

# Ekka

EDUCATION

## CURRICULUM ALIGNMENT & CLASSROOM RESOURCES

*Giant Pumpkin Competition  
Supported by Pillow Talk*



FOUNDATION TO 10



## COMPETITION OVERVIEW

The Giant Pumpkin Competition supported by Pillow Talk, features two classes, showcasing the skills of farmers, students, and gardeners as they vie to grow the heaviest giant pumpkin.

Participating in this competition provides a unique, hands-on learning experience that aligns with various educational curricula.

From a scientific perspective, students can apply lessons in biology by exploring plant life cycles, photosynthesis, and the effects of environmental factors on growth. Mathematics plays a key role as students measure and track their pumpkins, calculate growth rates, plus analyse data. The competition also fosters teamwork and project management, which enhances collaboration and problem-solving skills. Additionally, it introduces students to sustainability and environmental stewardship.

Importantly, the Giant Pumpkin Competition links classroom knowledge with real-world application, making learning engaging, impactful, and fun.

## IMPORTANT CONTACTS

### *Competition Enquiries*

[entries@rna.org.au](mailto:entries@rna.org.au)

### *Education Content Enquiries*

[education@ekka.com.au](mailto:education@ekka.com.au)

### *Ekka School & Group Bookings Enquiries*

[groupbookings@ekka.com.au](mailto:groupbookings@ekka.com.au)

## FOUNDATION

### VERSION 8.4

#### *Science Understanding*

Living things have basic needs, including food and water ([ACSSU002](#))

Daily and seasonal changes in our environment affect everyday life ([ACSSU004](#))

#### *Science as a Human Endeavour*

Science involves observing, asking questions about, and describing changes, in objects and events ([ACSHE013](#))

#### *Science Inquiry Skills*

Pose and respond to questions about familiar objects and events ([AC SIS014](#))

Participate in guided investigations and make observations using the senses ([AC SIS011](#))

Engage in discussions about observations and represent ideas ([AC SIS233](#))

Share observations and ideas ([AC SIS012](#))

#### *Design and Technologies*

Explore how plants and animals are grown for food, clothing and shelter and how food is selected and prepared for healthy eating ([ACTDEK003](#))

### VERSION 9

#### *Achievement Standard*

By the end of Foundation, students group plants and animals based on external features. Students pose questions and make predictions based on their experiences. They engage in investigations and make observations safely. With guidance, they represent observations and identify patterns. With guidance, they compare their observations with their predictions. They share questions, observations and ideas about their experiences with others.

#### *Science Understanding*

Observe external features of plants and animals and describe ways they can be grouped based on these features ([AC9SFU01](#))

#### *Science Inquiry*

Pose questions and make predictions based on experiences ([AC9SFI01](#))

Engage in investigations safely and make observations using their senses ([AC9SFI02](#))

Compare observations with predictions with guidance ([AC9SFI04](#))

Share questions, predictions, observations and ideas with others ([AC9SFI05](#))



*Creative & Critical  
Thinking*



*Numeracy*



*Literacy*



## YEAR 1

### VERSION 8.4

#### *Science Understanding*

Living things have a variety of external features ([ACSSU017](#))

#### *Science as a Human Endeavour*

Science involves observing, asking questions about, and describing changes in, objects and events ([ACSHE021](#))

#### *Science Inquiry Skills*

Pose and respond to questions, and make predictions about familiar objects and events ([AC SIS024](#))

Participate in guided investigations to explore and answer questions ([AC SIS025](#))

Use informal measurements to collect and record observations, using digital technologies as appropriate ([AC SIS026](#))

Compare observations with those of others ([AC SIS213](#))

Present and communicate observations and ideas in a variety of ways ([AC SIS029](#))

#### *Design and Technologies*

Explore how plants and animals are grown for food, clothing and shelter and how food is selected and prepared for healthy eating ([ACTDEK003](#))



## YEAR 1

### VERSION 9

#### *Achievement Standard*

By the end of Year 1, students pose questions to explore observations and make predictions based on experiences. They follow safe procedures to make and record observations. With guidance, they compare observations with predictions and identify further questions. They use everyday vocabulary to communicate observations, findings and ideas.

