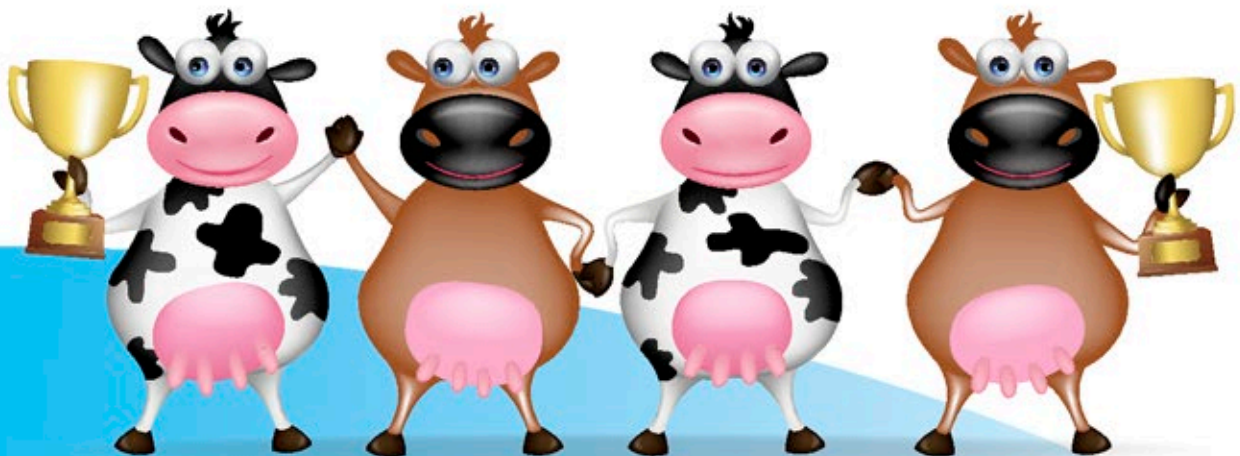




TEACHERS HANDBOOK 2023



THE COWS CREATE CAREERS PROJECT IS FUNDED BY:

Dairy Partners



Major Sponsorship Partners



THE HISTORY:

The Cows Create Careers project was initiated by the Lions Club of Strzelecki and McMillan College (Melbourne University) in 2004 into 9 Gippsland schools.

The committee consisted of a small group of volunteers who desired to share their passion and showcase the dairy industry and its opportunities to students in Gippsland. Many of those volunteers are still involved today.

The initial findings remain the legacy of the Cows Create Careers program 18 years later. The results are that many of our rural students are town kids who live in the country. They have not all had the opportunity to investigate the range of careers in Agriculture and specifically the dairy industry. Cows Create Careers can make this happen.

In 2022, the Cows Create Careers program was delivered Nationally to 23 dairying regions involving over 210 schools.

A special thanks to the volunteer dairy farmers and advocates who have been the reason for the program's success. Without you, Cows Create Careers would not have been able to profile the many students who have chosen to seek dairy industry employment opportunities. Let's keep this legacy rolling.

CONTACT DETAILS

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INTRODUCTION

Thank you for participating in the Cows Create Careers project.

Aims of the project are to:

- Introduce the dairy industry to school students
- Introduce students to pathways in the dairy industry and its many related career and educational opportunities
- Give students a hands-on experience working with calves
- Provide industry advocates and farmers to inform, encourage and support students
- Involve students in research and provide online support
- Motivate students to submit assessment tasks and attend the presentation and awards day for the region
- Provide incentives through a Cows Create Careers competition
- Celebrate student performance and reinforce career opportunities at the presentation and awards day.

PROJECT OUTLINE

Cows Create Careers is an innovative way to introduce the dairy industry to students. It aims to cater to students and schools at many levels.

The following considerations took priority in the project's design:

- The project must be highly motivational
- The project must cater to many learning styles and allow for differences in student entry levels
- Salient curriculum features of the project must be made explicit
- Evaluation and assessment opportunities must exist for all aspects of the curriculum
- The project must present a 'smorgasbord' of learning opportunities that allow teachers and students freedom of choice
- The rich context for the project will ensure integration across Key Learning Areas, especially Science, English, Maths, Humanities and ICT (Information Communication Technology)
- The project will provide a broad range of thinking skills, from transference and comprehension of knowledge through to higher-order skills such as analysing and synthesising data, forming judgments and making predictions
- Beyond evaluation/assessment at the school level, the criteria for selecting winning teams and awarding prizes must be clearly stated. Such criteria should link strongly to project aims and student learning.

Please refer to the CCC memory stick for 'project samples' and an electronic copy of the Cows Create Careers Handbooks. This is a good way to get the students started.

HOW TO GET STARTED

In schools, the preparation should begin well before the calves arrive. If students start early on their assessment tasks, it makes the timelines easier to achieve!

During this preparation, students will work together to learn about caring for calves. Details on how to prepare for the arrival of the calves in school appear in the Student handbooks. The calves are provided by local dairy farmers and will be in schools for a 3-week period. Industry advocates and/or dairy farmers are asked to demonstrate handling techniques and provide personal background about the dairying industry.

Cows Create Careers aims to involve students in active learning. In groups, students can research selected topics and present their findings to the class. It is intended that students work in teams of 2–5, for the duration of the program.

