

How has transport in Bolton changed over time?

Wheels, wings and other things!

Year 2: Spring 1

Knowledge Organiser



- Key Vocabulary
- Aviation
 - Pioneer
 - Atlantic Ocean
 - Aeroplane
 - Invented
 - Past
 - Present

The Wright Brothers were two American aviation pioneers who invented, built and flew the world's first successful motor-operated aeroplane.



Amelia Earhart

- Born in the state Kansas in the United States of America.
- Her first aeroplane was bright yellow and she nicknamed it the 'Canary'.
- Amelia was the first woman to fly solo across the Atlantic Ocean flying from America and landing in Wales!

Year 2 Mechanisms (Wheels and axles) Knowledge Mat

SUBJECT SPECIFIC VOCABULARY

Wheels and axles are mechanisms that help things to move.	
Wheel	Wheels are circular objects that roll on the ground helping vehicles and other objects to easily move.
Axle	a rod on which one or more wheels can rotate, either freely or be fixed to and turn with the axle.
Axle holder	the component through which an axle fits and rotates.
Chassis	the frame or base on which a vehicle is built.
Friction	resistance which is encountered when two things rub together.
Dowel	wooden rods used for making axles to hold wheels.

EXAMPLE MECHANISMS

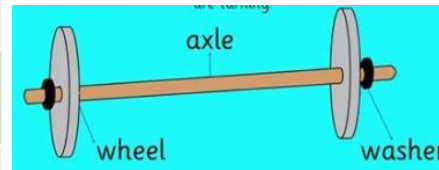
Toy cars and real cars use mechanisms to move. On a toy car the wheel is usually fixed to the axle, which means the wheel and axle will spin. If there is too much friction on the axle it will not move.



Examples of wheels in everyday life



WHEELS AND AXLES

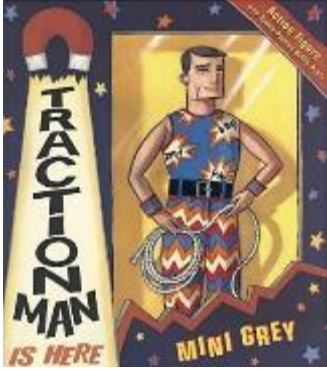


Roller skates have four wheels. Often the wheels rotate free from the axles but sometimes they can be attached too.

STICKY VOCABULARY

design/designing	When you plan what something will look like. You will need to think about what materials you will use.
design criteria	The precise checklist that a project must achieve in order to be successful.
make/making	Use a variety of tools and finishing techniques to create a designed product.
evaluating	Once you have finished making your product, you must discuss how well it works in relation to the purpose and design criteria.
purpose	The purpose is why your product has been made. Who would use your product?
product	The item that you are going to design, make and evaluate.

Year 2: Materials Knowledge Mat

Subject Specific Vocabulary		Interesting Book	Sticky Knowledge about materials
metal	When heated, metals can be shaped into anything from a tiny paperclip to a huge aircraft.		<input type="checkbox"/> Wood is used to make buildings and furniture and for making fires and heating.
plastic	Plastics are made from natural materials such as wood, coal and oil.		<input type="checkbox"/> Most of the paper or cardboard we use came from trees.
Charles Macintosh	We know Charles Mackintosh for inventing mackintoshes which was a special type of coat. We use the word 'mac' today because of his invention.		<input type="checkbox"/> Glass is a hard transparent material that can be made in many shapes.
John Dunlop	John Dunlop was a person who improved the tyres on cars. You may see tyres on cars with the name DUNLOP on them.	Important facts to know by the end of the Year 2 materials topic: <ul style="list-style-type: none"> <input type="checkbox"/> Know why some materials are more suitable than others for specific uses <input type="checkbox"/> Know why glass, wood, plastic, brick or paper would be used for certain jobs <input type="checkbox"/> Know that some materials can be squashed, twisted or bent according to need <input type="checkbox"/> Know why certain materials are suitable for many different uses <input type="checkbox"/> Know about the lives of important people who have developed useful new materials 	<input type="checkbox"/> Glass is usually transparent, which means you can see through it, but can also come in different colours.
wood	Wood is a material that comes from trees and is used to make furniture, floors and many other things		<input type="checkbox"/> Glass is often used to make windows and bottles.
squashing	Squashing is pushing things closely together.		<input type="checkbox"/> Many churches have special coloured glass often used to make religious pictures.
bending	Bending is changing the shape and direction of something.		<input type="checkbox"/> Plastics are used to make many of the things we use in everyday life. They are used for toys, bicycle helmets, mobile phones, window frames and many other common items.
twisting	To twist something you move one part clockwise and the other part anticlockwise.		<input type="checkbox"/> Petrol is used to make plastic and it invented just over a 100 years ago.
stretching	Stretching is to change shape by pulling it to make it longer or wider.		
John McAdam	John McAdam is most famous for inventing the tar used to make roads. It was known as Tar McAdam.		