#### *Science Understanding*

Identify the basic needs of plants and animals, including air, water, food or shelter, and describe how the places they live meet those needs ([AC9S1U01](#))

Describe daily and seasonal changes in the environment and explore how these changes affect everyday life ([AC9S1U02](#))

#### *Science Inquiry*

Pose questions to explore observed simple patterns and relationships and make predictions based on experiences ([AC9S1I01](#))

Suggest and follow safe procedures to investigate questions and test predictions ([AC9S1I02](#))

Make and record observations, including informal measurements, using digital tools as appropriate ([AC9S1I03](#))

Compare observations with predictions and others' observations, consider if investigations are fair and identify further questions with guidance ([AC9S1I05](#))

Write and create texts to communicate observations, findings and ideas, using everyday and scientific vocabulary ([AC9S1I06](#))

#### *Design and Technologies: Food and Fibre Production*

Explore how plants and animals are grown for food, clothing and shelter ([AC9TDE2K03](#))

Explore how food can be selected and prepared for healthy eating ([AC9TDE2K04](#))



*Creative & Critical  
Thinking*



*Sustainability*



*Numeracy*



*Literacy*



*Digital Literacy*



*Personal &  
Social Capability*



## YEAR 2

### VERSION 8.4

#### *Science as a Human Endeavour*

Science involves observing, asking questions about, and describing changes, in objects and events ([ACSHE034](#))

People use science in their daily lives, including when caring for their environment and living things ([ACSHE035](#))

#### *Science Inquiry Skills*

Pose and respond to questions, and make predictions about familiar objects and events ([AC SIS037](#))

Participate in guided investigations to explore and answer questions ([AC SIS038](#))

Use informal measurements to collect and record observations, using digital technologies as appropriate ([AC SIS039](#))

Compare observations with those of others ([AC SIS041](#))

Present and communicate observations and ideas in a variety of ways ([AC SIS042](#))

#### *Design and Technologies*

Explore how plants and animals are grown for food, clothing and shelter and how food is selected and prepared for healthy eating ([ACTDEK003](#))



## YEAR 2

## VERSION 9

*Achievement Standard*

By the end of Year 2, students describe how people use science in their daily lives and how people use patterns to make scientific predictions. Students pose questions to explore observed patterns or relationships and make predictions based on experiences. They suggest steps to be followed in an investigation and follow safe procedures to make and record observations. With guidance, they compare their observations with those of others, identify whether their investigation was fair and identify further questions. They use everyday and scientific vocabulary to communicate observations, findings and ideas.

*Science Inquiry*

Pose questions to explore observed simple patterns and relationships and make predictions based on experiences ([AC9S2I01](#))

Suggest and follow safe procedures to investigate questions and test predictions ([AC9S2I02](#))

Make and record observations, including informal measurements, using digital tools as appropriate ([AC9S2I03](#))

Compare observations with predictions and others' observations, consider if investigations are fair and identify further questions with guidance ([AC9S2I05](#))

Write and create texts to communicate observations, findings and ideas, using everyday and scientific vocabulary ([AC9S2I06](#))

*Design and Technologies: Food and Fibre Production*

Explore how plants and animals are grown for food, clothing and shelter ([AC9TDE2K03](#))

Explore how food can be selected and prepared for healthy eating ([AC9TDE2K04](#))



*Creative & Critical  
Thinking*



*Literacy*



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## CLASSROOM RESOURCES

### *Digital Technologies Hub: Planting Fruit and Vegetables*

In this sequence of lessons students grow a plant from seed, capturing each step and decision as an algorithmic process and recording data for future learning.

[www.digitaltechnologieshub.edu.au/teach-and-assess/classroom-resources/lesson-ideas/planting-fruit-and-vegetables/](http://www.digitaltechnologieshub.edu.au/teach-and-assess/classroom-resources/lesson-ideas/planting-fruit-and-vegetables/)



### *Pick of the Crop: School and Community Fruit and Veggie Education*

Connect your students and school community with local growers, producers and farmers to provide a great opportunity for students to experience all stages of 'paddock to plate'. Activities and ideas are provided for farm excursions, day events, and classroom activities, as well as supporting resources for school tuckshops.

[hw.qld.gov.au/pick-of-the-crop/school-resources/](http://hw.qld.gov.au/pick-of-the-crop/school-resources/)



### *Junior Landcare: Sow a Seed, Grow a Feed*

Engage young learners' senses as they grow food from a seed. They can learn about caring for a living thing, experience the joy of watching something grow and harvesting healthy food. The activity provides opportunities for development of science, sustainability and maths concepts.

[juniorlandcare.org.au/learning\\_activity/sow-a-seed-grow-a-feed/](http://juniorlandcare.org.au/learning_activity/sow-a-seed-grow-a-feed/)



### *CSIRO with Hort Innovation: Taste and Learn*

An Australian program for primary schools to support student learning and foster the enjoyment of vegetables to positively impact children's health and wellbeing with a focus on sensory education, not nutrition education. Teacher resources provide a large emphasis on experiential learning and vegetable tastings in structured activities.