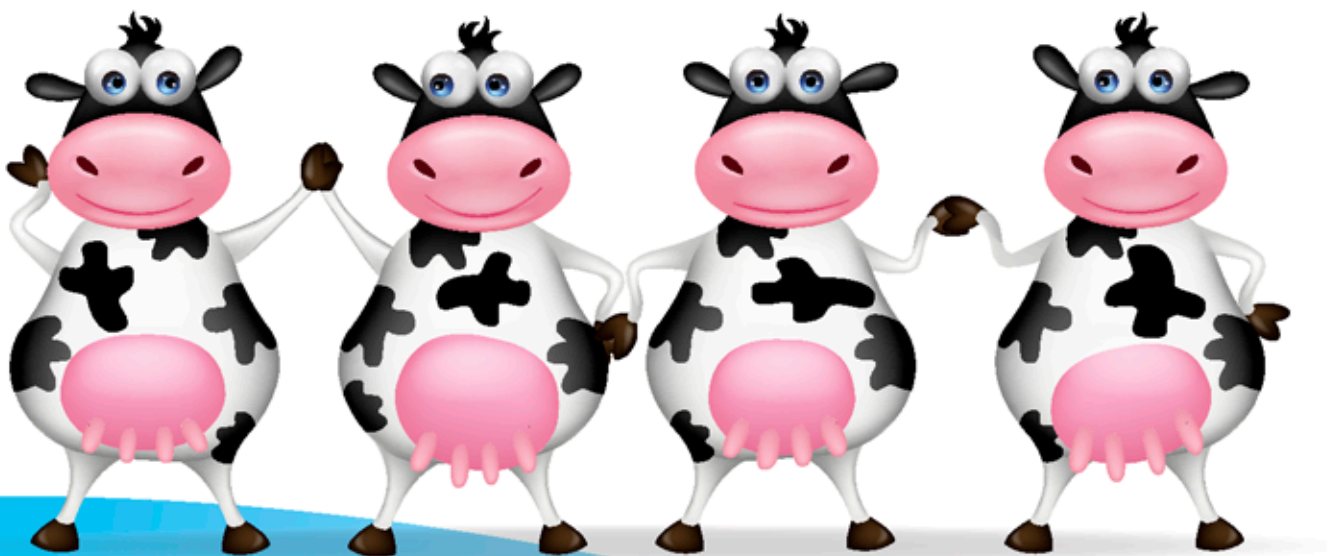
When the calves are in schools, it is expected that 'lessons' will move between the classroom and outdoors. Much of the lesson content will be driven by what is happening with the calves. During this time, students will be gathering data, recording data on class checklists, taking photographs and movies for their assessment tasks and continuing to learn about the animals and the industry. Depending on classroom resources, time inside might be spent with the teacher using a data projector to 'research' topics with the whole class.

ONLINE OPTIONS

Students can take part in a 5-week online learning experience.

Students can work in teams or individually to watch the series of videos about Bright and Future, our virtual calves and capture their growth rates in a graph and report.

Industry advocate visits can be in person or via Zoom or online alternatives.



SCHOOL RESOURCE KIT



The Cows Create Careers *School Resource Kit* aims to place an inquiry approach to learning at the students' fingertips. This approach motivates students to inquire, and places all the necessary resources within reach.

Through co-operative group work; and the support of teachers, industry advocates, and online

resources, teams work towards worthwhile and achievable goals.

Built into the project are opportunities for evaluation and assessment of student learning.

There are also opportunities for teachers and students to evaluate the Cows Create Careers project itself.

THE SCHOOL RESOURCE KIT CONSISTS OF:

Memory Stick

- Student handbooks – Full cream curriculum and Light curriculum
- Teachers handbook
- Education and training information
- Project logos and information
- Helpful tips for letters, emails and movie maker
- Project samples
- Project timelines and terms and conditions
- Helpful tips for Movie Maker/multi-media publishing tools
- MaxCare – Win \$1,000 – What a Great Idea!
- MaxCare – Calf rearing at your fingertips

NOTE:

The information on the memory stick should only be used under the supervision of the Cows Create Careers teacher.

Posters

- Hygiene & facility check poster
- Health check poster

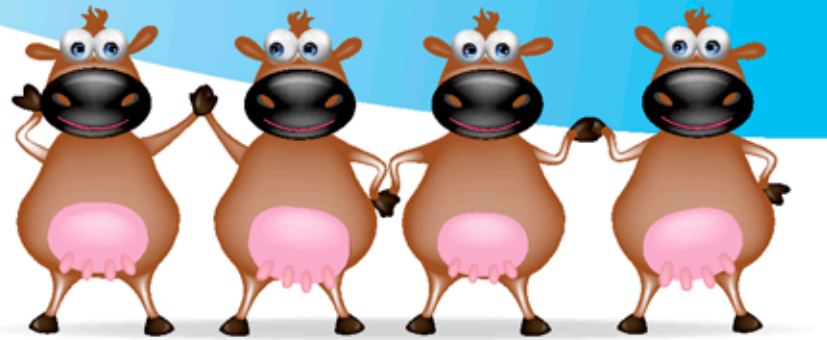
Checklists

- Daily and weekly checklists
- Resources/Documents
- Careers in the dairy industry

The project

- The project timelines at a glance and terms and conditions of entry
- The project 'What you should submit'
- Calf facility school checklist

OVERVIEW



Over the next few weeks, your school will be significantly involved in the lives of two calves. Caring for and monitoring the calves will be central to learning about the dairy industry and what it entails.

Competition

Work as part of a team and submit your work to have a chance to win prizes and awards.

Scientific report

Full cream curriculum

Create a science report to record the progress of the calves whilst they are in your care.

Presentation & awards day

Attend an interactive presentation and awards day where you will have the opportunity to share your learning.

Industry advocates and dairy farmers

When these guests engage with you and your school prepare questions and consider the knowledge that they can share with your class.

Letter/email task

Full cream curriculum

Write a letter or email to Jaydee Events Pty Ltd and make sure you tell them of your new-found understanding about the dairy industry.

