

*Ekka*

EDUCATION

# ZEBRA FINCHES PROJECT

## CURRICULUM ALIGNMENT & CLASSROOM RESOURCES



**SECONDARY SCHOOLS**

# COMPETITION OVERVIEW

We invite you to apply to participate in our exciting new School Zebra Finch Breeding Educational Project.

This unique opportunity connects classroom learning with a hands-on experience in breeding finches, while students explore the wonders of biology, science, mathematics and design technology. The competition encourages teamwork and engages in critical thinking and creative problem-solving.

We invite schools to participate in a unique opportunity to create a cross-curricular project. Students, with the guidance of the Ekka's Poultry Committee, will explore the life cycles, habitats and care of finches while observing their breeding process.

With a strong focus on fostering a curiosity for nature, students will learn about animal care, create habitats, track breeding patterns and develop an understanding of ecosystems and the role of species conservation.



**THE EXHIBITION ZEBRA  
FINCH SOCIETY OF  
QUEENSLAND**

## IMPORTANT CONTACTS

### *Competition Enquiries*

[entries@royalqueenslandshow.com.au](mailto:entries@royalqueenslandshow.com.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)

***Denny the Budgie - Zebra Finch Care For Beginners - Accessible for All Ages***

If you are new to caring for Zebra Finches, this video serves as an ideal introduction. Specifically designed for beginners, it addresses the most common concerns and questions that arise when welcoming a new pet into your classroom. While starting with a new pet may seem daunting, rest assured this guide will provide you with the essential information you need. The video offers a comprehensive overview of Zebra Finch care, covering key topics such as setting up an appropriate habitat and ensuring a balanced diet. The aim is to equip you with the knowledge and confidence to create a nurturing and healthy environment for your Zebra Finch.

<https://www.youtube.com/watch?v=La7JMeMck8I>



***Animal Humane Society - Zebra Finches Care - Accessible for All Ages***

Welcome to this guide on Zebra Finch care. Whether you're a first-time owner or looking to expand your knowledge, this resource provides essential information on diet, housing, and environmental needs. Zebra Finches require a balanced diet, a spacious, well-equipped cage, and a warm, social environment to thrive. This guide will help you create the ideal conditions to ensure your Zebra Finch remains healthy, happy, and well-cared for throughout its life.

<https://www.animalhumanesociety.org/resource/zebra-finch-care>



***Birdlife Australia - Zebra Finch Bird Profile - Accessible for All Ages***

This resource provides an overview of the Zebra Finch, focusing on its habitat, behaviour, feeding, and breeding patterns. Native to Australia's arid and semi-arid regions, Zebra Finches are highly adaptable, thriving in harsh conditions and capitalising on rare rainfall events to initiate rapid breeding cycles. The guide covers the species' distinctive physical traits, feeding habits, and their unique reproductive strategies that contribute to their population booms. Whether you're interested in the species' natural environment or their behavioral characteristics, this resource offers a detailed look at one of Australia's most common and widely distributed grassfinches.

<https://birdlife.org.au/bird-profiles/zebra-finch/>



***Animalia - Australian Zebra Finch - Accessible for All Ages***

This educational resource provides a comprehensive overview of the Australian Zebra Finch (*Taeniopygia castanotis*), detailing key aspects of its biology, behaviour, habitat, and conservation status. It is structured to give a broad understanding of the species, making it a valuable resource for both general audiences and those with an interest in bird studies.

<https://animalia.bio/australian-zebra-finch>

***Animal Discuss - Behavioural Facts Of Finches Bird - Accessible for All Ages***

This article delves into the behavioural characteristics of finches, offering a comprehensive look at their growth, feeding, breeding, and social behaviours, as well as their unique evolutionary adaptations. It explores how these small birds have evolved and adapted to various environments, from the Galapagos Islands to urban spaces, making them a fascinating subject for bird enthusiasts and researchers alike. The article is divided into several key sections, each highlighting different aspects of finch behavior and their ecological roles.

