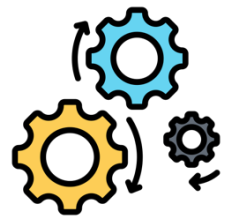


Mechanisms - Moving Toys



KS1 Design & Technology: Mechanisms

Design & Technology Concepts

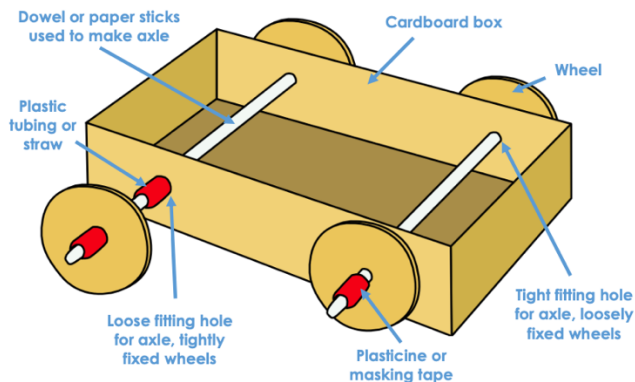
Design	A plan, such as a drawing, template or mock-up of an idea to make an object.
Make	The process of creating, forming or doing.
Evaluate	To judge the quality and importance of something carefully.

Core Vocabulary

Chassis	the frame or base on which a vehicle is built.
Axle	a rod on which one or more wheels can rotate, either freely or be fixed to and turn with the axle.
Cab	the covered part of a vehicle where the driver would sit.

Technical Knowledge

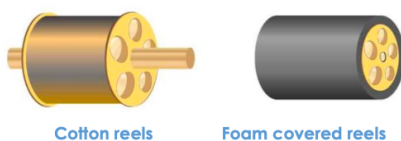
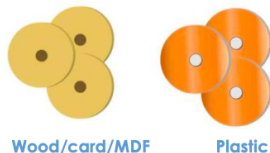
Two different ways to fix wheels



Some example of mechanisms with axles and wheels.



Types of wheels

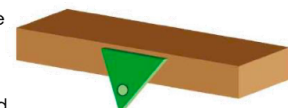


Ways to hold moving axles

Use **pairs of clothes pegs** glued with PVA to the underside of a box. Check the peg holes are large enough to allow axles to move freely. Make sure they are aligned carefully so the vehicle moves in a straight line when the wheel and axle mechanism is added.



Use **card triangles** with holes for the axle. Check the holes are large enough to allow the axle to move freely. Make sure opposite triangles are aligned carefully so the vehicle moves in a straight line when the wheel and axle mechanism is added.



Use **large paper/plastic straws** fixed with masking tape to the underside of a box. Check straws are positioned carefully so the vehicle will move in a straight line when the wheel and axle mechanisms are added. Make sure the straw hole is large enough to allow the axle to move freely. The wheels must be fixed tightly to the axle.



Helpful Knowledge

- 1 A Chassis is the frame or base on which a vehicle is built. A chassis should be strong and rigid enough to hold the vehicle. The Chassis should include axle holders.
- 2 The axle will also need to be strong enough to hold the wheels and fit freely in the axle holder.
- 3 You will need to decide if your wheels will be fixed to the axle or free. If they are fixed, they need to be firmly attached. If they are going to be free moving, they will need a stopper to prevent them falling off.