Online calves

Full cream or Light curriculum

Work in teams or individually to view our virtual calves called Bright and Future. Capture their growth rates on a graph and report.

Multimedia authoring

Full cream curriculum

Choose a topic and create a Mootube moovie or PowerPoint presentation.

3D model

Full cream curriculum

Choose a topic and create a 3D model using visual art to demonstrate your dairy learning.

Caring for calves

Full cream or Light curriculum

Work as part of a team to care for the calves, monitor their health, growth and report on their condition.

Team discussion

Share your new awareness about rural industries and caring for animals with your team. Discuss your thought processes and understanding with your team.

Research

Work as part of a team to use the internet to research a topic and career pathway. Present the research and information as part of your assessment tasks.

Student worksheets

Light curriculum

Take part in a 5-week online learning experience. Capture your knowledge on the student worksheets.



CURRICULUM CONNECTIONS – YEARS 5–11



The Cows Create Careers project provides the creative teacher with ways to ensure the following ACARA outcomes are being addressed. We provide the opportunity, following is the “how”...

Curriculum connections – Year 5

Mathematics

- Choose appropriate units of measurement for length, area, volume, capacity and mass (ACMMG108).
- Pose questions and collect categorical or numerical data by observation or survey (ACMSP118).
- Construct displays, including column graphs, dot plots and tables, appropriate for data type, with and without the use of digital technologies (ACMSP119).
- Describe and interpret different data sets in context (ACMSP120).

Science

- Science involves testing predictions by gathering data and using evidence to develop explanations of events and phenomena and reflects historical and cultural contributions (ACSHE081).
- Construct and use a range of representations, including tables and graphs, to represent and describe observations, patterns or relationships in data using digital technologies as appropriate (AC SIS090).
- Compare data with predictions and use as evidence in developing explanations (AC SIS218).

- Communicate ideas, explanations and processes using scientific representations in a variety of ways, including multi-modal texts (AC SIS093).
- With guidance, pose clarifying questions and make predications about scientific investigations (AC SIS231).
- Identify, plan and apply the elements of scientific investigations to answer questions and solve problems using equipment and materials safely and identifying potential risks (AC SIS086).

Humanities

- Locate and collect relevant information and data from primary and secondary sources (ACHASSI095 & ACHASSI123).
- Organise and represent data in a range of formats including tables, graphs and large- and small-scale maps, using discipline-appropriate conventions (ACHASSI096 & ACHASSI124).
- Evaluate evidence to draw conclusions (ACHASSI101 & ACHASSI129).
- Work in groups to generate responses to issues and challenges (ACHASSI102 & ACHASSI130).
- The environmental and human influences on the location and of a place and the management of spaces within them (ACHASSK113).
- Develop appropriate questions to guide an inquiry about people, events, developments, places, systems and challenges (ACHASSI094 & ACHASSI122).

Health and Physical Education

- Plan and practise strategies to promote health, safety and wellbeing (ACPPS054).
- Investigate community resources and ways to seek help about health, safety and wellbeing (ACPPS053).
- Investigate the role of preventive health in promoting and maintaining health, safety and wellbeing for individuals and their communities (ACPPS058).

The Arts

- Plan, produce and present media artworks for specific audiences and purposes using responsible media practice (ACAMAM064).
- Develop and apply techniques and process when making their artworks (ACAVAM115).
- Plan the display of artworks to enhance their meaning for an audience (ACAVAM116).

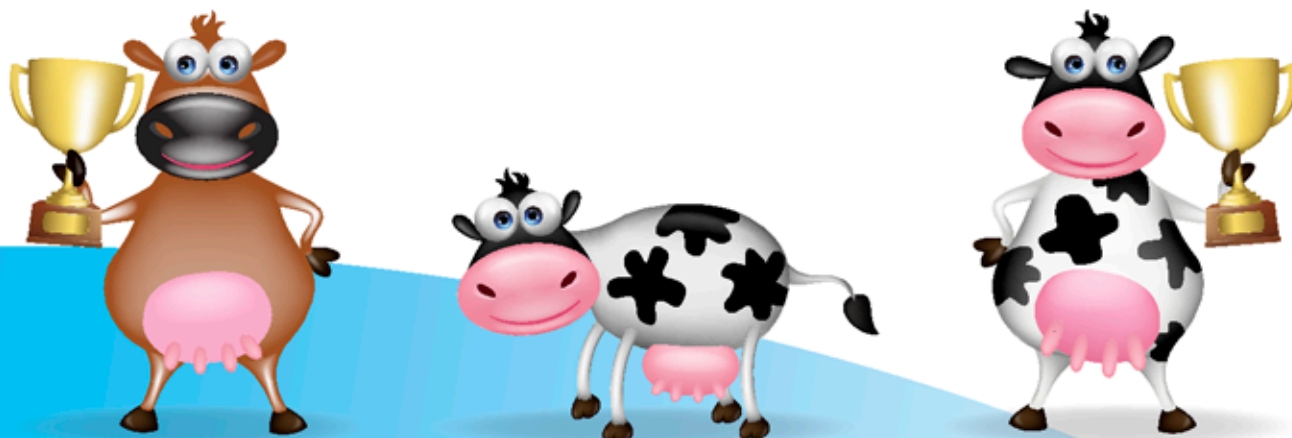
Technologies

- Investigate characteristics and properties of a range of materials, systems, components, tools, equipment and processes to achieve intended designed solutions (ACTDEK023).
- Critique needs or opportunities for designing, and investigate materials, components, tools, equipment and processes to achieve intended designed solutions (ACTDEP024).

- Investigate how and why food and fibre are produced in managed environments and prepared to enable people to grow and be healthy (ACTDEK021).
- Develop project plans that include consideration of resources when making designed solutions individually and collaboratively (ACTDEP028).

