  <u>http://aaco.com.au/people-careers/our-jobs/</u>
- Teys Australia at http://www.teysaust.com.au/

**Take a virtual tour** of meat processing plants using videos and discover the wide range of jobs available within the industry. View videos about the main processing systems used by other red meat processors in Australia.

For example:

- Thomas Foods International, an international and domestic processor and supplier located in South Australia <u>https://vimeo.com/62319210</u>
- Gundagai Meat Processors, a national processor and supplier to some of Australia's largest supermarkets <u>https://youtu.be/bZKSsHXO6rc</u> and
- D & S Afflick, a smaller domestic processor who supplies markets in New South Wales <u>https://youtu.be/y2mPEqIuLVY</u>.

**Hear** from a range of people, from CEOs to processors and butchers, who work within them about their processing techniques, work they undertake, and how there are a range of careers available in the modern meat processing plant. <u>https://youtu.be/4pKzgbypZGM</u>

**Play a video** from Thomas Foods International, and record all the possible careers that could be available in a 'Paddock to Plate' pathway in the red meat industry. See <u>https://vimeo.com/62319210</u> . For example: butcher, packer, transporter, meat inspector, exporter, fork lift driver, truck driver, processor, grader, trimmer, boner, safety officer, MSA Grader, stock handler, farmer, saleyard auctioneer, and business owner.

**Hear** from Alistair Keller who completed an Australian School-Based Apprenticeship in Agriculture, and discover where this qualification took him in the industry. See <u>http://www.youtube.com/</u> watch?v=WU5VZ901Z10&list=PL9CC4BF1401DCA

Discover how a retail butcher invests in apprentices in his red meat retailing business <u>https://www.youtube.</u> com/watch?v=dvlBiWRWff8&index=28&list=PLOe\_ FXYm1yBV1H6ohnhfFl\_gmRx-Y8I5Z

**Read** about Matthew Papandrea, who qualified with a Certificate III in Meat Retailing <u>https://www.</u> <u>australianapprenticeships.gov.au/australian-</u> <u>apprenticeships-ambassador/matthew-papandrea</u>

**Learn** about David Bridge, and find out where an Advanced Diploma in Meat Processing led him in the industry <u>https://www.australiantrainingawards.gov.</u> <u>au/finalists/david-bridge</u>

Find out about the career undertaken by Colin Wilson in the 'Paddock to Plate' pathway, offered by the industry at <u>https://www.youtube.com/</u> watch?v=AU8dRRx14wQ&index=30&list=PLOe\_ FXYm1yBV1H6ohnhfFl\_gmRx-Y8I5Z

**Listen** to a second podcast in which Mr. Will Barton CEO of Gundagai Meat Processors talks about emerging careers in the industry, and what inspired him to get involved in the industry.

#### https://youtu.be/bDQYRj\_bTZM

**Hear** from a meat scientist and discover what is involved in this occupation and the career path that was undertaken. <u>https://youtu.be/zgaRXyEVdTM</u>

**Hear from Project Engineers** who design and manufacture meat processing systems that have been installed and maintained in the vast majority of current meat processing plants. Find out about the science, engineering, logistics, and information technology skills they need in order to undertake their jobs as Project Engineers. Think about the skills and training that would be needed to operate and maintain processing equipment of this nature.

#### https://youtu.be/4pKzgbypZGM

**Find out** about the types of careers available at Scott Automation and Robotics and hear about the graduate program they offer students. https://youtu.be/dm3QFoAKIH0



Listen to a podcast and hear from Mr. Will Barton, the CEO of Gundagai Meat Processors (GMP) and the systems and technologies used at the plant to ensure sustainable and ethical processing and production of lamb and discover what he says about existing and emerging careers in the industry. <u>https://youtu.be/s-</u> WECeqkl2U

Read about a former Merchant Banker, Mr. Mark Hopkinson, who is making a career out of growing, processing and producing his own red meat products at <u>http://www.afr.com/lifestyle/banker-farmerbutcher-mark-hopkinsons-journey-in-ethicalbeef-20160915-grhc58</u>

Use the Myfuture website to discover more about careers in the industry and broader supply chain <u>https://myfuture.edu.au/occupations/</u> details?anzsco=831311A

**Discover** the types of scholarships offered by the AMPC and think about whether the AMPC can see a need for young people to enter the industry with skills in science, information technology, design and technology, engineering or mathematics. See <u>Resource 1.3.1</u>.

