



Knowledge Organiser: YEAR 2 Design Technology

Mechanisms: Wheels and axles

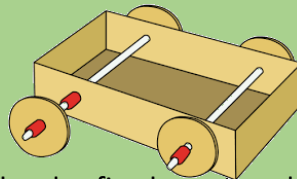
What I should already know:

Understand the development of existing products: What they are for, how they work, materials used.
How to make my design using appropriate techniques.
The use mechanisms e.g. levers and sliders in products.
How to use tools safely e.g. scissors.
How to assemble, join and combine materials and components together using a variety of temporary methods e.g. glues or masking tape.

Examples of wheels in everyday life



Different ways to attach axles and chassis



1. Attach axles firmly to the wheels so the axle rotates and the wheel turn with it.
2. Attach wheel loosely on the axle. You need to use something to stop the wheels from falling off. This can be a bolt or washer.

or

1. Attach axles to the chassis from underneath. This means the axles will not turn around. Place the wheels over the axle but do not attach it so that the wheels can rotate around the axle.
2. Put the axle through the holes in the chassis so the axle can turn around. Attach the wheels firmly to the axle so they turn when the axle turns.

KEY VOCABULARY

Assemble- to fix all parts together

Mechanism- a device used to create movement in a product

Push- applying force to move something away

Wheel- wheels are circular objects that roll on the ground helping vehicles and other objects to easily move.

Axles- 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.

Dowel- wooden rods used for making axles to hold wheels.



I will be learning:

Design

Begin to develop their design ideas through discussion, observation, drawing and modelling.
Understand how to identify a target group for what they intend to design and make based on a design criteria.

Make

Begin to select tools and materials; use correct vocabulary to name and describe them.
Explore and use mechanisms e.g. wheels and axles in their products
Learn to use hand tools safely and appropriately.
Start to assemble, join and combine materials in order to make a product.
Demonstrate how to cut, shape and join fabric to make a simple product.

Evaluate

Look at a range of existing products explain what they like and dislike about products and why.
Start to evaluate their products as they are developed, identifying strengths and possible changes they might make.