English

- Use a range of software including word processing programs with fluency to construct, edit and publish written text, and select, edit and place visual, print and audio elements (ACELY1707).
- Plan, draft and publish imaginative, informative and persuasive print and multimodal texts, choosing text structures, language features, images and sound appropriate to purpose and audience (ACELY1704).



Curriculum connections – Year 6

Mathematics

- Connect decimal representations to the metric system (ACMMG135).
- Interpret and compare a range of data displays, including side-by-side column graphs for two categorical variables (ACMSP147).
- Interpret secondary data presented in digital media and elsewhere (ACMSP148).

Science

- Science involves testing predictions by gathering data and using evidence to develop explanations of events and phenomena and reflects historical and cultural contributions (ACSHE098).
- Construct and use a range of representations, including tables and graphs, to represent and describe observations, patterns or relationships in data using digital technologies as appropriate (AC SIS107).
- Compare data with predictions and use as evidence in developing explanations (AC SIS221).
- Communicate ideas, explanations and processes using scientific representations in a variety of ways, including multimodal texts (AC SIS110).
- With guidance, pose clarifying questions and make predictions about scientific investigations (AC SIS232).
- Identify, plan and apply the elements of scientific investigations to answer questions and solve problems using equipment and materials safely and identifying potential risks (AC SIS103).

Humanities

- Develop appropriate questions to guide an inquiry about people, events, developments, places, systems and challenges (ACHASSI094 & ACHASSI122).
- Locate and collect relevant information and data from primary and secondary sources (ACHASSI095 & ACHASSI123).

- The reasons businesses exist and the different ways they provide goods and services (ACHASSK151).
- Work in groups to generate responses to issues and challenges (ACHASSI102 & ACHASSI130).

Health and Physical Education

- Plan and practise strategies to promote health, safety and wellbeing (ACPPS054).

The Arts

- Plan, produce and present media artworks for specific audiences and purposes using responsible media practice (ACAMAM064).
- Develop and apply techniques and process when making their artworks (ACAVAM115).
- Plan the display of artworks to enhance their meaning for an audience (ACAVAM116).

Technologies

- Acquire, store and validate different types of data, and use a range of software to interpret and visualise data to create information (ACTDIP016).
- Investigate how and why food and fibre are produced in managed environments and prepared to enable people to grow and be healthy (ACTDEK021).
- Develop project plans that include consideration of resources when making designed solutions individually and collaboratively (ACTDEP028).
- Negotiate criteria for success that include sustainability to evaluate design ideas, processes and solutions (ACTDEP027).

English

- Use a range of software, including word processing programs, to confidently create, edit and publish written and multimodal texts (ACELY1717).
- Plan, draft and publish imaginative, informative and persuasive texts, choosing and experimenting with text structures, language features, images and digital resources appropriate to purpose and audience (ACELY1714).

Curriculum connections – Year 7

Mathematics

- Investigate, interpret and analyse graphs from authentic data (ACMNA180).
- Identify and investigate issues involving numerical data collected from primary and secondary sources (ACMSP169).
- Construct and compare a range of data displays including stem-and-leaf plots and dot plots (ACMSP170).
- Calculate mean, median, mode and range for sets of data. Interpret these statistics in the context of data (ACMSP171).
- Describe and interpret data displays using median, mean and range (ACMSP172).

Science

- Identify questions and problems that can be investigated scientifically and make predictions based on scientific knowledge (ACSIS124).
- Construct and use a range of representations, including graphs, keys and models to represent and analyse patterns or relationships in data using digital technologies as appropriate (ACSIS129).
- Collaboratively and individually plan and conduct a range of investigation types, including fieldwork and experiments, ensuring safety and ethical guidelines are followed (ACSIS125).
- Summarise data, from students' own investigations and secondary sources, and use scientific understanding to identify relationships and draw conclusions based on evidence (ACSIS130).
- Use scientific knowledge and findings from investigations to evaluate claims based on evidence (ACSIS132).
- Communicate ideas, findings and evidence based solutions to problems using scientific language, and representations, using digital technologies as appropriate (ACSIS133).

Humanities

- Why individuals work, types of work and how people derive an income (ACHEK020).
- Develop questions about an economic or business issue or event, and plan and conduct an investigation or project (ACHES021 & ACHES032).
- Gather relevant data and information from a range of digital, online and print sources (ACHES022 & ACHES033).
- Interpret data and information displayed in different formats to identify relationships and trends (ACHES023 & ACHES034).
- The influence of environmental quality on the liveability of places (ACHGK045).

Health and Physical Education

- Investigate and select strategies to promote health, safety and wellbeing (ACPPS073).
- Evaluate health information and communicate their own and others' health concerns (ACPPS076).
- Plan and use health practices, behaviours and resources to enhance health, safety and wellbeing of their communities (ACPPS077).
- Plan and implement strategies for connecting to natural and built environments to promote the health and wellbeing of their communities (ACPPS078).

