



**THE WORKSHOPS
RAIL MUSEUM**

ANIMAL CLASSIFICATION WORKSHOPS

Years 3–6

Teacher notes

This program has been produced and published by The Workshops Rail Museum, North Street, North Ipswich, Qld, Australia 4305.

The Workshops Rail Museum's Vision Statement is:

to be recognised as a creative, innovative and exciting journey of discovery into Australia's rail story.

The Workshops Rail Museum's Mission Statement is:

to harness the significance of the Workshops precinct by delivering international standard cultural and tourism related activities, education and public programs associated with the interaction of rail on people's lives.

The Queensland Museum Network's Vision Statement is:

to be the premier Museum in Australia, connecting real objects and contemporary research with communities, creating authentic and compelling experiences and stories that inspire, enrich and empower.

The Queensland Museum's Mission Statement is:

to inspire generations of Queenslanders to discover, celebrate and value our distinctive natural and cultural environments.

The Queensland Museum Network Lifelong Learning vision is:

to provide lifelong learning experiences and opportunities for everyone, connecting QMN collections, research and stories, with the aim to inspire, enrich and empower people to make meaning.

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Purpose and overview

The Animal Classification Workshops provide an opportunity for Years 3-4 and Years 5-6 students to develop their Science Understanding and Inquiry Skills through recognising the patterns, systems and conventions of the classification processes used in the Biological Sciences. Students discover relationships and connections among different species as they explore the animal kingdom, using visuals, challenges and real Museum specimens.

The Primary School Animal Classification Workshops are offered in two versions for Years 3-4 and Years 5-6. During the sessions, students will:

- Compare the physical characteristics of a selection of familiar animals;
- Examine real Museum specimens in order to identify and classify them;
- Organise their observations through grouping and classifying specimens;
- Broaden their knowledge of classification systems;
- Identify and analyse the forms of different species to better understand how they function in their environment;
- Describe and analyse relationships in the animal kingdom;
- Consider how and why scientists organise animals into groups, with guided discussion;
- Discover the benefits of classification in our daily lives.

We recommend co-ordinating this session with an exploration of the *A Room for Wild Animals* exhibition, which complements this learning experience. A guided tour of the exhibition by Museum staff is offered as part of the workshop program. The tour explores the following key themes of the exhibition:

- The purpose of the exhibition: presenting a range of wild animal species that people may not ordinarily have the opportunity to see; to highlight threats to wildlife and biodiversity;
- How the specimens were acquired by Queensland Museum;
- Processes of preservation;
- Examining the various exhibits to identify key features and adaptations.

Assumed prior knowledge

This excursion-based workshop is designed to support in-class units of work on animal groups and classification. It is assumed that students have some familiarity with sorting and classifying living things into groups based on similar features or characteristics.

Session details

- The program is led by a Museum Learning Officer
- \$6.00 per student; supervising adults are free
- Each session runs for approximately 60 minutes (including guided tour of *A Room for Wild Animals* exhibition)

Booking information

For information on booking a school group excursion to The Workshops Rail Museum, please complete the online booking form available on our website:

<http://www.theworkshops.qm.qld.gov.au/>

Please refer to the “Planning your visit” page on our website for further information and The Workshop Rail Museum’s Risk Assessment for schools. Alternatively, contact our Booking Officer on (07) 3432 5100 or info@theworkshops.qm.qld.gov.au

Curriculum Information:

The workshops are aligned with the Australian Curriculum: Science (v8.2) for Years 3 to 6. The Science content strands addressed are *Science Understanding*, *Science as a Human Endeavour* and *Science Inquiry Skills*. These links are elaborated on the following pages.

Curriculum Links

The Australian Curriculum: Science (v8.2): Years 3 – 6

Year 3 Science

Science Understanding

Biological sciences:

Living things can be grouped on the basis of observable features and can be distinguished from non-living things **(ACSSU044)**

Elaborations:

- recognising the range of different living things
- sorting living things based on their characteristics

TEACHER NOTES:

- The animals on display in the workshop and exhibition offer students the opportunity to compare and contrast interesting features as well as things that are unique to living organisms; e.g. limbs for movement and other specialisations, such as claws for hunting, digging, etc.
- Students use these features as a basis for classifying the animals

Science as a Human Endeavour

Nature and development of science:

Science involves making predictions and describing patterns and relationships **(ACSHE050)**

Elaboration:

- making predictions about change and events in our environment

TEACHER NOTES:

- The workshop aims to develop understanding of how and why sorting and classification systems are used by Queensland Museum scientists and how they make important observations, predictions and investigations to help us answer scientific questions and develop understandings about the natural world

Science Inquiry Skills

Questioning and predicting:

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

Elaborations:

- jointly constructing questions that may form the basis for investigation
- listing shared experiences as a whole class and identifying possible investigations

TEACHER NOTES:

- The workshop encourages students to generate research questions about varied animal characteristics and adaptations. These questions also inform exhibition exploration

Communicating:

Represent and communicate observations, ideas and findings using formal and informal representations **(AC SIS060)**

Elaborations:

- communicating with other students carrying out similar investigations to share experiences and improve investigation skill
- using simple explanations and arguments to communicate ideas to other students

TEACHER NOTES:

- During the workshop, students use simple explanations and arguments to communicate ideas about animal classification with other students
- When exploring the exhibition, encourage students to ask questions and share ideas about specimens

Year 4 Science

Science as a Human Endeavour

Nature and development of science:

Science involves making predictions and describing patterns and relationships **(ACSHE061)**

