



Managing Collections at The Workshops Rail Museum

YEAR 6 AND 8
SCIENCE AS A HUMAN ENDEAVOUR



QGC

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Future Makers

Future Makers is an innovative partnership between Queensland Museum Network and Shell's QGC business aiming to increase awareness and understanding of the value of science, technology, engineering and maths (STEM) education and skills in Queensland.

This partnership aims to engage and inspire people with the wonder of science, and increase the participation and performance of students in STEM-related subjects and careers – creating a highly capable workforce for the future.

Cover image: A group of model diesel locomotives from the T-House Model Rail Collection. QM, Peter Waddington.

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EXPLAIN – ELABORATE

Managing Collections at The Workshops Rail Museum

Teacher Resource

Queensland Museum has a responsibility to collect, research and promote Queensland’s natural, cultural and technological heritage. Our collections provide evidence of changes occurring in our natural and cultural environments.

Cultural and historical collections are comprised of objects that are significant to the people of Queensland; some of these objects are small, such as a [model electric locomotive](#) (4.65 cm in length), while others can be as large as a [diesel electric locomotive](#) (16 m in length)! The people who research and acquire objects for a museum’s collection are called curators.

In this activity, students learn about the work of Rob Shiels, Curator of Transport at The Workshops Rail Museum (TWRM). During his time at TWRM, Rob has helped deliver a number of large object moves including locomotives, buses, cars, wagons and carriages, generators, tanks, rail motors and high voltage electrical material. Rob is also heavily involved in the development and delivery of exhibitions.

Following this activity, students could complete [Generating Electricity: Past and Present](#). If visiting TWRM, students could also complete [The Future of Rail: A Design Challenge](#).

Image, left: Rob Shiels, Curator of Transport at TWRM. Rob stands in the collection store, in front of models of locomotives, carriages and wagons from the T-House Collection. There are over 11,000 rail models in this collection!



Curriculum Links

Science

YEAR 6

Science as a Human Endeavour

Scientific knowledge is used to solve problems and inform personal and community decisions (ACSH100)

Science Inquiry Skills

Communicate ideas, explanations and processes using scientific representations in a variety of ways, including multi-modal texts (ACSI110)

YEAR 8

Science as a Human Endeavour

Solutions to contemporary issues that are found using science and technology, may impact on other areas of society and may involve ethical considerations (ACSH135)

Science Inquiry Skills

Communicate ideas, findings and evidence based solutions to problems using scientific language, and representations, using digital technologies as appropriate (ACSI148)

General Capabilities

Literacy

Comprehending texts through listening, reading and viewing
Composing texts through speaking, writing and creating

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Student Activity

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A Chat with Rob Shiels, Curator of Transport, The Workshops Rail Museum

Rob Shiels is the Curator of Transport at The Workshops Rail Museum (TWRM). Learn more about his work at the museum below.

- **How did you become interested in your field of work?**

When I first went to university, I started a degree in town planning. I quickly realised town planning wasn't for me, and so I left the course. I then got a job for 12 months, but this wasn't a job I enjoyed, so I decided to go back to university. I didn't really know what I wanted to do there, but I knew that I wanted to study something that I was passionate about, so I decided to study history. After completing a Bachelor of Arts with a History Double Degree Major, I was lucky enough to get a job at TWRM. I worked at one of the Thomas the Tank Engine school holiday events and I quickly realised that I wanted to work in museums, so I enrolled in a Master of Museum Studies. I completed my Master's Degree part-time while I continued to work at TWRM. I have worked at TWRM for 15 years now, in a number of positions – currently I am the Curator of Transport.



Rob Shiels inspecting one of the locomotive models from the T-House Collection. There are over 11,000 individual models in this collection!

