

Year 3 - Forces and magnets

Do forces involve contact?

Prior learning

In Year 2, you found out how objects can be made of materials, which can be changed by squashing, bending and twisting.

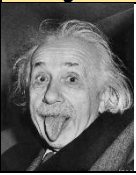
Future learning

In Year 5, you will learn about different forces including the force of gravity, friction and air and water resistance.

In this unit you will:

- Compare how 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

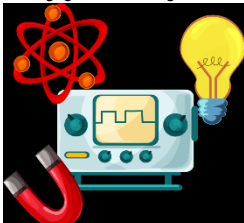
Key Scientist: Albert Einstein



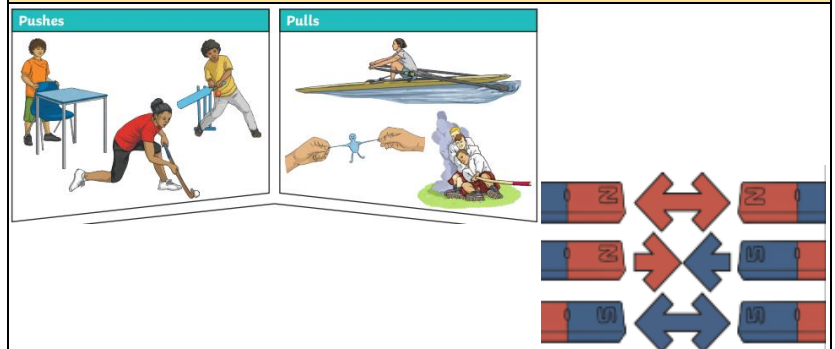
Albert Einstein's most famous research was on the 'theory of relativity'. This is to do with forces and explained that everything has a mass and can be turned into energy.

Science discipline: Physics

Physics is a science that studies matter and its motion as well as how it interacts with energy and forces.



Scientific diagram



Vocabulary:

- **Force:** A push or a pull. Forces can change an object's speed, its direction, and even its shape.
- **Surface:** The outside of an object or body.
- **Magnet:** A rock or a piece of metal that can pull certain types of metal toward itself.
- **Poles:** All magnets have two poles: a north pole and a south pole.
- **Attract:** When two magnets come near each other, their fields create forces that attract.
- **Repel:** If you hold two magnets the wrong way around, they push apart - they repel.
- **Magnetic field:** The area around a magnet that has magnetic force.