<https://www.animaldiscuss.com/pet-animals/birds/finches/behavior/>

***Macquarie University - Personality, sociality and foraging in the zebra finch (Taeniopygia guttata)***

Few personality studies of zebra finches have considered the importance of the social environment in shaping the personality of this highly social species, despite its potential influence on how personality traits are formed and maintained. Additionally, no research had previously examined zebra finch personality in the wild, particularly in relation to fitness outcomes. This study addresses these gaps by first exploring the relationship between sociality and established personality traits, such as exploratory behavior and activity levels, within a captive aviary population. The study also investigates how these personality traits impact fitness in captivity, considering factors such as reproductive success and survival. In the second phase, the research examines zebra finch personality in the wild for the first time, seeking to understand how natural environmental conditions and social interactions influence personality and its role in fitness outcomes in the wild.

[https://figshare.mq.edu.au/articles/thesis/Personality\\_sociality\\_and\\_foraging\\_in\\_the\\_zebra\\_finch\\_Taeniopygia\\_guttata\\_/19435730?file=34532777](https://figshare.mq.edu.au/articles/thesis/Personality_sociality_and_foraging_in_the_zebra_finch_Taeniopygia_guttata_/19435730?file=34532777)



**VERSION 8.4*****Biological Sciences***

Classification helps organise the diverse group of organisms ([ACSSU111](#)).

Interactions between organisms, including the effects of human activities can be represented by food chains and food webs ([ACSSU112](#)).

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

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

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

***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](#)).

***Technologies***

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 investigate, analyse and select from a range of materials, components, tools, equipment and processes to develop design ideas ([ACTDEP035](#)).

Generate, develop, test and communicate design ideas, plans and processes for various audiences using appropriate technical terms and technologies including graphical representation techniques ([ACTDEP036](#)).

Select and justify choices of materials, components, tools, equipment and techniques to effectively and safely make designed solutions ([ACTDEP037](#)).

Independently develop criteria for success to evaluate design ideas, processes and solutions and their sustainability ([ACTDEP038](#)).

Use project management processes when working individually and collaboratively to coordinate production of designed solutions ([ACTDEP039](#)).



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*Literacy*



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**VERSION 9.0*****Biological Sciences***

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

Select and construct appropriate representations, including tables, graphs, models and mathematical relationships, to organise and process data and information ([AC9S7I04](#))

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

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](#))

***Mathematics***

Use mathematical modelling to solve practical problems, involving rational numbers and percentages, including financial contexts; formulate problems, choosing representations and efficient calculation strategies, using digital tools as appropriate; interpret and communicate solutions in terms of the situation, justifying choices made about the representation ([AC9M7N09](#))

Conduct repeated chance experiments and run simulations with a large number of trials using digital tools; compare predictions about outcomes with observed results, explaining the differences ([AC9M7P02](#))

***Technologies***

Analyse how people in design and technologies occupations consider ethical and sustainability factors to design and produce products, services and environments ([AC9TDE8K01](#))

Develop design criteria collaboratively including sustainability to evaluate design ideas, processes and solutions ([AC9TDE8P04](#))

Acquire, store and validate data from a range of sources using software, including spreadsheets and databases ([AC9TDI8P01](#))



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## VERSION 8.4

### *Biological Sciences*

Cells are the basic units of living things; they have specialised structures and functions ([ACSSU149](#)).

Multi-cellular organisms contain systems of organs carrying out specialised functions that enable them to survive and reproduce ([ACSSU150](#)).

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

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

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

### *Mathematics*

Investigate techniques for collecting data, including census, sampling and observation ([AC MSP284](#)).

Explore the variation of means and proportions of random samples drawn from the same population ([AC MSP293](#)).

### *Technologies*

Analyse and visualise data using a range of software to create information, and use structured data to model objects or events ([ACT DIP026](#)).

Critique needs or opportunities for designing and investigate, analyse and select from a range of materials, components, tools, equipment and processes to develop design ideas ([ACT DEP035](#)).