The Arts

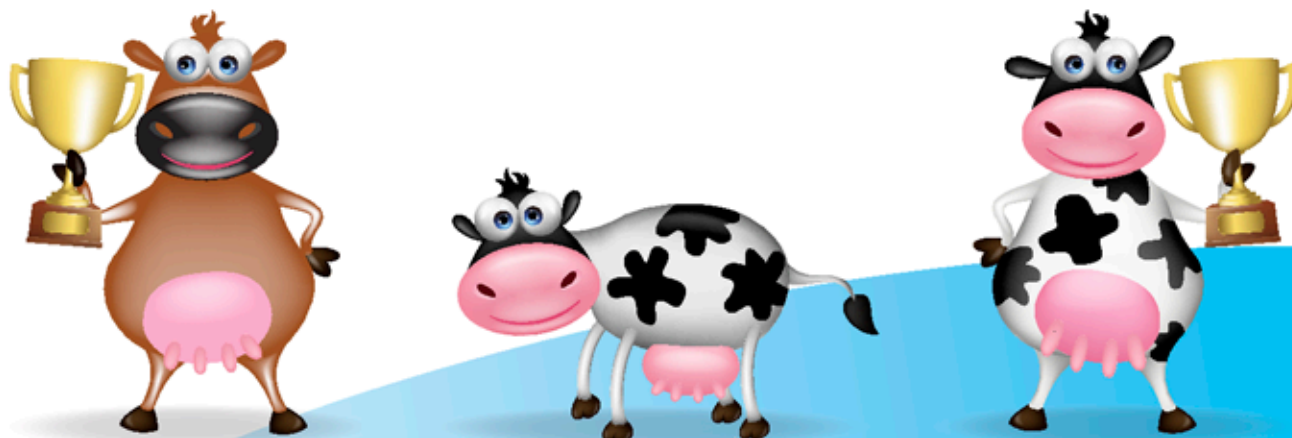
- Develop and refine media production skills to shape the technical and symbolic elements of images, sounds and text for a specific purpose and meaning (ACAMAM068).
- Plan, structure and design media artworks that engage audiences (ACAMAM069).
- Practise techniques and processes to enhance representation of ideas in their art making (ACAVAM121).

Technologies

- Acquire data from a range of sources and evaluate authenticity, accuracy and timeliness (ACTDIP025).
- Analyse and visualise data using a range of software to create information, and use structured data to model objects or events (ACTDIP026).
- Analyse how food and fibre are produced when designing managed environments and how these can become more sustainable (ACTDEK032).

English

- Use a range of software, including word processing programs, to confidently create, edit and publish written and multimodal texts (ACELY1728).
- Plan, draft and publish imaginative, informative and persuasive texts, selecting aspects of subject matter and particular language, visual, and audio features to convey information and ideas (ACELY1725).



Curriculum connections – Year 8

Mathematics

- Investigate techniques for collecting data, including census, sampling and observation (ACMSP284).
- Explore the practicalities and implications of obtaining data through sampling using a variety of investigative processes (ACMSP206).
- Investigate the effect of individual data values, including outliers, on the mean and median (ACMSP207).

Science

- Identify questions and problems that can be investigated scientifically and make predictions based on scientific knowledge (ACSIS139).
- Collaboratively and individually plan and conduct a range of investigation types, including fieldwork and experiments, ensuring safety and ethical guidelines are followed (ACSIS140).
- Construct and use a range of representations, including graphs, keys and models to represent and analyse patterns or relationships in data using digital technologies as appropriate (ACSIS144).
- Summarise data, from students' own investigations and secondary sources, and use scientific understanding to identify relationships and draw conclusions based on evidence (ACSIS145).
- Use scientific knowledge and findings from investigations to evaluate claims based on evidence (ACSIS234).
- Communicate ideas, findings and evidence based solutions to problems using scientific language, and representations, using digital technologies as appropriate (ACSIS148).

Humanities

- The way markets in Australia operate to enable the distribution of resources, and why they may be influenced by government (ACHEK027).
- Develop questions about an economic or business issue or event, and plan and conduct an investigation or project (ACHES021 & ACHES032).
- Gather relevant data and information from a range of digital, online and print sources (ACHES022 & ACHES033).
- Interpret data and information displayed in different formats to identify relationships and trends (ACHES023 & ACHES034).
- Present evidence-based conclusions using economics and business language and concepts in a range of appropriate formats, and reflect on the consequences of alternative actions (ACHES026 & ACHES037).
- Reflect on their learning to propose individual and collective action in response to a contemporary geographical challenge, taking account of environmental, economic and social considerations, and predict the expected outcomes of their proposal (ACHGS054 & ACHGS062).
- Types of businesses and the way that businesses respond to opportunities in Australia (ACHEK030).

Health and Physical Education

- Investigate and select strategies to promote health, safety and wellbeing (ACPPS073).

The Arts

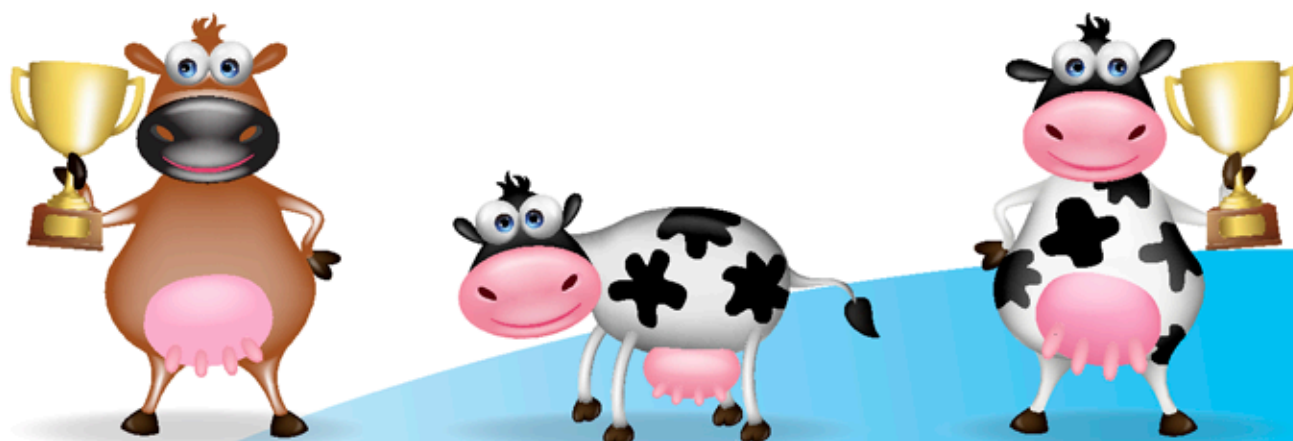
- Plan, structure and design media artworks that engage audiences (ACAMAM069).
- Develop and refine media production skills to shape the technical and symbolic elements of images, sounds and text for a specific purpose and meaning (ACAMAM068).