Elaboration:

- exploring ways in which scientists gather evidence for their ideas and develop explanations

TEACHER NOTES:

- The workshop models ways in which scientists make important observations, predictions and investigations to help us answer scientific questions and develop understandings about the natural world

Science Inquiry Skills

Questioning and predicting:

With guidance, identify questions in familiar contexts that can be investigated scientifically and make predictions based on prior knowledge **(ACSIS064)**

Elaboration:

- reflecting on familiar situations to make predictions with teacher guidance

TEACHER NOTES:

- The workshop encourages students to generate research questions about varied animal characteristics and adaptations. These questions also inform exhibition exploration

Communicating:

Represent and communicate observations, ideas and findings using formal and informal representations **(ACSIS071)**

Elaborations:

- communicating with other students carrying out similar investigations to share experiences and improve investigation skills
- using simple explanations and arguments to communicate ideas to other students

TEACHER NOTES:

- During the workshop, students use simple explanations and arguments to communicate ideas about animal classification with other students
- The workshop activities and exhibition also assist students in recognising how Queensland Museum's collections can communicate scientific information about different animals
- When exploring the exhibition, encourage students to ask questions and share ideas about specimens

Year 5 Science

Science Understanding

Biological sciences:

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

Elaborations:

- explaining how particular adaptations help survival
- describing and listing adaptations of living things suited for different environments

TEACHER NOTES:

- During the workshop, students are encouraged to explore animal adaptations for survival and use these adaptations as a means of classifying and identifying animals
- When exploring the exhibition, encourage students to further identify animal adaptations and their purposes

Science Inquiry Skills

Questioning and predicting:

With guidance, pose clarifying questions and make predictions about scientific investigations (ACSIS231)

Elaboration:

- exploring the range of questions that can be asked about a problem or phenomena and with guidance

TEACHER NOTES:

- The workshop encourages students to generate research questions about varied animal characteristics and adaptations. These questions also inform exhibition exploration

Communicating:

Communicate ideas, explanations and processes using scientific representations in a variety of ways, including multi-modal texts (ACSIS093)

Elaboration:

- constructing spoken texts to communicate science ideas

TEACHER NOTES:

- During the workshop, students are encouraged to ask questions and share ideas about specimens
- The workshop activities and exhibition also assist students in recognising how Queensland Museum's collections can communicate scientific information about different animals
- When exploring the exhibition, encourage students to ask questions and share ideas about specimens

Year 6 Science

Science Inquiry Skills

Questioning and predicting:

With guidance, pose clarifying questions and make predictions about scientific investigations **(AC SIS232)**

Elaboration:

- asking questions to understand the scope or nature of a problem

TEACHER NOTES:

- The workshop encourages students to generate research questions about varied animal characteristics and adaptations. These questions also inform exhibition exploration
- Students also use Queensland Museum learning to identify and refine research questions that may be used to inform further scientific investigation in animal classification

Processing and analysing data and information:

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)**

Elaboration:

- exploring how different representations can be used to show different aspects of relationships

TEACHER NOTES:

- The workshop models how scientists use representations to show relationships among species, e.g. taxonomic ranking: Domain, Kingdom, Phylum, Class, Order, Family, Genus, Species

Communicating:

Communicate ideas, explanations and processes using scientific representations in a variety of ways, including multi-modal texts **(AC SIS110)**

Elaboration:

- exploring how different representations can be used to show different aspects of relationships

TEACHER NOTES:

- During the workshop, students are encouraged to ask questions and share ideas about specimens
- The workshop activities and exhibition also assist students in recognising how Queensland Museum's collections can communicate scientific information about different animals
- The workshop models ways in which scientists use to conduct and communicate their investigations, and some of the tools they use, e.g. microscopes, scans, etc.

Additional Queensland Museum Network Resources

For information regarding Queensland Museum loans kits visit:

<http://www.theworkshops.qm.qld.gov.au/Learning+resources/QM+Loans>

For information on the *A Room for Wild Animals* exhibition visit:

<http://www.theworkshops.qm.qld.gov.au/Events+and+Exhibitions>

For Queensland Museum learning resources on biodiversity, animal adaptations and classification, visit the website below and enter keywords in the search box:

<http://www.theworkshops.qm.qld.gov.au/Learning+resources/Resources>

To explore the Queensland Museum's Biodiversity on-line collection visit:

<http://www.collections.qm.qld.gov.au/naturalEnvironments.page.do>

Other internet resources

For general factual information about different types of animals for student reference:

<http://www.softschools.com/facts/animals/>

For information on classification for younger learners, including interactive games:

http://www.sheppardsoftware.com/content/animals/kidscorner/classification/kc_classification_main.htm

A Room for Wild Animals at The Workshops Rail Museum

Get up close to 20 taxidermy specimens from the Queensland Museum collection.

Most of us are familiar with Australian mammals such as koalas and kangaroos, but have little appreciation for the sheer size and form of many overseas land mammals.

In a first for Ipswich, *A Room for Wild Animals* showcases 20 taxidermy specimens from the Queensland Museum collection including big cats, bears and deer.

The specimens featured represent some of the most impressive mammals on the planet, providing a rare opportunity to experience them up close. The exhibits featured in this display are part of a larger collection, some of which were seized as Proceeds of Crime and donated to Queensland Museum on behalf of the Commonwealth of Australia.

Today they speak on behalf of their living relatives across the globe and help us to learn an important conservation lesson.

Dates: 25 February 2017 - 26 November 2017

Price: Free with Museum entry

