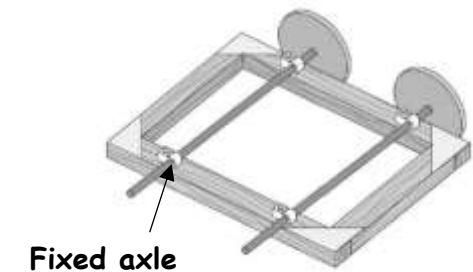
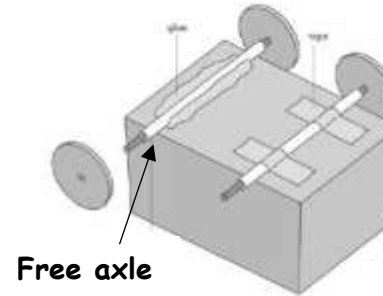
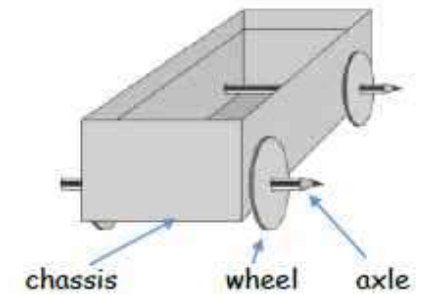




Key Vocabulary

Axle	a rod that allows a wheel to turn
Wheel	a round shaped frame that turns on an axle and its purpose is to allow things to roll
Chassis	the base on which a vehicle is built
Dowel	wooden rod used for making the axles
Bearing	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.
Mechanism	part of a machine that has a particular function
Friction	resistance which happens when two things rub together
Design	to think up and plan out
Evaluate	to decide how good or right something is
Prototype	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 that 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?