**Complete an analysis** of skills and qualities associated with occupations in the industry and broader supply chain, with a specific emphasis on how these occupations need skills in science, information technology, design and technology, engineering or mathematics.

Think about where skills in science, information technology, design and technology, engineering or maths might be needed inorder to be able to:

- operate and design systems and technologies to treat the livestock ethically,
- reduce manual handling and repetitive work,
- reduce the risk of injuries,
- manage water, energy and waste productively,
- maintain equipment,
- collect data for the processor,
- process data from equipment,
- make money or save money, and
- assist meat processors market a quality product.



37

### My notes:




**References and Sources** 


# Discover the scholarships the AMPC makes available

Read the brochures below and think about whether the AMPC can see a need for young people to enter the industry with skills in science, information technology, design and technology, engineering or mathematics.



## YOUR FUTURE IN THE AUSTRALIAN FOOD INDUSTRY

Red Meat Manufacturing Scholarship Programs



www.ampc.com.au



AUSTRALIAN MEAT PROCESSOR CORPORATION

#### WHO WE ARE

The Australian Meat Processor Corporation (AMPC) is the Rural Research and Development Corporation (RDC) for the red meat processing industry in Australia. AMPC's mandate is to provide research, development extension and marketing services that improve the productivity, profitability and sustainability of the sector. Red meat processor levies are strategically invested in programs that deliver a range of benefits to the industry and the broader Australian community.

#### WHAT WE DO

AMPC delivers project outcomes in areas that include process automation and sensing, environment and sustainability, food safety, product integrity and meat science, capability development, education and extension, marketing and market access. It has and will continue to provide innovation services for a globally competitive red meat processing industry.

#### SCHOLARSHIP PROGRAMS

AMPC endorses a range of initiatives to encourage the uptake of careers within the red meat processing industry. AMPC is working towards implementing an integrated approach effectively covering the range of education pathways from vocational through to post-doctoral studies. AMPC seeks to address capability gaps and difficulties associated with the attraction and retention of highly qualified and capable meat processing industry personnel. This booklet provides a summary of the scholarships available through the AMPC Integrated Scholarships Program.



AMPC focuses on providing vocational training and upskilling opportunities for the red meat processing plant staff by providing priority pathways to build and retain capability within the sector.

#### Australian Rural Leadership Foundation (ARLF) Agribusiness Leadership Program

Starting in 2016, AMPC will be offering 4 scholarships per year to participate in the Australian Agribusiness Leadership Program (AALP). The AALP is a leadership development program tailored to the needs of the Australian Agribusiness sector. It has been specifically designed for members who hold existing middle and senior management positions in the agribusiness industry.

The program covers a range of topics including:

- Strengthening leadership capabilities
- Facilitating deeper understanding of
- sectoral challenges and opportunities
- · Fostering peer relationships and support
- · Communication, influence and negotiation skills
- Effective and constructive collaboration.



#### **ARLF Australian Rural Leadership Program**

The Australian Rural Leadership Program (ARLP) is rural Australia's iconic leadership development program, based on the Australian Rural Leadership Foundation's decades of experience. AMPC is offering 1 scholarship per year to participate in the program. It follows a leadership model that reflects current thinking and practice in the areas of adult education, leadership and capacity building. It consists of up to 50 days, delivered in multiple sessions over 15 months.Five of these sessions take place in locations across Australia, and one takes place overseas.

#### Red Meat Processing Upskilling Scholarship program

This scholarship program allows existing red meat industry personnel to upgrade their current skills and qualifications at a Certificate IV level or higher by offering a 85,000 scholarship. The sponsorship will also include on-line professional development assistance and study support webinars. There are five scholarships on offer each year for 5 years, starting in 2016.





#### 2. UNIVERSITIES SCHOLARSHIP PROGRAMS

AMPC continues to recognise the need to foster professionals who will contribute to industry innovation. The universities scholarships programs develop and build the skills of undergraduates, post-graduates and post-doctoral students and propose pathways from tertiary studies to developing a career within the red meat processing sector.