Technologies

- Acquire data from a range of sources and evaluate authenticity, accuracy and timeliness (ACTDIP025).
- Analyse and visualise data using a range of software to create information, and use structured data to model objects or events (ACTDIP026).
- Critique needs or opportunities for designing and investigating, analyse and select from a range of materials, components, tools, equipment and processes to develop design ideas (ACTDEP035).
- Plan and manage projects that create and communicate ideas and information collaboratively online, taking safety and social contexts into account (ACTDIP032).
- Analyse how characteristics and properties of food determine preparation techniques and presentation when designing solutions for healthy eating (ACTDEK033).
- Analyse how food and fibre are produced when designing managed environments and how these can become more sustainable (ACTDEK032).

English

- Use a range of software, including word processing programs, flexibly and imaginatively to publish texts (ACELY1738).
- Create imaginative, informative and persuasive texts that present a point of view and advance or illustrate arguments, including texts that integrate visual, print and/or audio features (ACELY1736).
- Practise techniques and processes to enhance representation of ideas in their art making (ACAVAM121).



Curriculum connections – Year 9

Mathematics

- Identify everyday questions and issues involving at least one numerical and at least one categorical variable, and collect data directly and from secondary sources (ACMSP228).
- Construct back-to-back stem-and-leaf plots and histograms and describe data, using terms including 'skewed', 'symmetric' and 'bi modal' (ACMSP282).
- Compare data displays using mean, median and range to describe and interpret numerical data sets in terms of location (centre) and spread (ACMSP283).

Science

- Formulate questions or hypotheses that can be investigated scientifically (ACSIS164).
- Plan, select and use appropriate investigation types, including field work and laboratory experimentation, to collect reliable data; assess risk and address ethical issues associated with these methods (ACSIS165).
- Analyse patterns and trends in data, including describing relationships between variables and identifying inconsistencies (ACSIS169).
- Use knowledge of scientific concepts to draw conclusions that are consistent with evidence (ACSIS170).
- Evaluate conclusions, including identifying sources of uncertainty and possible alternative explanations, and describe specific ways to improve the quality of the data (ACSIS171).
- Critically analyse the validity of information in primary and secondary sources and evaluate the approaches used to solve problems (ACSIS172).
- Communicate scientific ideas and information for a particular purpose, including constructing evidencebased arguments and using appropriate scientific language, conventions and representations (ACSIS174).

Humanities

- Australia as a trading nation and its place within the rising economies of Asia and broader global economy (ACHEK038).
- Develop questions and hypotheses about an economic or business issue or event, and plan and conduct an investigation (ACHES043 & ACHES055).
- Analyse data and information in different formats to explain cause-and-effect relationships, make predictions and illustrate alternative perspectives (ACHES045 & ACHES057).
- Apply economics and business knowledge, skills and concepts in familiar, new and hypothetical situations (ACHES047 & ACHES059).
- Present reasoned arguments and evidence-based conclusions in a range of appropriate formats using economics and business conventions, language and concepts (ACHES048), (ACHES060).
- The ways that places and people are interconnected with other places through trade in goods and services, at all scales (ACHGK067).
- Reflect on and evaluate findings of an inquiry to propose individual and collective action in response to a contemporary geographical challenge, taking account of environmental, economic, political and social considerations; and explain the predicted outcomes and consequences of their proposal (ACHGS071 & ACHGS080).
- Challenges to food production, including land and water degradation, shortage of fresh water, competing land uses and climate change, for Australia and other areas of the world (ACHGK063).
- Gather relevant and reliable data and information from a range of digital, online and print sources (ACHES044 & ACHES056).

Health and Physical Education

- Critically analyse and apply health information from a range of sources to health decisions and situations (ACPPS095).
- Plan, implement and critique strategies to enhance health, safety and wellbeing of their communities (ACPPS096).
- Critique behaviours and contextual factors that influence and wellbeing of diverse communities (ACPPS098).

The Arts

- Experiment with ideas and stories that manipulate media conventions and genres to construct new and alternative points of view through images, sounds and text (ACAMAM073).
- Develop and refine media production skills to integrate and shape the technical and symbolic elements in images, sounds and text for a specific purpose, meaning and style (ACAMAM075).
- Manipulate materials, techniques, technologies and processes to develop and represent their own artistic intentions (ACAVAM126).
- Plan and design artworks that represent artistic intention (ACAVAM128).

Technologies

- Analyse and visualise data to create information and address complex problems, and model processes, entities and their relationships using structured data (ACTDIP037).
- Investigate and make judgments on the ethical and sustainable production and marketing of food and fibre (ACTDEK044).
- Investigate and make judgments on how the principles of food safety, preservation, preparation, presentation and sensory perceptions influence the creation of food solutions for healthy eating (ACTDEK045).

- Develop, modify and communicate design ideas by applying design thinking, creativity, innovation and enterprise skills of increasing sophistication (ACTDEP049).
- Investigate and make judgments within a range of technologies specialisations on how technologies can be combined to create designed solutions (ACTDEK047).
- Evaluate design ideas, processes and solutions against comprehensive criteria for success recognising the need for sustainability (ACTDEP051).
- Create interactive solutions for sharing ideas and information online, taking into account safety, social contexts and legal responsibilities (ACTDIP043).

