

# WHEELED INVENTIONS FOR CHILDREN

## AIM

- To develop an awareness of the inventions that lead to modern day bicycles for children, and learn about the changes of materials and designs used over time. To review student understanding through a crossword puzzle.

VELS: Level 3-4

GRADE: 4-6

- [The Humanities; History](#) - Level 3

At Level 3, students use a range of historical evidence, including oral history, artifacts, narratives and pictures, to retell events and describe historical characters. They develop simple timelines to show events in sequence.

- [Technology](#) - Level 3

Students investigate what products and simple technological systems can do, how they meet people's needs, how they are used and/or work, what they look like and why they look the way they do.

- [The Humanities; History](#) - Level 4

Students use a range of written, visual, oral and electronic sources to study the past. With support, they frame research questions and plan their own inquiries using historical language and concepts such as time, sequence, chronology, continuity, change, culture and, tradition. They learn to develop explanations in a range of forms such as timelines, oral presentations, posters, multimedia presentations, reports and narratives.

- [Technology](#) - Level 4

Students learn to analyse how products and systems function and what they look like, and discuss the meaning of quality in the context of design.

DURATION (Approximate) 1hour

- 30mins: Wheeled Inventions for Children Timeline
- 10mins: Follow-up discussion
- 20mins: Wheeled Inventions Crossword Puzzle

## LINK

- [Wheeled Inventions Crossword Puzzle](#)
- [Web Based Resource List](#)
- [Back to Contents Page](#)

# LESSON NOTES

Information and photos are sourced from: [Metz Bicycle Museum](#) and the [Canberra Bicycle Museum and Resource Centre](#).

## EQUIPMENT

### Part 1:

- Timeline: Teacher Answer Page, Photos & Labels (See below)
- Timeline: Photos (See below)
- Timeline: Museum Labels (See below)
- Scissors, poster paper, glue stick, drawing equipment
- Photocopier

### Part 2:

- Completed Timeline poster.
- Click here for: [Wheeled Inventions Crossword Puzzle](#)

## LESSON

### Part 1 - TIMELINE

- 1) Print out the Museum Labels and Photos and photocopy 1 per student.
- 2) Students cut out the Museum Labels and Photos.
- 2) Students match the Museum Labels with the Photos and stick them onto a poster in chronological order.
- 3) To match the Museum Labels with the Photos students will be assisted by the date, name, design, and description of the mechanical workings of the wheeled invention.

### Alternative Whole Class Activity (ideal for younger students):

- 1) Print out one copy of the activity sheets, enlarge them and cut out the individual photos and labels.
- 2) Spread the photos and the labels face up in two piles on the carpet.
- 3) One at a time, ask students to match the photos to the labels and explain the reasoning behind their choices.
- 4) The class can work out the chronological order of the wheeled inventions and glue the pictures and matching labels onto a poster.

### Discussion Topics:

- The factors influencing the materials used to build bicycles over the centuries and how this relates to bike designs and manufacture. For

example; bikes with wooden wheels and frames compared to metal bikes with rubber tires.

- The different mechanisms used to propel and stop the wheeled inventions. For example; bike levers compared to pedals and no breaks or back-pedal brakes compared to modern handbrakes.

## LESSON

### Part 2 - CROSSWORD

- Students use the information from the Wheeled Inventions for Children Timeline poster to complete the Wheeled Inventions Crossword Puzzle. This activity is hyperlinked to an external document under the EQUIPMENT list.

### GOING FURTHER: RESEARCH PROJECT

- Students choose a topic to research in more depth either in small groups or individually. (For links to useful research sites see: [Web Based Resource List](#)).
- Students display their research findings on a poster and present this to the class.

### RESEARCH TOPICS SUGGESTIONS

The development of scooters, tricycles, penny farthings, tandem bikes, folding bikes or tricycles.

Antique wheeled toys for children.

Compare how the design of bikes for males and females differed in past centuries and why.

Compare bikes from two diverse decades.

Materials used to build bikes over the centuries.

The first bicycle designs by Leonardo da Vinci.

Compare features of modern bikes; road, racer, mountain and recumbent bikes.

Unusual bike designs from the past and design your own futuristic bike.

Bike designs and use in Asia, such as the Pedi cab.

Bikes designs and materials used during war times by soldiers.

Create a time line showing popular bikes used over the centuries.

The development of the postman's Bike.

# WHEELED INVENTIONS FOR CHILDREN TIMELINE

## TEACHER ANSWER PAGE



**1860's**  
**Child Boneshaker**  
**Velocipede Bicycle**



**1870's**  
**A Very Rare Children's**  
**Wood Frame Bicycle (With a chain)**



**Child's Treadle Tricycle (1890's)**  
Probably built by a blacksmith in Britain for the child of a wealthy family. It has a treadle drive and tiller steering.



**1901**  
**Skate Board with Front Brake**



**Child's Tricycle (1920's)**  
Built by Australian firm Eclipse. Seat replaced by a handmade one.



**1930's**  
**Up and Down Foot**  
**Lever Propulsion**



### **Scooter (1934)**

Probably built in Australia and of rugged construction, which would have given a child many years of enjoyment.



### **Child's Tricycle with Sidecar (1950's)**

Made by Cyclops, Sydney, Australia, when children's bicycles and tricycles became popular.



### **Child's Bicycle (1960's)**

Made by Cyclops, Sydney, Australia. One of the many types of children's bicycles available in the 1960's and early 70's, before the arrival of BMX bikes in Australia in 1977.



### **Child's Bicycle (1975)**

Built by Malvern Star Cycles Co. in Victoria and called a "Dragstar", an early type of BMX cycle. It was considered a fun cycle, with trendsetting parts and accessories, such as highrise handlebars, streamers and a special frame with a low centre of gravity. They were often used for stunt riding.



### **An Unusual Tandem Tricycle (Date Unknown)**

## **ADDITIONAL INTERESTING PHOTOS**



# WHEELED INVENTIONS FOR CHILDREN TIMELINE

## PHOTOS

- 1) Cut out the pictures of the bicycles, tricycles and scooters.
- 2) Cut out the information labels.
- 3) Match the pictures with the labels.
- 4) Paste the picture with the matching label onto a poster in order from the oldest to the newest invention.



# WHEELED INVENTIONS FOR CHILDREN TIMELINE

## MUSEUM LABELS

Use the descriptions and dates to help match these museum labels to the photos.

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**Skate Board with Front Brake**

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**Child Boneshaker  
Velocipede Bicycle**

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**Up and Down Foot  
Lever Propulsion**