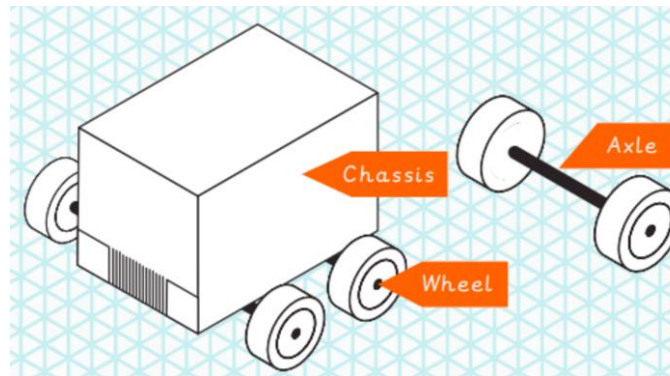
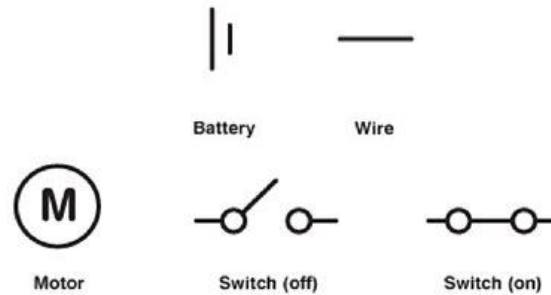


Design and Technology Term 4 Knowledge Organiser – Controllable Vehicles

Key Vocabulary

Vehicle	A vehicle is a machine that transports people or cargo.
Circuit	A circuit is a complete path around which electricity can flow. It must include a source of electricity, such as a battery.
Motor	an electrical machine that converts electrical energy into mechanical (moving) energy.
Chassis	The body of a car.
Switch	A device for making and breaking the connection in an electric circuit.
Pulley	A simple machine and comprises of a wheel on a fixed axle, with a groove along the edges to guide a rope or cable.
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.
Axel	A long straight rod which connects to a rotating part (e.g., the wheels of a car).
Design	To plan and draw an idea thinking about their target audience.
Evaluation	To look at their creation and thinking about things that have worked out well and those they would change to improve next time.
Short circuit	An incorrect route in a circuit which misse out certain components and can cause the circuit to fail.
Series Circuit	A circuit with only one possible path for the current.



Key Parts of a Vehicle

The **wheels** need to be circular to balance the body of the vehicle so it can be mobile. The wheels need to be attached to an axle.

The **axle** needs to fit inside the axle holder but must not be attached to the axle else the wheels will not be able to rotate.

The **chassis** supports the weight of people or goods that are being transported or carried by the vehicle.

Pupils should be able to:

- Explore and use mechanisms (such as axles and wheels).
- Explore a variety of ways to make vehicles move.
- Describe in detail the way in which an axle and chassis help a vehicle move.
- Deconstruct and reconstruct an axle and wheel and describe how it works.
- Design and make a working model where the direction of movement can be controlled.
- Evaluate their product against the design criteria, the products appearance, and functionality.

