









The Power of Forces!

What are the key physical facts that I need to know?

Scientific Fact 1	Scientific Fact 2	Scientific Fact 3	Scientific Fact 4	Scientific Fact 5	Scientific Fact 6
The entire universe is controlled by force – which is awesome especially since we cannot see them.	A force is a push or a pull. It can make something start to move, slow down or speed up, change direction or change shape or size. The bigger the force, the more powerful it is.	Friction happens when two things rub against each other. Friction makes things slow down.	Friction can also warm them up. Try rubbing your hands together. Are your hands warmer?	Gravity is a natural force. It pulls everything down towards the earth!	Even magnetism is a force, which is exactly the same as a magnet that makes things move.

Key Scientific Vocabulary - words that are related to the topic you are investigating and that must be used in your work

Word	Definition
attract 	If a magnet or gravity attracts something, it makes it move towards it.
force 	An effect that causes things to move in a particular way.
magnetic 	A material or object that behaves like a magnet.
North pole 	The point on the surface of the earth that is furthest north.
pull 	The force, which tends to move the object in the direction of the force.
push 	The force that moves an object away from the direction of the force.
repel 	If two things repel each other, an electrical or magnetic force pushes them apart.
South pole 	The point on the surface of the earth that is furthest south.

Sticky Knowledge- what we want you to know at the end of the unit
To know that our senses helps us explore the world around us.

To know what a force is

- an effect that causes things to move
- push and pull are forces

To know that air can make things move

- air resistance is a force that slows things down
- windmills work when air pushes against the windmill blades

To know that friction acts in the opposite direction of the force that has been applied

- friction slows objects down
- brakes use friction to slow or stop an object

To know what magnetism is

- magnetism is a force experienced by certain materials
- magnetism is a force too
- there are two poles of magnetism – north and south
- like poles repel
- opposite poles attract

To know which metals are magnetic

- not all metals have magnetic properties
- metals that contain iron, nickel or cobalt are magnetic

To know what a magnetic field is

- the area around a magnet is the magnetic force

The scientific skills that you will be learning to use to answer the scientific questions

What is science?

Science is the exciting study of the nature and behaviour of natural things and the knowledge that we obtain about them. We ask questions that need answers. In order to answer these questions successfully, you will learn to use all these skills.

Identifying similarities and differences:

You will learn to identify the features of the magnets that are the same and those that are different.

Which materials are magnetic?

Comparative tests:

You will compare the physical properties of magnets.

Which magnets are the strongest?

Using evidence to support your findings:

When conducting experiments, it is important that you use your findings to answer the questions.

Making careful and systematic observations:

You will learn to make careful observations during the experiment. This year you will focus on ensuring that you make these observations in a logical manner.

Which poles of a magnet attract?

Which poles of a magnet repel?