#### **Queensland University of Technology (QUT) Integrated** Scholarship Program in Process Engineering

In partnership with AMPC, QUT is establishing a prestigious scholarship scheme attracting outstanding students to choose process engineering and exposing those students to the opportunities and challenges offered by the red meat processing industry. From 2017, the program will offer one sponsorship of the Dean Scholarship program, 4 scholarships per year for 3 years, for 2nd and 3rd year Bachelor of engineering (Process), 2 scholarships for Master students and 2 PhD.

AUSTRALIAN MEAT PROCESSOR CORPORATION

#### Royal Melbourne Institute of Technology (RMIT) Educational Pathways in Meat Sciences: **Creating a Highly Skilled Meat Industry**

The AMPC sponsored RMIT program is an integrated educational program to meet the capability needs of the Australian red meat processors. Over the next 5 years, the program will offer scholarships for 6 Honours students, 6 PhD students and one post-doc fellow in the areas of meat science and technology.

AMPC is currently seeking the involvement of other Universities for the development of additional scholarship programs built around the following themes: environment and water reuse, meat science, meat microbiology and safety, meat inspection and guality assurance

The program will be deployed over the next five years as described below.

#### Elite Meat Undergraduate Scholarships

Involving seven Universities nation-wide: Adelaide, Charles Sturt. Melbourne, Murdoch, Sydney, UNE and UQ along with beef and sheep meat processors, 14 scholarships will be offered annually to 3rd year undergraduate students through a competitive selection process, including: · Specific training in 2 industry relevant courses

- 16 weeks of work experience placement with an industry partner
- over 2 years • 1 Honour research project in relation with the industry partner
- · Employment by the industry partner for a 12 months graduate program



The University of Queensland Integrated Scholarship Program in Water, Water re-use and Environment

The partnership proposal is built around an integrated scholarship program incorporating undergraduate (BE/ME), PhD and postdoctoral placements. The multi-level program is designed to foster career development and to demonstrate that the meat processing industry contains broad opportunities. Demonstrating support for career paths at multiple development/qualification levels will assist in attracting outstanding personnel to the industry. The proposal is structure around a 5 year strategic partnership with activities including:

- 10 industry placements for training and engaging with
- elite undergrads; • 4 full PhD scholarships with operating funds;
- 2 partial funded postdoctoral fellowships :
- Vocational training for meat industry employees
- delivered by IWES through targeted short courses;

#### Meat Inspection and Quality Assurance Undergraduate Scholarships

Successful undergraduate and graduate Animal Science students will receive training as meat inspectors and quality assurance officers either during their undergraduate years or as a post graduate program. The students will receive the identified required theory training prior to undertaking an on-plant practicum to meet the on-the-job practice requirements for either the Certificate IV in Meat Processing (Meat Safety) or the Certificate IV in Meat Processing (Quality Assurance). This two year project seeks to develop a model which will ensure that high quality new meat inspectors and quality assurance personnel are entering the industry, thus resolving an ever-increasing succession problem across the industry

#### The University of Melbourne Pathways to upskilling the

Meat Industry in the Production of High Quality Meat The program proposes to appoint one post-doctorate, 5 PhD students, 5 small Masters scholarships, and fund five visiting scientists, all of whom will participate in workshops with industry, through AMPC. The research programs will be aligned with industry needs and will be conducted on the premises of processing plants wherever feasible, enabling rapid technology and knowledge transfer.

#### Curtin University Integrated Scholarship Program

in Red Meat Safety and Microbiology The integrated scholarship scheme will include scholarships for undergraduate, coursework, post-graduate and PhD scholarships, and a post-doctoral fellowship. A yearly forum to facilitate knowledge sharing among the scholarship holder, the partners, AMPC and the red meat processing industry will also be facilitated by the scheme. The key outcomes of the scheme will be graduates at a range of levels with expertise in the red meat safety and microbiology area. These graduates will be aware of the actual issues the industry faces in this area and be ready to enter the red meat processing industry workforce with this knowledge



AUSTRALIAN MEAT PROCESSOR CORPORATION

#### **3** YOUNG SCIENTISTS PROGRAM

AMPC financially supports the Australian Intercollegiate Meat Judging Association (ICMJ) to organise activities such as the annual tertiary conference, the industry and education week, a US industry tour and several meat judging competitions including the secondary school judging programs in Queensland and NSW.

