

Sketch your motor design then add details for your kinetic art

I Wonder Statements

# Testing your I Wonder Statements

The materials and methods used

The outcomes of their tests and how that influenced their design

Any observations or unexpected results

## Homopolar Motor Reminders

#### Magnetic poles

Batteries have two ends, one positive (+) and one negative (-). These ends create magnetic poles, which we will interact with to create movement.

#### Flow of electricity

When the copper wire is connected to the battery, electricity begins to flow from the positive end of the battery, through the wire, and towards the negative end.

# **Creating motion**

Magnets create electromagnetic force when they are placed near the wire. Because the wire is connected to the positive end of the battery and its near the magnets, it starts to spin around the battery.

## Spinning action

The spinning motion means the homopolar motor is working as a simple electric motor by changing the electrical energy (from the battery) into mechanical energy (the spinning).

