



What should I already know?

- Compare how some things move on different surfaces.
- Notice that some forces need contact between two objects but magnetic forces can act at a distance.
- Observe how magnets attract or repel each other and attract some materials and not others.
- Compare and group together a variety of everyday materials on the basis of whether they are attracted to a magnet, and identify some magnetic materials.
- Describe magnets as having two poles.
- Predict whether two magnets will attract or repel each other, depending on which poles are facing.

Knowledge

Forces can make an object-

- Change direction.
- Start to move
- Change its shape.
- Move faster
- Move More Slowly
- Stop Moving.
- Move Faster

Pulleys can be used to make a small force lift a heavier load.

Gears or Cogs can be used to change the speed, force or direction of a motion.

Lever can be used to make a small force lift a heavier load.



Year 5– Spring 1 Forces
Intention: In Science, I will be...

Scientific Skills

- Explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object.
- Identify the effects of air resistance, water resistance and friction, that act between moving surfaces.
- Recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect.
- There are different types of forces (push, pull, friction, air resistance, water resistance, magnetic forces, gravity).
- Gravity can act without direct contact between the Earth and an object.
- Friction, air resistance and water resistance are forces which slow down moving objects.
- Friction, air resistance and water resistance can be useful or unwanted.
- The effects of friction, air resistance and water resistance can be reduced or increased for a preferred effect.
- More than one force can act on an object simultaneously (either reinforcing or opposing each other).

Vocabulary

Forces	Lever
Earth's Gravitational Pull	Mechanism
Mass	Buoyancy
Gravity	Streamlined
Weight	Pulleys
Friction	Gears
Air Resistance	Cogs
Water Resistance	