The ICMJ association showcases the red meat processing industry to more than 100 secondary school students and more than 2,000 undergraduates each year.

#### **ABARES Young People in Agriculture Award**

AMPC sponsors one award from The ABARES Young People in Agriculture Awards. Those annual awards recognise innovative scientific projects from young rural innovators that will contribute to the ongoing success and sustainability of Australia's Agribusiness sector as a whole.





For information about any of the projects listed in this brochure, or to find out about other funding opportunities, please contact Estelle Lifran at AMPC on (02) 8908 5500 or admin@ampc.com.au

# Dream

This is where you use the knowledge you've gathered to visualize a creative and appropriate solution. This is an holistic process where we imagine what the solution will appear like as it would in the future. Instead of asking "why" we ask "why not?" The question of "what's the worst that could happen" becomes "what's the best that could happen?"

**Consider** the many possible ways you can design and create a career profile.

On which careers might you want to focus?

How might you create your portfolio of career profiles?

**Will** your career profiles feature current or future jobs in the industry and broader supply chain?

**How** do you want job seekers and other students to react when they read the career profiles?

**Visualise** your designs and develop possible solutions by brainstorming all possible ideas.

**Visualise** your creative direction for your career profiles, blog post, review and presentation.

Imagine the steps involved in designing your solutions.

**Think about** the materials, tools, and equipment you will need to design and create your individual solutions. Will you use digital or non-digital equipment and tools?

### Resource **1.5** Student Task Sheet

# Design

Commence by establishing your desired outcome, then visualise the various steps necessary to achieve the solution visualised in measurable, achievable steps.

Prepare a project plan to outline information that needs to be gathered, who is responsible, from where you will seek information, and how it will be gathered. Try and work out the order in which you are going to do things when researching and designing. Knowing what you have to complete, and in which order, will help you organise your time better during the project. Write it down as a suggested order of work.

What do I need to do?	How will I gather the information? How will I create my designs?	When will I do this?	How can my products and processes be improved?



Or, consider another type of Project Plan. Consider a plan with the following headings.

What	How	When	Who and what's needed	How will we know if it worked



#### You may like to sequence an order of work



Remember your task is to develop and produce career profiles about current or future work opportunities in the Australian meat processing industry, a blog post, and review of three or more careers in the industry, and a mock 'Careers Day' presentation.



# Deliver

This stage is the process by which the dream becomes a reality. It's where you actually complete the solution to the problem in two separate steps:

- Produce (career profiles about current or future work opportunities in the Australian meat processing industry; a blog post and review of three or more careers in the industry; a mock 'Careers Day' presentation), and
- Publish (the career profiles, blog post, reviews and present the mock 'Careers Day' presentation).

Use the following prompts to write your script for the 'Careers Day' presentation.

#### Write the introduction:

Write the body:

47

#### Write the conclusion:

# Debrief

Resource **1.8** Student Task Sheet

# Self-Assessment – Things to improve

You need to be able to judge and measure the success of your solutions in addressing the original tasks and achieving your goals.

Refer back to the earlier tasks set by AMPC whether you achieved your goals of:

- researching and creating career profiles about current or future work opportunities in the Australian meat processing industry;
- writing a blog post and reviews of three or more careers in the industry; and
- creating and sharing a mock 'Careers Day' presentation.

Review your solutions and see whether you/your team achieved the goals.

Reflect on the strengths and any weaknesses in the solutions that have been created.

Brainstorm any things that could have been done differently to get a better result.

#### Reflect on the learning

Complete a self-assessment activity. Using your learning journal to reflect on and answer the following questions:

- How has my/our attitude and behaviour changed as a result of my learning?
- How well did I/we contribute to any pair/team learning activities?
- How can I/we apply what I/we have learned to finding a career in the industry or broader supply chain?





