

ANIMAL VEGETABLE AND MINERAL

**The weird and wonderful world of
the Powerhouse Museum 1880–1939**



6 April – 17 July 2005

Introduction

Animal, vegetable and mineral celebrates the early years of the Powerhouse, a new type of museum when it was founded in the early 1880s, dedicated to educating the public about the science of everyday life. The exhibition features a range of early exhibits, many not seen since the 1920s when some of the older displays were removed. It provides a rare opportunity to see the marvels collected and exhibited by the Museum's first curators and helps us understand why 19th century technology museums grew and prospered, evolving into some of the world's greatest museums.

Syllabus links

The exhibition, together with the activities included in these notes, can be integrated into or adapted for areas of teaching in the following syllabuses:

Primary (stages 2 & 3)

- English — 'Talking and listening skills and strategies', 'Reading and viewing texts', 'Producing texts' and 'Context and text' substrands
- HSIE – 'Identities' and 'Resource systems' substrands

Secondary (stages 4 and 5)

- English — 'Responding', 'Composing text' and 'Context'
- History — 'Investigating history' and 'Thematic studies'

Tertiary

- Museum studies

A model of horse's teeth, one of the 31 bought by the Museum in 1885 to show changes from birth to an 'advanced age'.

Animal, vegetable and mineral: the weird and wonderful world of the Powerhouse Museum 1880–1939

When the Powerhouse was founded in 1880 it represented a new type of museum. Far from exhibiting the rare and the curious, the Technological, Industrial and Sanitary Museum, as it was then known, aimed to explain the 'science of everyday life'.* Its audience were working men and women rather than the well-to-do and its goal was 'to be of interest and lasting service to the mass of the population ... in regard to things met with in daily life'.**

This exhibition brings together some of the Museum's earliest acquisitions. It tells the story of what was collected and why and how its first curators set out to educate the public about the new materials, innovations and processes that were transforming Australia and their way of life.

* Thomas Twining, *Technical training*, 1874, p 97

** Annual report for 1881, p1

Did you know?

- In September 1879, Sydney held Australia's first international exhibition, a showcase of invention and industry from around the world. The Garden Palace was built in the Botanic Gardens as a home for the exhibition, which proved to be so popular that the government bought many of the star exhibits and set up the Technological, Industrial and Sanitary Museum. This was the grandparent of today's Powerhouse Museum.

Things to do or discuss

- On 22 September 1882 the Garden Palace was completely destroyed by fire and only a few objects survived from a collection of 10 000. The Museum re-opened on 15 December 1883, and began to build its collection again. Locate the few objects that managed to survive the fire in 1882 and are on display here. Are they animal, vegetable or mineral?

Ordering the world: the three great kingdoms of nature

The founders of Sydney's Technological Museum believed that all the things that surrounded them in daily life could be classified according to their origins

in the three great kingdoms: animal, vegetable and mineral. The Museum's first curator, Joseph Maiden, had such confidence in this classification system that he organised the entire collection on this basis. In the new purpose-built premises in Ultimo, visitors ascended from minerals on the ground floor through the vegetable kingdom on the first to the animal kingdom on the second.

Did you know?

- Swedish naturalist, Carl Linnaeus (1707–1778) first described the three kingdoms of nature in his book *Systema naturae*, published in 1735. When you play 'Animal, Vegetable, Mineral' you are playing a game based on Linnaeus' classifications.
- When the Powerhouse was first established the collection was arranged according to the three kingdoms of nature. Today, the Museum's collection is arranged around three major collecting areas: science and technology, decorative arts and design, and Australian history and society.

Things to do or discuss

- Besides using actual objects on display, what methods did the first curators use to educate the public about the changing world around them? Discuss how effective the Museum was in this educational role given the social, cultural and economic context of the times.

Research at the Museum: 'this botanical terra incognita'*

Although a 'modern' institution, Sydney's Technological Museum preserved the 17th century ideal of the museum as collection, library and laboratory. Indeed in a country like Australia, the laboratory and the analysis of the colony's raw materials were thought particularly important. Each floor of the Museum had its own research laboratory: mineralogy on the ground floor, botany and chemistry on the first and zoology and entomology on the third. The results were published in books and articles, and featured in exhibits such as the Eucalyptus Oil Courts.

* Maiden writing to George Miller II, May 1887

Did you know?

- Joseph Maiden studied and catalogued the botanical specimens collected for the Museum from all over NSW. His research publications were enormous, including the eight volume *A critical revision of the genus eucalyptus* (1903–1933) and *A census of New South Wales plants* (1917).

Things to do or discuss

- The early curators believed the Museum had an important role to play collecting and analysing Australia's raw materials. Give specific examples from the exhibition that illustrate this belief.

