

Design and Technology Knowledge Organiser

Southwold Primary School



Topic: How can I make a vehicle that moves?

Year KS1

Strand: Mechanical Product

What should I already know?

- There are different glue and fastening methods (tape, split pins, treasure tag etc.).
- I need to choose the right glue and fastening method
- Some things require electricity to work (batteries,

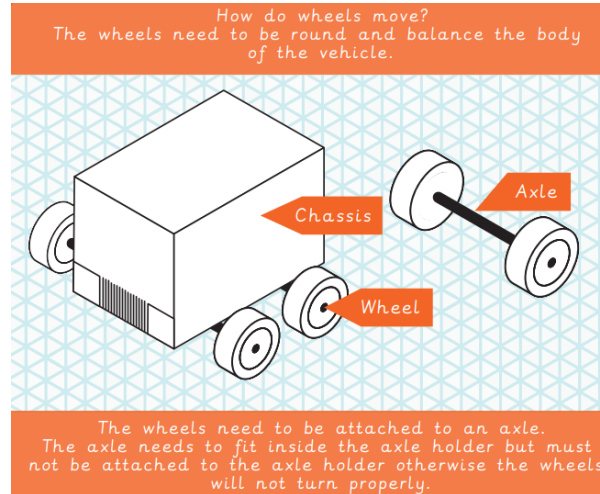
What will I know by the end of this unit?

- Wheels need to be round to rotate and move.
- For a wheel to move it must be attached to a rotating axle.
- An axle moves within an axle holder which is fixed to the vehicle or toy.
- The frame of a vehicle (chassis) needs to be

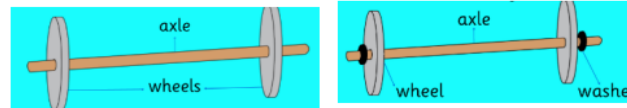
Design Technology: Skills and Enquiry

- What kind of axles and chassis will I use?
- What shape of body will my vehicle need?
- How will I decorate my vehicle?
- How will my wheels move?
- How can I communicate my ideas clearly to my user?

Design



Different ways to attach axles and chassis

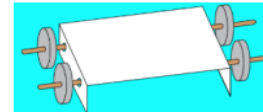


1. Attach axles firmly to the wheels so the axle rotates and the wheel turn with it.

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.



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.

Vocabulary

| | |
|--------------------|---|
| wheel | A circular object that turns round. It can be fixed to a vehicle like a car or bicycle to allow the vehicle to move easily over the ground. |
| axle | A long, straight rod that connects to a rotating |
| chassis | The body of a car. |
| axle holder | The part of a mechanism which holds the axle |
| design | To make, draw or write plans for something. |
| fix | To mend something so that it will work properly again. |
| mechanism | Parts of an object that move together to make something work. |
| model | A practise version that lets you test out your idea and see how it will look and work. |
| test | To find out whether something works as it should. |

What will I be able to do by the end of this unit?

- Design a vehicle that includes wheels, axles and axle holders, which will allow the wheels to move.
- Create clearly labelled drawings that illustrate movement.
- Adapt mechanisms.
- Test mechanisms, identifying what stops wheels from turning, knowing that a wheel needs an axle in order to move.