Generate, develop, test and communicate design ideas, plans and processes for various audiences using appropriate technical terms and technologies including graphical representation techniques ([ACT DEP036](#)).

Select and justify choices of materials, components, tools, equipment and techniques to effectively and safely make designed solutions ([ACT DEP037](#)).

Independently develop criteria for success to evaluate design ideas, processes and solutions and their sustainability ([ACT DEP038](#)).

Use project management processes when working individually and collaboratively to coordinate production of designed solutions ([ACT DEP039](#)).



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**VERSION 9.0*****Biological Sciences***

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 ([AC9S8U02](#))

Select and use equipment to generate and record data with precision, using digital tools as appropriate ([AC9S8I03](#))

Select and construct appropriate representations, including tables, graphs, models and mathematical relationships, to organise and process data and information ([AC9S8I04](#))

***Mathematics***

Use mathematical modelling to solve practical problems involving rational numbers and percentages, including financial contexts; formulate problems, choosing efficient calculation strategies and using digital tools where appropriate; interpret and communicate solutions in terms of the situation, reviewing the appropriateness of the model ([AC9M8N05](#))

Use mathematical modelling to solve applied problems involving linear relations, including financial contexts; formulate problems with linear functions, choosing a representation; interpret and communicate solutions in terms of the situation, reviewing the appropriateness of the model ([AC9M8A03](#))

Analyse and report on the distribution of data from primary and secondary sources using random and non-random sampling techniques to select and study samples ([AC9M8ST02](#))

***Technologies***

Analyse how people in design and technologies occupations consider ethical and sustainability factors to design and produce products, services and environments ([AC9TDE8K01](#))

Develop design criteria collaboratively including sustainability to evaluate design ideas, processes and solutions ([AC9TDE8P04](#))

Acquire, store and validate data from a range of sources using software, including spreadsheets and databases ([AC9TDI8P01](#))



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**VERSION 8.4*****Biological Sciences***

Multi-cellular organisms rely on coordinated and interdependent internal systems to respond to changes to their environment ([ACSSU175](#)).

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

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](#)).

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

***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 ([AC MSP228](#)).

List all outcomes for two-step chance experiments, both with and without replacement using tree diagrams or arrays. Assign probabilities to outcomes and determine probabilities for events ([AC MSP225](#)).

***Technologies***

Develop techniques for acquiring, storing and validating quantitative and qualitative data from a range of sources, considering privacy and security requirements ([ACT DIP036](#)).

Analyse and visualise data to create information and address complex problems, and model processes, entities and their relationships using structured data ([ACT DIP037](#)).

Plan and manage projects using an iterative and collaborative approach, identifying risks and considering safety and sustainability ([ACT DIP044](#)).



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**VERSION 9.0*****Biological Sciences***

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 ([AC9S9U02](#))

Select and construct appropriate representations, including tables, graphs, descriptive statistics, models and mathematical relationships, to organise and process data and information ([AC9S9I04](#))

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](#))

***Mathematics***

Use mathematical modelling to solve applied problems involving change including financial contexts; formulate problems, choosing to use either linear or quadratic functions; interpret solutions in terms of the situation; evaluate the model and report methods and findings ([AC9M9A05](#))

Use mathematical modelling to solve practical problems involving direct proportion, rates, ratio and scale, including financial contexts; formulate the problems and interpret solutions in terms of the situation; evaluate the model and report methods and findings ([AC9M9M05](#))

Design and conduct repeated chance experiments and simulations, using digital tools to compare probabilities of simple events to related compound events, and describe results ([AC9M9P03](#))

***Technologies***

Analyse how people in design and technologies occupations consider ethical, security and sustainability factors to innovate and improve products, services and environments ([AC9TDE10K01](#))

Use simple project management tools to plan and manage individual and collaborative agile projects, accounting for risks and responsibilities ([AC9TDI10P12](#))



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## VERSION 8.4

### *Biological Sciences*

The theory of evolution by natural selection explains the diversity of living things and is supported by a range of scientific evidence ([ACSSU185](#)).