[research.csiro.au/taste-and-learn/](http://research.csiro.au/taste-and-learn/)



### *Hort Innovation: Veggycation*

Explore the nutrition and health benefits of vegetables including the different varieties of pumpkins and how they are grown in Australia. Veggycation provides further information on scientific names, health benefits, preparation and storage, and cooking tips. A great resource for students to research the uses and benefits of all different vegetables.

[www.veggycation.com.au/vegetables/pumpkin/](http://www.veggycation.com.au/vegetables/pumpkin/)

**veggycation**





## YEARS 3 & 4

### VERSION 8.4

#### *Science Understanding*

Living things have life cycles ([ACSSU072](#))

Living things depend on each other and the environment to survive ([ACSSU073](#))

#### *Science Inquiry Skills*

With guidance, identify questions in familiar contexts that can be investigated scientifically and make predictions based on prior knowledge ([AC SIS053](#) & [AC SIS064](#))

With guidance, plan and conduct scientific investigations to find answers to questions, considering the safe use of appropriate materials and equipment ([AC SIS054](#) & [AC SIS065](#))

Consider the elements of fair tests and use formal measurements and digital technologies as appropriate, to make and record observations accurately ([AC SIS055](#) & [AC SIS066](#))

Represent and communicate observations, ideas and findings using formal and informal representations ([AC SIS060](#) & [AC SIS071](#))

#### *Design and Technologies*

Investigate food and fibre production and food technologies used in modern and traditional societies ([ACTDEK012](#))



## YEAR 3

### VERSION 9

#### *Achievement Standard*

By the end of Year 3, students classify and compare living and non-living things and different life cycles. Students pose questions to explore patterns and relationships and make predictions based on experiences. They use scaffolds to plan safe investigations and fair tests. They use familiar classroom instruments to make measurements. They compare their findings with those of others, explain how they kept their investigation fair, identify further questions and draw conclusions. They communicate ideas and findings for an identified purpose, including using scientific vocabulary when appropriate.

#### *Science Understanding*

Compare characteristics of living and non-living things and examine the differences between the life cycles of plants and animals ([AC9S3U01](#))

#### *Science Inquiry*

Pose questions to explore observed patterns and relationships and make predictions based on observations ([AC9S3I01](#))

Use provided scaffolds to plan and conduct investigations to answer questions or test predictions, including identifying the elements of fair tests, and considering the safe use of materials and equipment ([AC9S3I02](#))

Follow procedures to make and record observations, including making formal measurements using familiar scales instruments and using digital tools as appropriate ([AC9S3I03](#))

Compare findings with those of others, consider if investigations were fair, identify questions for further investigation and draw conclusions ([AC9S3I05](#))

Write and create texts to communicate findings and ideas for identified purposes and audiences, using scientific vocabulary and digital tools as appropriate ([AC9S3I06](#))

#### *Design & Technologies: Food and Fibre Production*

Describe the ways of producing food and fibre ([AC9TDE4K03](#))



*Creative & Critical  
Thinking*



*Literacy*



*Numeracy*



*Digital Literacy*



*Personal &  
Social Capability*



## YEAR 4

### VERSION 9

#### *Achievement Standard*

By the end of Year 4, students pose questions to identify patterns and relationships and make predictions based on observations. They plan investigations using planning scaffolds, identify key elements of fair tests and describe how they conduct investigations safely. They use simple procedures to make accurate formal measurements. They compare their findings with those of others, assess the fairness of their investigation, identify further questions for investigation and draw conclusions. They communicate ideas and findings for an identified audience and purpose, including using scientific vocabulary when appropriate.

#### *Science Understanding*

Explain the roles and interactions of consumers, producers and decomposers within a habitat and how food chains represent feeding relationships ([AC9S4U01](#))

#### *Science Inquiry*

Pose questions to explore observed patterns and relationships and make predictions based on observations ([AC9S4I01](#))

Use provided scaffolds to plan and conduct investigations to answer questions or test predictions, including identifying the elements of fair tests, and considering the safe use of materials and equipment ([AC9S4I02](#))

Follow procedures to make and record observations, including making formal measurements using familiar scales instruments and using digital tools as appropriate ([AC9S4I03](#))

Compare findings with those of others, consider if investigations were fair, identify questions for further investigation and draw conclusions ([AC9S4I05](#))

