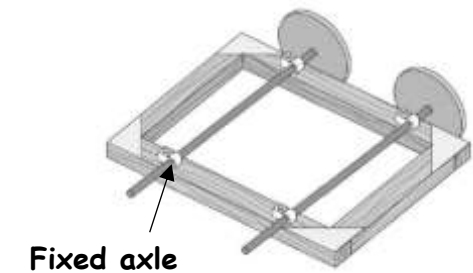
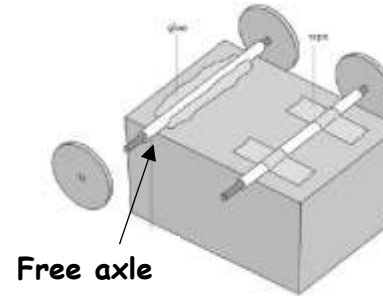
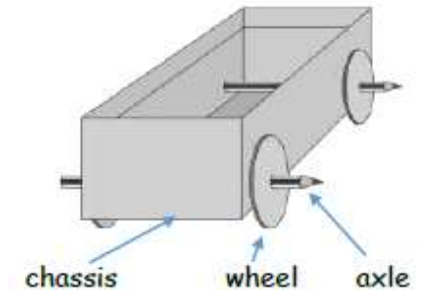




## Key Vocabulary

<b>Axle</b>	a rod that allows a wheel to turn
<b>Wheel</b>	a round shaped frame that turns on an axle and its purpose is to allow things to roll
<b>Chassis</b>	the base on which a vehicle is built
<b>Dowel</b>	wooden rod used for making the axles
<b>Bearing</b>	It is a hollow tube that the axle goes through. The bearing must be bigger than the axle so that the axle can turn easily.
<b>Mechanism</b>	part of a machine that has a particular function
<b>Friction</b>	resistance which happens when two things rub together
<b>Design</b>	to think up and plan out
<b>Evaluate</b>	to decide how good or right something is
<b>Prototype</b>	a simple model that can be used for testing

## Examples of wheeled objects



## Key knowledge

- Dragging something over the ground is hard work! The **wheel** and **axle** are a simple **mechanism** that reduces the **friction** involved in moving an object, making the object easier to move.
- **Wheels** can move by either: pulling them, pushing them or adding a motor (like a car).
- There are two different types of **axles**:
  - **Free axle**: the wheels are fixed to the axle and the axle turns in a bigger tube called the bearing.
  - **Fixed axle**: the axle is fixed to the body and the wheels are free to turn on the axle.



## Quiz Questions

1. How does a wheel and axle make it easier to move an object?
  - a. By increasing the friction
  - b. By decreasing the friction
  - c. By keeping the friction the same
  
2. Name the 3 ways in a wheel can be moved?
  
3. What is the difference between a free and fixed axle?
  - a. A free axle is attached to a frame and the fixed axle is not attached.
  - b. A fixed axle is attached to a frame and a free axle is not attached.
  
4. Which axle did you chose for your prototype?