Formulate questions or hypotheses that can be investigated scientifically ([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 SIS199](#)).

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

### *Mathematics*

Describe the results of two- and three-step chance experiments, both with and without replacements, assign probabilities to outcomes and determine probabilities of events. Investigate the concept of independence ([AC MSP246](#)).

Use the language of 'if ...then', 'given', 'of', 'knowing that' to investigate conditional statements and identify common mistakes in interpreting such language ([AC MSP247](#)).

Evaluate statistical reports in the media and other places by linking claims to displays, statistics and representative data ([AC MSP253](#)).

### *Technologies*

Develop techniques for acquiring, storing and validating quantitative and qualitative data from a range of sources, considering privacy and security requirements ([AC TDIP036](#)).

Analyse and visualise data to create information and address complex problems, and model processes, entities and their relationships using structured data ([AC TDIP037](#)).

Plan and manage projects using an iterative and collaborative approach, identifying risks and considering safety and sustainability ([AC TDIP044](#)).



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## VERSION 9.0

### *Biological Sciences*

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

Select and construct appropriate representations, including tables, graphs, descriptive statistics, models and mathematical relationships, to organise and process data and information ([AC9S10I04](#))

Assess the validity and reproducibility of methods and evaluate the validity of conclusions and claims, including by identifying assumptions, conflicting evidence and areas of uncertainty ([AC9S10I06](#))

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 ([AC9S10I08](#))

### *Mathematics*

Use mathematical modelling to solve applied problems involving growth and decay, including financial contexts; formulate problems, choosing to apply linear, quadratic or exponential models; interpret solutions in terms of the situation; evaluate and modify models as necessary and report assumptions, methods and findings ([AC9M10A04](#))

Use mathematical modelling to solve practical problems involving proportion and scaling of objects; formulate problems and interpret solutions in terms of the situation; evaluate and modify models as necessary, and report assumptions, methods and findings ([AC9M10M05](#))

### *Technologies*

Analyse how people in design and technologies occupations consider ethical, security and sustainability factors to innovate and improve products, services and environments ([AC9TDE10K01](#))

Use simple project management tools to plan and manage individual and collaborative agile projects, accounting for risks and responsibilities ([AC9TDI10P12](#))



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## VERSION 8.4

### *Biological Sciences: Unit 3: Heredity and continuity of life Content Descriptions*

Identify, research and construct questions for investigation; propose hypotheses; and predict possible outcomes ([ACSBL061](#))

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 ([ACSBL062](#))

Represent data in meaningful and useful ways, including the use of mean, median, range and probability; organise and analyse data to identify trends, patterns and relationships; discuss the ways in which measurement error, instrumental accuracy, the nature of the procedure and the sample size may influence uncertainty and limitations in data; and select, synthesise and use evidence to make and justify conclusions ([ACSBL064](#))

Interpret a range of scientific and media texts, and evaluate models, processes, claims and conclusions by considering the quality of available evidence, including interpreting confidence intervals in secondary data; and use reasoning to construct scientific arguments ([ACSBL065](#))

### *Essential Mathematics*

Display categorical data in tables and column graphs ([ACMEM045](#))  
recognise and identify outliers ([ACMEM047](#))

Compare the suitability of different methods of data presentation in real-world contexts. ([ACMEM048](#))

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](#))



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## VERSION 9.0

### *Biological Sciences: Unit 1: Biodiversity and the interconnectedness of life*

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](#))

Select, construct and use appropriate representations, including classification keys, food webs and biomass pyramids, to communicate conceptual understanding, solve problems and make predictions ([ACSBL006](#))

### *Essential Mathematics*

Display categorical data in tables and column graphs ([ACMEM045](#))

Display numerical data as frequency distributions, dot plots, stem and leaf plots, and histograms ([ACMEM046](#))

Recognise and identify outliers ([ACMEM047](#))

Compare the suitability of different methods of data presentation in real-world contexts. ([ACMEM048](#))



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# 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.