Write and create texts to communicate findings and ideas for identified purposes and audiences, using scientific vocabulary and digital tools as appropriate ([AC9S4I06](#))

#### *Design & Technologies: Food and Fibre Production*

Describe the ways of producing food and fibre ([AC9TDE4K03](#))



*Creative & Critical Thinking*



*Sustainability*



*Digital Literacy*



*Numeracy*



*Literacy*



*Personal & Social Capability*



## CLASSROOM RESOURCES

### *ABC Education: Kids in the Garden*

The Kids in the Garden episode series identifies the life cycle of plants from seed to plant and flower to fruit with each episode providing accompanying questions for classes to reflect on after watching. The following episodes are the most relevant for Years 3 and 4 and highlight information about pumpkin growing.



Episode 2 - [www.abc.net.au/education/kids-in-the-garden-ep-2-how-seeds-become-plants/13633088](http://www.abc.net.au/education/kids-in-the-garden-ep-2-how-seeds-become-plants/13633088)

Episode 5 - [www.abc.net.au/education/kids-in-the-garden-ep-5-how-plants-work/13633124](http://www.abc.net.au/education/kids-in-the-garden-ep-5-how-plants-work/13633124)

Episode 6 - [www.abc.net.au/education/kids-in-the-garden-ep-6-why-plants-make-fruit/13605862](http://www.abc.net.au/education/kids-in-the-garden-ep-6-why-plants-make-fruit/13605862)

Episode 9 - [www.abc.net.au/education/kids-in-the-garden-ep-9-vegetable-gardens/13633262](http://www.abc.net.au/education/kids-in-the-garden-ep-9-vegetable-gardens/13633262)

### *Phenomenom! by Hort Innovation and Alice Zaslavsky: Ghost Pumpkins*

Phenomenom! is all in the name of discovering the things that food can do (and what you can do too)! Ghost Pumpkins is a unit for Year 3 HASS that explores seasonal festivals that traditionally occur in autumn and can be used to highlight how the seasons vary between the hemispheres.

[phenomenom.com.au/wp-content/uploads/2018/06/Ph-Ghost-Pumpkins.pdf](http://phenomenom.com.au/wp-content/uploads/2018/06/Ph-Ghost-Pumpkins.pdf)



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Connect your students and school community with local growers, producers and farmers to provide a great opportunity for students to experience all stages of 'paddock to plate'. Activities and ideas are provided for farm excursions, day events, and classroom activities, as well as supporting resources for school tuckshops.

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[research.csiro.au/taste-and-learn/](http://research.csiro.au/taste-and-learn/)



## YEARS 5 & 6

### VERSION 8.4

#### *Science Understanding*

Living things have structural features and adaptations that help them to survive in their environment ([ACSSU043](#))

The growth and survival of living things are affected by physical conditions of their environment ([ACSSU094](#))

#### *Science Inquiry Skills*

With guidance, pose clarifying questions and make predictions about scientific investigations ([AC SIS231](#) & [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 SIS086](#) & [AC SIS103](#))

Describe variables to be changed and measured in fair tests, and observe measure and record data with accuracy using digital technologies as appropriate ([AC SIS087](#) & [AC SIS104](#))

Communicate ideas, explanations and processes using scientific representations in a variety of ways, including multi-modal texts ([AC SIS093](#) & [AC SIS110](#))

#### *Design and Technologies*

Explain how and why food and fibre are produced in managed environments and prepared to enable people to grow and be healthy ([ACTDEK021](#))



## YEAR 5

### VERSION 9

#### *Achievement Standard*

By the end of Year 5, students explain how the form and behaviour of living things enables survival. Students plan safe investigations to identify patterns and relationships and make reasoned predictions. They identify risks associated with investigations and key intercultural considerations when planning field work. They identify variables to be changed and measured. They use equipment to generate data with appropriate precision. They compare their methods and findings to those of others, identify possible sources of error in their investigation, pose questions for further investigation and draw reasoned conclusions. They use language features that reflect their purpose and audience when communicating their ideas and findings.

