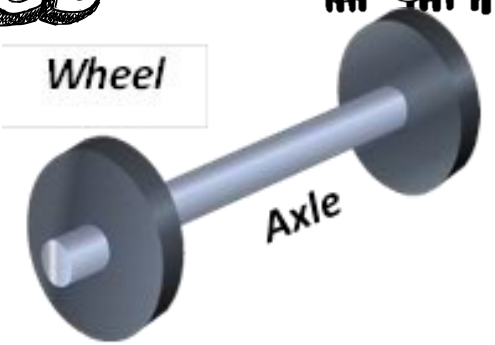
# Mechanisms: Wheels and Axles

## Curriculum Coverage:




**Design**

- Design purposeful, functional, appealing products for themselves and other users based on design criteria
- Generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology

**Make**

- Select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]
- Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics

**Evaluate**

- Explore and evaluate a range of existing products
- Evaluate their ideas and products against design criteria

**Technical Knowledge**

- Explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products

## Key Vocabulary

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|---|---|
| Wheel | Round and spins to move things by rolling. |
| Axle | A central pole which goes through the middle of a wheel. |
| Chassis | A strong base frame which holds together the parts of a moving vehicle. |
| Design | Creating a plan or idea for something new based on research and exploration. |
| Evaluate | Decide how good something is based on a set criteria. |

## Key Facts:

- Wheels and axles allow objects to move smoothly.
- Wheels and axles sometimes work alongside a chassis to ensure an object can move.

## Key Skills:

- Explore a variety of wheels and axles, establishing their own opinions on how materials, size and placements impact movement.
- Make decisions based on explorations on the material, size and placement of wheels and axles, applying their understanding to create a functional model.
- Test designs and make improvements based on the success of their original model.
- Evaluate the effectiveness of their model through brief annotations and class discussions on whether their model worked or not based on a pre-set criteria (stability, speed, smooth movement etc.)

## Possible experiences:

- Visit a transport museum.
- Explore and observe everyday items and how they move (bikes, cars, suitcases etc.)

## We should already know:

- Mechanisms are ways to make things move.
- The materials and joining methods used can impact the way a mechanism works.
- How to group parts of mechanisms based on their size, weight and shape.
- How to test if a mechanism works.