English

- Use a range of software, including word processing programs, flexibly and imaginatively to publish texts (ACELY1748).
- Create imaginative, informative and persuasive texts that present a point of view and advance or illustrate arguments, including texts that integrate visual, print and/or audio features (ACELY1746).



Curriculum connections – Year 10

Mathematics

- Evaluate statistical reports in the media and other places by linking claims to displays, statistics and representative data (ACMSP253).
- Use information technologies to investigate bivariate numerical data sets. Where appropriate use a straight line to describe the relationship allowing for variation (ACMSP279).

Science

- Formulate questions or hypotheses that can be investigated scientifically (AC SIS198).
- Communicate scientific ideas and information for a particular purpose, including constructing evidence based arguments and using appropriate scientific language, conventions and representations (AC SIS208).
- Critically analyse the validity of information in primary and secondary sources and evaluate the approaches used to solve problems (AC SIS206).

Humanities

- Develop questions and hypotheses about an economic or business issue or event, and plan and conduct an investigation (ACHES043 & ACHES055).
- Analyse data and information in different formats to explain cause-and-effect relationships, make predictions and illustrate alternative perspectives (ACHES045 & ACHES057).
- Gather relevant and reliable data and information from a range of digital, online and print sources (ACHES044 & ACHES056).
- Present reasoned arguments and evidence-based conclusions in a range of appropriate formats using economics and business conventions, language and concepts (ACHES048 & ACHES060).

- Factors that influence major consumer and financial decisions and the short and long term consequences of these decisions (ACHEK053).
- The application of systems thinking to understand the causes and likely consequences of the environmental change being investigated (ACHGK073).

Health and Physical Education

- Critically analyse and apply health information from a range of sources to health decisions and situations (ACPPS095).
- Plan, implement and critique strategies to enhance health, safety and wellbeing of their communities (ACPPS096).
- Critique behaviours and contextual factors that influence and wellbeing of diverse communities (ACPPS098).

The Arts

- Experiment with ideas and stories that manipulate media conventions and genres to construct new and alternative points of view through images, sounds and text (ACAMAM073).
- Develop and refine media production skills to integrate and shape the technical and symbolic elements in images, sounds and text for a specific purpose, meaning and style (ACAMAM075).
- Manipulate materials, techniques, technologies and processes to develop and represent their own artistic intentions (ACAVAM126).
- Plan and design artworks that represent artistic intention (ACAVAM128).

Technologies

- Analyse and visualise data to create information and address complex problems, and model processes, entities and their relationships using structured data (ACTDIP037).
- Investigate and make judgments on the ethical and sustainable production and marketing of food and fibre (ACTDEK044).
- Investigate and make judgments on how the principles of food safety, preservation, preparation, presentation and sensory perceptions influence the creation of food solutions for healthy eating (ACTDEK045).
- Develop, modify and communicate design ideas by applying design thinking, creativity, innovation and enterprise skills of increasing sophistication (ACTDEP049).
- Investigate and make judgments within a range of technologies specialisations on how technologies can be combined to create designed solutions (ACTDEK047).
- Evaluate design ideas, processes and solutions against comprehensive criteria for success recognising the need for sustainability (ACTDEP051).
- Create interactive solutions for sharing ideas and information online, taking into account safety, social contexts and legal responsibilities (ACTDIP043).

English

- Use a range of software, including word processing programs, confidently, flexibly and imaginatively to create, edit and publish texts, considering the identified purpose and the characteristics of the user (ACELY1776).
- Create sustained texts, including texts that combine specific digital or media content, for imaginative, informative, or persuasive purposes that reflect upon challenging and complex issues (ACELY1756).



Curriculum connections – Year 11

English - Unit 1

Create a range of texts:

- using appropriate form, content, style and tone for different purposes and audiences in real and imagined contexts (ACEEN011).
- drawing on a range of technologies in, for example, research, communication and representation of ideas (ACEEN012).
- combining visual, spoken and written elements where appropriate (ACEEN013).
- using evidence-based argument (ACEEN014).
- using appropriate quotation and referencing protocols (ACEEN015).
- using strategies for planning, drafting, editing and proofreading (ACEEN016).
- using accurate spelling, punctuation, syntax and metalanguage (ACEEN017).

Reflect on their own and others' texts by:

- analysing textual evidence to assess the purpose and context of texts (ACEEN018).
- questioning responses to texts (ACEEN019).
- investigating the impact and uses of imaginative, interpretive and persuasive texts (ACEEN020).

General Mathematics - Unit 2

The statistical investigation process:

- review the statistical investigation process; for example, identifying a problem and posing a statistical question, collecting or obtaining data, analysing the data, interpreting and communicating the results (ACMGM026).

Making sense of data relating to a single statistical variable:

- classify a categorical variable as ordinal, such as income level (high, medium, low), or nominal, such as place of birth (Australia, overseas), and use tables and bar charts to organise and display the data (ACMGM027).
- classify a numerical variable as discrete, such as the number of rooms in a house, or continuous, such as the temperature in degrees Celsius (ACMGM028).
- with the aid of an appropriate graphical display (chosen from dot plot, stem plot, bar chart or histogram), describe the distribution of a numerical dataset in terms of modality (uni or multimodal), shape (symmetric versus positively or negatively skewed), location and spread and outliers, and interpret this information in the context of the data (ACMGM029).
- determine the mean and standard deviation of a dataset and use these statistics as measures of location and spread of a data distribution, being aware of their limitations (ACMGM030).