#### *Science Understanding*

Examine how particular structural features and behaviours of living things enable their survival in specific habitats ([AC9S5U01](#))

#### *Science Inquiry*

Pose investigable questions to identify patterns and test relationships and make reasoned predictions ([AC9S5I01](#))

Plan and conduct repeatable investigations to answer questions, including, as appropriate, deciding the variables to be changed, measured and controlled in fair tests; describing potential risks; planning for the safe use of equipment and materials; and identifying required permissions to conduct investigations on Country/Place ([AC9S5I02](#))

Use equipment to observe, measure and record data with reasonable precision, using digital tools as appropriate ([AC9S5I03](#))

Compare methods and findings with those of others, recognise possible sources of error, pose questions for further investigation and select evidence to draw reasoned conclusions ([AC9S5I05](#))

Write and create texts to communicate ideas and findings for specific purposes and audiences, including selection of language features, using digital tools as appropriate ([AC9S5I06](#))

#### *Design & Technologies: Food and Fibre Production*

Explain how and why food and fibre are produced in managed environments ([AC9TDE6K03](#))



*Creative & Critical Thinking*



*Literacy*



*Ethical Understanding*



*Aboriginal & Torres Strait Islander Histories & Cultures*



*Digital Literacy*



*Numeracy*



*Personal & Social Capability*



## YEAR 6

### VERSION 9

#### *Achievement Standard*

By the end of Year 6, students explain how changes in physical conditions affect living things. Students plan safe, repeatable investigations to identify patterns and test relationships and make reasoned predictions. They describe risks associated with investigations and key intercultural considerations when planning field work. They identify variables to be changed, measured and controlled. They use equipment to generate and record data with appropriate precision. They identify possible sources of error in their own and others' methods and findings, pose questions for further investigation and select evidence to support reasoned conclusions. They select and use language features that reflect their purpose and audience when communicating their ideas and findings.

#### *Science Understanding*

Investigate the physical conditions of a habitat and analyse how the growth and survival of living things is affected by changing physical conditions ([AC9S6U01](#)).

#### *Science Inquiry*

Pose investigable questions to identify patterns and test relationships and make reasoned predictions ([AC9S6I01](#)).

Plan and conduct repeatable investigations to answer questions, including, as appropriate, deciding the variables to be changed, measured and controlled in fair tests; describing potential risks; planning for the safe use of equipment and materials; and identifying required permissions to conduct investigations on Country/Place ([AC9S6I02](#)).

Use equipment to observe, measure and record data with reasonable precision, using digital tools as appropriate ([AC9S6I03](#)).

Compare methods and findings with those of others, recognise possible sources of error, pose questions for further investigation and select evidence to draw reasoned conclusions ([AC9S6I05](#)).

Write and create texts to communicate ideas and findings for specific purposes and audiences, including selection of language features, using digital tools as appropriate ([AC9S6I06](#)).

#### *Design & Technologies: Food and Fibre Production*

Explain how and why food and fibre are produced in managed environments ([AC9TDE6K03](#)).



*Creative & Critical Thinking*



*Sustainability*



*Literacy*



*Ethical Understanding*



*Aboriginal & Torres Strait Islander Histories & Cultures*



*Digital Literacy*



*Numeracy*



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Episode 9 - [www.abc.net.au/education/kids-in-the-garden-ep-9-vegetable-gardens/13633262](http://www.abc.net.au/education/kids-in-the-garden-ep-9-vegetable-gardens/13633262)

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[hw.qld.gov.au/pick-of-the-crop/school-resources/](http://hw.qld.gov.au/pick-of-the-crop/school-resources/)

### *Australian National Botanic Gardens: Pollination*

The Australian National Botanic Gardens has developed a Plant Science Learning Hub that aims to inspire and engage students in plant science and learn in a way that is fun and rewarding. The resource on Pollination is the perfect accompaniment to growing Giant Pumpkins where hand pollination is undertaken.



[learn.anbg.gov.au/pollination](http://learn.anbg.gov.au/pollination)

### *OzHarvest: FEAST*

FEAST (Food Education and Sustainability Training) is a curriculum-aligned education program for primary and secondary schools, which explores the issue of food waste and its environmental impact, healthy eating and easy classroom cooking. Like any good FEAST, it's designed to be fun, engaging and filled with good food run over 7 to 10 weeks and as a STEM project-based learning program. FEAST including online learning resources including lesson plans, student worksheets, videos, recipe books, and cooking guide.