The mail order museum: 'real or modelled wonders of the earth'*

What made objects of interest to Sydney's Technological Museum was not rarity but representativeness and the contents of many exhibits could literally be bought off the shelf. Distance from major European and American manufacturing centres was no handicap, as examples of raw materials and finished products could be purchased from catalogues. At times there was little to distinguish the Museum from a trade show. Promotional material was included in displays as well as 'the price paid and commercial value'.**

* Description of the Museum's contents in the *Daily Telegraph*, 22 October 1880

** Archibald Liversidge, *Report upon certain museums for technology, science and art*, Sydney, 1880, p xi

Things to do or discuss

- Given the social and economic context of the times, do you agree with the practice of collecting objects on the basis of 'representativeness' rather than 'rarity'? Why did the Museum acquire so many plant, animal, furnace and engine models? What purposes did these models serve?

Exhibiting: 'a means of general and industrial education'*

With huge collections to display, 'careful arrangement'* was essential to ensure visitors found the displays educational and informative. As much as possible objects were organised so as to show production processes — from raw material to finished article. Modelled on the organisation of international exhibitions, each floor was divided into bays 'to

facilitate the classification of the exhibits into groups'.** On the floor given over to the animal kingdom two bays were devoted to insects 'beneficial and injurious to man** and another to the Fisheries Court.

* Progress report of the Technological and Industrial Museum committee, 18 September 1879

** Annual report for 1893, p 216

Did you know?

- Plate glass (sheets of thick clear glass) became available in Sydney in 1854. It was first installed in Farmer's Department Store in Market Street, at the time Sydney's tallest building.

- According to the CSIRO, there are more than 350 species of termite in Australia of which some 20 species can damage timber in houses.

Serving the people of NSW: 'A bureau of information'*

Each year the Museum received thousands of letters of enquiry. Some simply wanted information on local plants and animals, while others hoped to identify new ways of making money. In response to one such query, Maiden wrote enthusiastically about the possibilities of wattle bark for the tanning industry: 'I feel sure there is a fortune to be made'.

In their replies to these inquiries, and in their books, pamphlets and learned papers, the curators and scientific staff extended the Museum's influence far beyond Ultimo.

* *Sydney Technological Museum*, Sydney, 1899, p 2

Things to do or discuss

- In what ways did the Museum serve the people of NSW during the late 19th century?

Extension activities

1. For a brief history of the Museum, including interesting facts and figures about the collection, visit the 'About the Powerhouse Museum' page on the Museum website:

www.powerhousemuseum.com/about/aboutMuseum.asp

Based on the 'History of the Museum' page, construct a timeline highlighting the major events that happened to the Museum since 1879. According to the 'About the Museum' page, what mission does the Museum set for itself and what audiences does it try to reach?

2. For an overview of the Museum's diverse collection visit the 'Powerhouse Museum collection' page:

www.powerhousemuseum.com/collection/collection_overview.asp

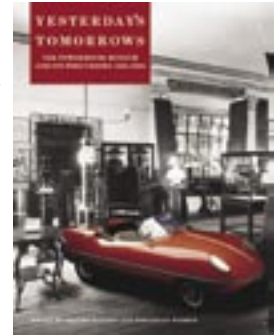
Select an object from one of the collection fields. How did the Museum acquire it? What is the significance of this object?

3. Do you collect things? What do you collect? Why do you collect them? How do you collect them? Discuss the above as a group or a class.
4. To understand attitudes to science in 19th century Australia, read the paper 'Scientists and Colonists: efforts to involve the public in science in late 19th century Australia' by Jenny Newell at:

www.asap.unimelb.edu.au/bsparcs/exhib/papers/sc_home.htm

Resources

- *Yesterday's tomorrows: the Powerhouse Museum and its precursors 1880–2005*, Graeme Davison and Kimberley Webber (eds), Powerhouse Publishing in association with UNSW Press, 2005 RRP \$55.00, members \$44.95.



- The history of the Powerhouse Museum: www.powerhousemuseum.com/about/abouthistory.asp
- The Powerhouse Museum collection: www.powerhousemuseum.com/collection/index.asp
- The three kingdoms of nature, Linnean Society of London www.linnean.org/contents/library/faq.html#kingdoms
- *Scientists and colonists*, Jennifer Newell and Denise Sutherland, 1997 on www.asap.unimelb.edu.au/bsparcs/exhib/journal/as_colonists.htm

Please note

The websites referred to in these notes were available and suitable at the time of publication. We advise teachers to check sites before recommending them to students.

For more information on the exhibition
Animal, vegetable and mineral: the weird and wonderful world of the Powerhouse Museum 1880–1939 visit the Powerhouse Museum's website
<http://www.powerhousemuseum.com>

For more information about education support or your booking, contact Education and Visitor Services at the Powerhouse Museum:
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