

**Push and Pull -  
Simple Machines**

**1** Locomotives push and pull many different types of things.  
Explore the Fitch Pavilion  
**Draw a line to match the name of the wagon to the photo**

**Answers**

SAR Carriage 3  
**Row 5**

Provision Van  
**Row 6**

Caboose No 4367  
**Row 1**

Wooden Tool and Goods  
Van No 251  
**Row 1**



2



Find the Glenelg Line Signal, located near row 3.  
Find a lever, wheel and pulley. You can operate  
this interactive exhibit.

**Pull the lever to move the signal. If the arm  
is pointing straight out should the train stop or go?  
(Clue: read the instructions)**

STOP

3



Go to the large platform - Break of Gauge Platform  
in the Fitch Pavilion

**What simple machines can you find on the platform?**  
trolleys and wheel barrow

**Is the machine a example of a lever or a pulley?**  
lever

**do you push or pull the machine?**  
push

also discuss

- ramps/platforms versus stairs
- luggage and goods
- height of ramps
- energy and force to move objects
- do you need less energy and force to move objects on a ramp/platform

4

## Power/energy

### Introduction

*Types of power/energy have been used over time to help move wagons, vans, carriages etc*



Find the MIC 4 (refer to your map and photo)

**Complete the sentence, by underlining the correct answer.**

**The car was operated by  
steam/motor/hand?**

motor



Find the locomotive - Rx93 It is in the Fitch Pavilion.

**Underline the type of power that moves this locomotive**  
steam



Find the fire truck in the photo. It is near the entrance of the Fitch Pavilion. Sorry you cannot move this exhibit.

**Can you find a lever, axle or wheels? How is the truck moved?**  
hand



Look at the display in The Long Journey - Women In Railways.

Find the red Hard Yakka 3 wheel Pump Trike

**Complete the sentence, by underlining the correct answer.**

**The trike was operated by  
motor/steam/hand?**

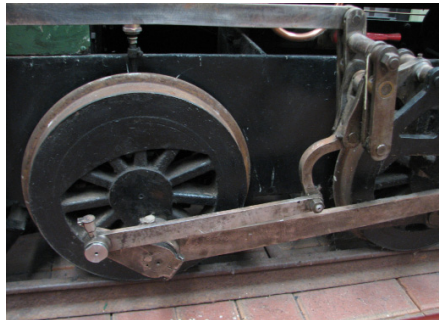
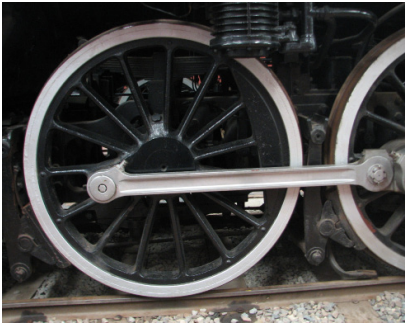
hand

**Is the trike moved by pushing or pulling?**

pushing and pulling

● **Can you find a lever?**

5



**Wheel and Axle  
Introduction**

- *the axle is a rod that goes through the wheel and lets the wheel turn*

Explore the museum. Discuss the size of locomotive wheels. Look for the axle.

**How was the Explosives Van moved?  
horses**

6



Go to the Model Railway and the display cases (refer to your map)  
**List the toys and models that can be pushed and pulled.**  
**Discuss the objects in the Model Railway. How are they moved/ powered in real life.**

Display cases -  
 old tin toy pushed by hand  
 modern model trains powered by electricity

Model Railway -  
 boats, cars, tractors, buses are powered by motors  
 cranes lifts cars, locomotives and goods  
 earth mover lifts soil and rocks  
 windmill blades and balloons are pushed by the wind  
 airship is pushed by the wind  
 locomotives (at the front of the train) pull carriages and freight  
 tug pulls ships and boats