[www.ozharvest.org/education/feast/](http://www.ozharvest.org/education/feast/)





## YEARS 7 & 8

### VERSION 8.4

#### *Science Inquiry Skills*

Identify questions and problems that can be investigated scientifically and make predictions based on scientific knowledge ([AC SIS124](#) & [AC SIS139](#))

Collaboratively and individually plan and conduct a range of investigation types, including field work and experiments, ensuring safety and ethical guidelines are followed ([AC SIS125](#) & [AC SIS140](#))

Measure and control variables, select equipment appropriate to the task and collect data with accuracy ([AC SIS126](#) & [AC SIS141](#))

Summarise data, from students' own investigations and secondary sources, and use scientific understanding to identify relationships and draw conclusions based on evidence ([AC SIS130](#) & [AC SIS145](#))

Reflect on scientific investigations including evaluating the quality of the data collected, and identifying improvements ([AC SIS131](#) & [AC SIS146](#))

Use scientific knowledge and findings from investigations to evaluate claims based on evidence ([AC SIS132](#) & [AC SIS234](#))

Communicate ideas, findings and evidence based solutions to problems using scientific language, and representations, using digital technologies as appropriate ([AC SIS133](#) & [AC SIS148](#))

#### *Design and Technologies*

Analyse how food and fibre are produced when designing managed environments and how these can become more sustainable ([ACTDEK0032](#))



## YEAR 7

### VERSION 9

#### *Achievement Standard*

By the end of Year 7, students plan and conduct safe, reproducible investigations to test relationships and aspects of scientific models. They identify potential ethical issues and intercultural considerations required for field locations or use of secondary data. They use equipment to generate and record data with precision. They process data and information and analyse it to describe patterns, trends and relationships. They identify possible sources of error in methods and identify unanswered questions in conclusions and claims. They identify evidence to support their conclusions and construct arguments to support or dispute claims. They select and use language and text features appropriately for their purpose and audience when communicating their ideas and findings.

#### *Science Inquiry*

Develop investigable questions, reasoned predictions and hypotheses to explore scientific models, identify patterns and test relationships ([AC9S7I01](#))

Plan and conduct reproducible investigations to answer questions and test hypotheses, including identifying variables and assumptions and, as appropriate, recognising and managing risks, considering ethical issues and recognising key considerations regarding heritage sites and artefacts on Country/Place ([AC9S7I02](#))

Select and use equipment to generate and record data with precision, using digital tools as appropriate ([AC9S7I03](#))

Analyse data and information to describe patterns, trends and relationships and identify anomalies ([AC9S7I05](#))

Analyse methods, conclusions and claims for assumptions, possible sources of error, conflicting evidence and unanswered questions ([AC9S7I06](#))

Write and create texts to communicate ideas, findings and arguments for specific purposes and audiences, including selection of appropriate language and text features, using digital tools as appropriate ([AC9S7I08](#))

#### *Design & Technologies: Food and Fibre Production*

Analyse how food and fibre are produced in managed environments and how these can become sustainable ([AC9TDE8K04](#))



*Creative & Critical Thinking*



*Literacy*



*Ethical Understanding*



*Aboriginal & Torres Strait Islander Histories & Cultures*



*Digital Literacy*



*Numeracy*



*Sustainability*



## YEAR 8

### VERSION 9

#### *Achievement Standard*

By the end of Year 8, students explain the role of specialised cell structures and organelles in cellular function and analyse the relationship between structure and function at organ and body system levels. Students plan and conduct safe, reproducible investigations to test relationships and explore models. They describe potential ethical issues and intercultural considerations needed for specific field locations or use of secondary data. They select and use equipment to generate and record data with precision. They analyse data and information to describe patterns, trends and relationships and identify anomalies. They construct evidence-based arguments to support conclusions and evaluate claims. They select and use language and text features appropriately for their purpose when communicating their ideas, findings and arguments to specific audiences.

#### *Science Understanding*

Recognise cells as the basic units of living things, compare plant and animal cells, and describe the functions of specialised cell structures and organelles ([AC9S8U01](#))  
Analyse the relationship between structure and function of cells, tissues and organs in a plant and an animal organ system and explain how these systems enable survival of the individual ([AC9S8U2](#))

#### *Science Inquiry*

Develop investigable questions, reasoned predictions and hypotheses to explore scientific models, identify patterns and test relationships ([AC9S8I01](#))  
Plan and conduct reproducible investigations to answer questions and test hypotheses, including identifying variables and assumptions and, as appropriate, recognising and managing risks, considering ethical issues and recognising key considerations regarding heritage sites and artefacts on Country/Place ([AC9S8I02](#))  
Select and use equipment to generate and record data with precision, using digital tools as appropriate ([AC9S8I03](#))  
Analyse data and information to describe patterns, trends and relationships and identify anomalies ([AC9S8I05](#))  
Analyse methods, conclusions and claims for assumptions, possible sources of error, conflicting evidence and unanswered questions ([AC9S8I06](#))  
Write and create texts to communicate ideas, findings and arguments for specific purposes and audiences, including selection of appropriate language and text features, using digital tools as appropriate ([AC9S8I08](#))