- **What do you enjoy most about your work?**

For me, the best thing about working in a museum is learning about our past. Every object has a story to tell (often they have many stories to tell!), and we can learn so much about ourselves and our communities by looking over our shoulders to see where we have come from. The most rewarding part of my job is tracking down information about objects; sometimes it is like being a detective, trying to find clues and snippets of information about these objects from different sources. It is a great feeling when you start with an object you don't know much about and, through some hard work (and patience), discover its history and how people used it in the past.

- **Describe some of the objects you have worked with in the Queensland Museum collection. How do these objects function?**

We have so many different types of objects at TWRM. It takes a lot of people and resources to run a railway, and our objects help us document this history. We have old uniforms, advertisements from stations, tools that were used to lay tracks, tickets, photographs, crockery that was used in railway refreshment rooms... in fact, we have thousands and thousands of different objects that help us tell stories about Queensland's railway history.

Recently I have been working on many objects that have links to railway sporting teams, which I have found very interesting. Workplaces used to play a huge part in the social lives of workers and their families. Along with workplace sporting teams, there were also workplace brass bands and other workplace social clubs! These teams and clubs were started by railway workers at the Ipswich Railway Workshops. I have really enjoyed researching this other side of life as a railway worker over the last few years.



The Ipswich Railway Band was comprised of talented railway workers. They were very successful during the 1920s and won a number of competitions. QMN Collection.

TWRM however is most famous for its locomotives, and we are lucky enough have A10 No.6 locomotive in the collection. It is the oldest Queensland steam locomotive in existence. A10 No.6 was built in 1865, and although it may appear to be quite basic, its no-frills design allows visitors to see how external combustion engines were developed into steam locomotives.

After the era of steam, locomotives transitioned to diesel internal combustion engines. In Queensland, the ‘dieselisation’ of the fleet began in the 1950s. One early diesel locomotive purchased by Queensland Rail was the 1250 Class, built by English Electric of Rocklea, Brisbane. 1250 Class: No.1262 is on display in the *Diesel Revolution* zone of TWRM. The exterior panels of the locomotive were removed so visitors can see exactly how diesel electric locomotives work.



Image, left: A10 No.6 locomotive on display at TWRM. Image, right: Installing 1250 Class: No.1262 locomotive at TWRM in 2002. Image credit: David Mewes.

At TWRM, you can also learn about the electrification of railway networks and how overhead power lines (or third rails) power trains. Queensland has one of the largest electrified railway networks in Australia; passenger services and some freight services use this technology.

- **What has been the biggest impact of rail on Queensland?**

The building of railways during the 19th and 20th centuries had a deep impact on the economic development of Queensland. Many of us live in places today that were created – or flourished – because a railway was built nearby or passed directly through our town or city. Even if the railway tracks were ripped up years ago, if you do enough research, you will probably be able to find out how an old railway line affected the past and present of sites across Queensland today.

- **What makes Queensland’s railways unique?**

The sheer size of Queensland influenced the design of our railways. Right from the very beginning, railway designers adopted a 3 foot 6 inch narrow railway gauge for Queensland in the 1860s. This narrow gauge size was cheaper to produce and install, meaning you could lay more for less. With about 70% of Queensland Government budgets between the 1860s – 1900s allocated to building, servicing and spreading the state’s railway network, any savings to be found were appreciated. Despite this financial saving, the decision to use narrow gauge in the 1860s affected Queensland’s ability to transport goods down to New South Wales and Victoria, who used different size rail gauges; this had a profound and long-lasting impact that is still experienced today. Despite gauge issues with other states, the railway network within Queensland was a resounding success with the network extending over 10,550 km at the start of the 1950s.



A map of Queensland railway network in 1950.

- **What would you recommend for students who would like to work in a similar field?**

Museum jobs do not come up as often as some other industries, particularly in the capital cities, but there are often good opportunities in regional areas. If you are prepared to move away from the city for job opportunities, smaller regional museums and galleries are great places to work.

Hypothesise what rail will look like in 100 years' time. Consider the importance of sustainability, and the need to move toward a more sustainable future in your response.