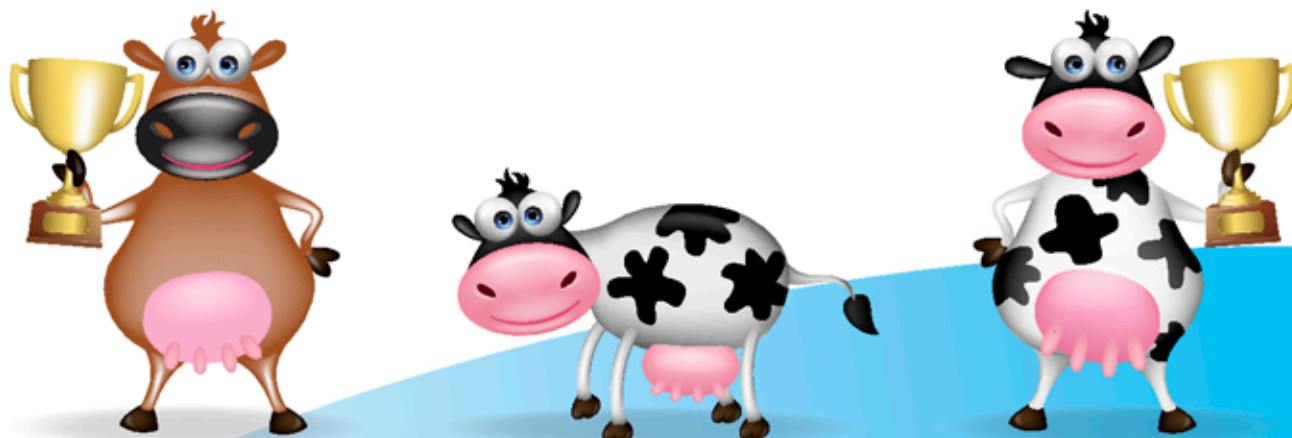
Science: Biology – Unit 1

- Identify, research and construct questions for investigation; propose hypotheses; and predict possible outcomes (ACSBL001).
- Design investigations, including the procedure/s to be followed, the materials required, and the type and amount of primary and/or secondary data to be collected; conduct risk assessments; and consider research ethics, including animal ethics (ACSBL002).
- Conduct investigations, including using ecosystem surveying techniques, safely, competently and methodically for the collection of valid and reliable data (ACSBL003).

- Represent data in meaningful and useful ways; organise and analyse data to identify trends, patterns and relationships; qualitatively describe sources of measurement error, and uncertainty and limitations in data; and select, synthesise and use evidence to make and justify conclusions (ACSBL004).
- Interpret a range of scientific and media texts, and evaluate processes, claims and conclusions by considering the quality of available evidence; and use reasoning to construct scientific arguments (ACSBL005).
- Select, construct and use appropriate representations, including classification keys, food webs and biomass pyramids, to communicate conceptual understanding, solve problems and make predictions (ACSBL006).
- Communicate to specific audiences and for specific purposes using appropriate language, nomenclature, genres and modes, including scientific reports (ACSBL007).

Science: Earth & Environmental Science – Units 1 & 2

- Science is a global enterprise that relies on clear communication, international conventions, peer review and reproducibility (ACSES008).
- Development of complex models and/or theories often requires a wide range of evidence from multiple individuals and across disciplines (ACSES009).
- Advances in science understanding in one field can influence other areas of science, technology and engineering (ACSES010).
- The use of scientific knowledge is influenced by social, economic, cultural and ethical considerations (ACSES011).
- The use of scientific knowledge may have beneficial and/or harmful and/or unintended consequences (ACSES012).
- Scientific knowledge can enable scientists to offer valid explanations and make reliable predictions (ACSES013).
- Scientific knowledge can be used to develop and evaluate projected economic, social and environmental impacts and to design action for sustainability (ACSES014).



STUDENT EVALUATION PROCESS

The Cows Create Careers project provides many opportunities for teams and individuals to be assessed. As the project is activity-based and involves many hands-on learning components, it is important that student processes, as well as product (work produced), are evaluated.

Products

Products that students in teams will submit for assessment include:

Full cream curriculum:

3D model OR Mootube moovie/PowerPoint

Letter/email OR a Scientific report

Student evaluation – entry and exit

Take a **Creative photo**

Final team checklist

OR

Light Curriculum:

Activity one to five student worksheets

Student evaluation – entry and exit

Take a **Creative photo**

Final team checklist

Processes

Processes that can be assessed through observation, interview, check-listing and anecdotal recording include:

- Measuring
- Speaking and Listening
- Taking responsibility
- Critical-thinking skills
- Reading for information
- Writing factual texts

- Data collection and analysis
- Working in teams
- Creativity
- Internet skills
- Summarising
- Research skills
- Independence
- ICT skills
- Letter writing
- Report writing
- Scientific investigation.

The following online support will prove useful to students and teachers.

Weblinks

Department of Primary Industries

dpi.nsw.gov.au
dpiptwe.tas.gov.au
depi.vic.gov.au
agric.wa.gov.au
daff.qld.gov.au
pir.sa.gov.au

Careers and training pathways in dairy

Total College: total.nsw.edu.au
TAFE Gippsland: tafegippsland.edu.au
Dairy Australia: dairyaustralia.com.au

Other recommended sites

cowtime.com.au
datagene.com.au
maxumanimal.com

TEACHER EVALUATION – ENTRY AND EXIT

The survey information for Cows Create Careers is important to Jaydee Events Pty Ltd and their sponsoring partners to gain an understanding about student learning, student involvement and student interest in the dairy industry.

Submit your teacher evaluation data using these links:

Entry surveymonkey.com/r/2023cccteacherentry

Exit surveymonkey.com/r/2023cccteacherexit

Don't forget by teachers submitting their teacher evaluation, your school will gain an additional 5 Points towards the final school score.