#### *Design & Technologies: Food and Fibre Production*

Analyse how food and fibre are produced in managed environments and how these can become sustainable ([AC9TDE8K04](#))



*Creative & Critical Thinking*



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[www.ozharvest.org/education/feast/](http://www.ozharvest.org/education/feast/)



### *PIEFA: Producing Pollinators for Improved Orchard Yields*

Where would we be without bees? This resource for Years 7 & 8 will introduce students to the importance of pollinators for improving orchard yields, human management of bees for orchard pollination, and the impacts of farm management on the sustainability of farm enterprise. This resource consists of three activities to build on students' knowledge of pollinators and their impact on food production.

[ezrwbvk28gx.exactdn.com/wp-content/uploads/2023/07/Producing-Pollinators-for-Improved-Orchard-Yields.pdf](http://ezrwbvk28gx.exactdn.com/wp-content/uploads/2023/07/Producing-Pollinators-for-Improved-Orchard-Yields.pdf)



### *PIEFA, Soil Science Australia & Soils for Life: Healthy Living Soils*

The key to growing a giant pumpkin is pruning, fertilising, and getting soil tests, share Dale Oliver, the current Australian record holder of an [867kg giant pumpkin](#) at the 2021 Giant Pumpkin and Watermelon Festival in Kyogle, NSW.

PIEFA, Soil Science Australia, and Soils for Life, with funding from the Australian Government's National Landcare Program, developed a suite of soil-based, curriculum linked resources for teachers and students. Students learn about our valuable and productive Australian soils with hands-on practical tasks, collaborative activities, research opportunities, video content, and case studies. There is a full unit on undertaking soil testing and understanding the results.

[healthylivingsoils.com.au](http://healthylivingsoils.com.au)



## YEARS 9 & 10

### VERSION 8.4

#### *Science Inquiry Skills*

Formulate questions or hypotheses that can be investigated scientifically ([AC SIS164](#) & [AC SIS198](#))

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 ([AC SIS165](#) & [AC SIS199](#))

Select and use appropriate equipment, including digital technologies, to collect and record data systematically and accurately ([AC SIS166](#) & [AC SIS200](#))

Analyse patterns and trends in data, including describing relationships between variables and identifying inconsistencies ([AC SIS169](#) & [AC SIS203](#))

Use knowledge of scientific concepts to draw conclusions that are consistent with evidence ([AC SIS170](#) & [AC SIS204](#))

Evaluate conclusions, including identifying sources of uncertainty and possible alternative explanations, and describe specific ways to improve the quality of the data ([AC SIS171](#) & [AC SIS205](#))

Communicate scientific ideas and information for a particular purpose, including constructing evidence-based arguments and using appropriate scientific language, conventions and representations ([AC SIS174](#) & [AC SIS208](#))



## YEAR 9

### VERSION 9

#### *Achievement Standard*

By the end of Year 9, students describe how the processes of sexual and asexual reproduction enable survival of the species. Students plan and conduct safe, reproducible investigations to test or identify relationships and models. They describe how they have addressed any ethical and intercultural considerations when generating or using primary and secondary data. They select and use equipment to generate and record replicable data with precision. They analyse and connect data and information to identify and explain patterns, trends, relationships and anomalies. They analyse the impact of assumptions and sources of error in methods and evaluate the validity of conclusions and claims. They construct logical arguments based on evidence to support conclusions and evaluate claims. They select and use content, language and text features effectively to achieve their purpose when communicating their ideas, findings and arguments to specific audiences.

#### *Science Understanding*

Describe the form and function of reproductive cells and organs in animals and plants, and analyse how the processes of sexual and asexual reproduction enable survival of the species ([AC9S9U01](#))

#### *Science Inquiry*

Develop investigable questions, reasoned predictions and hypotheses to test relationships and develop explanatory models ([AC9S9I01](#))

Plan and conduct valid, reproducible investigations to answer questions and test hypotheses, including identifying and controlling for possible sources of error and, as appropriate, developing and following risk assessments, considering ethical issues, and addressing key considerations regarding heritage sites and artefacts on Country/Place ([AC9S9I02](#))

Select and use equipment to generate and record data with precision to obtain useful sample sizes and replicable data, using digital tools as appropriate ([AC9S9I03](#))

Analyse and connect a variety of data and information to identify and explain patterns, trends, relationships and anomalies ([AC9S9I05](#))

Write and create texts to communicate ideas, findings and arguments effectively for identified purposes and audiences, including selection of appropriate content, language and text features, using digital tools as appropriate ([AC9S9I08](#))

#### *Design & Technologies: Food and Fibre Production*

Analyse and make judgements on the ethical, secure and sustainable production and marketing of food and fibre enterprises ([AC9TDE10K04](#))



*Creative & Critical Thinking*



*Literacy*



*Ethical Understanding*



*Aboriginal & Torres Strait Islander Histories & Cultures*



*Digital Literacy*



*Numeracy*



*Personal & Social Capability*



*Sustainability*



## YEAR 10

### VERSION 9

#### *Achievement Standard*

By the end of Year 10, students explain the processes that underpin heredity and genetic diversity and describe the evidence by supporting the theory of evolution by natural selection. Students plan and conduct safe, valid and reproducible investigations to test relationships or develop explanatory models. They explain how they have addressed any ethical and intercultural considerations when generating or using primary and secondary data. They select equipment and use it efficiently to generate and record appropriate sample sizes and replicable data with precision. They analyse and connect a variety of data and information to identify and explain patterns, trends, relationships and anomalies. They evaluate the validity of and reproducibility of methods, and the validity of conclusions and claims. They construct logical arguments based on analysis of a variety of evidence to support conclusions and evaluate claims. They select and use content, language and text features effectively to achieve their purpose when communicating their ideas, findings and arguments to diverse audiences.

#### *Science Understanding*

Use the theory of evolution by natural selection to explain past and present diversity and analyse the scientific evidence supporting the theory ([AC9S10U02](#))

#### *Science Inquiry*

Develop investigable questions, reasoned predictions and hypotheses to test relationships and develop explanatory models ([AC9S10I01](#))

Plan and conduct valid, reproducible investigations to answer questions and test hypotheses, including identifying and controlling for possible sources of error and, as appropriate, developing and following risk assessments, considering ethical issues, and addressing key considerations regarding heritage sites and artefacts on Country/Place ([AC9S10I02](#))

Select and use equipment to generate and record data with precision to obtain useful sample sizes and replicable data, using digital tools as appropriate ([AC9S10I03](#))

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*Numeracy*



*Personal & Social Capability*



*Sustainability*



## CLASSROOM RESOURCES

### *OzHarvest: FEAST*

FEAST (Food Education and Sustainability Training) is a curriculum-aligned education program for primary and secondary schools, which explores the issue of food waste and its environmental impact, healthy eating and easy classroom cooking. Like any good FEAST, it's designed to be fun, engaging and filled with good food run over 7 to 10 weeks and as a STEM project-based learning program. FEAST including online learning resources including lesson plans, student worksheets, videos, recipe books, and cooking guide.

[www.ozharvest.org/education/feast/](http://www.ozharvest.org/education/feast/)



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[healthylivingsoils.com.au](http://healthylivingsoils.com.au)

### *Soil Science Australia: Soil Science Careers*

In this activity, designed for students in Years 7 - 10 Science, students explore several soil science careers. The resource provides a variety of videos, and articles on environmental management careers who use soil science in their work. Soil science offers meaningful and rewarding career options that often intersect with other sciences such as ecology, hydrology, and forensics.

[www.soilscienceaustralia.org.au/wp-content/uploads/2021/09/Soil-science-careers-teacher-guide-2020\\_updated.pdf](http://www.soilscienceaustralia.org.au/wp-content/uploads/2021/09/Soil-science-careers-teacher-guide-2020_updated.pdf)



### *Soil Science Australia: Soil in the Urban Environment*

This scenario-based resource is targeted for Year 10 Science with a chemistry focus. Students explore the chemical reactions of pH, salinity, sodicity and corrosion in the soil in a real-world scenario.

[www.soilscienceaustralia.org.au/wp-content/uploads/2020/12/SoilsInSchools-TeacherGuide-Soil-in-the-Urban-Environment\\_FINAL.pdf](http://www.soilscienceaustralia.org.au/wp-content/uploads/2020/12/SoilsInSchools-TeacherGuide-Soil-in-the-Urban-Environment_FINAL.pdf)





# Ekka

## EDUCATION

### INTERNATIONAL AWARD WINNERS

The Royal Queensland Show (Ekka) is recognised for its excellence, over many years, by winning numerous awards at the International Fairs & Expos (IAFE) Awards.

IAFE has more than 1,000 members representing agricultural fairs from the United States, Canada, the United Kingdom, and Australia.

These awards represent the continued dedication the Ekka plays in bridging the country city divide, and educating the next generation on the essential role farming and agriculture plays in their everyday lives.

