

Careers linked to this topic
**Radiographer, magnetic engineer,
 railway engineer.**

Forces and magnets



How do moving
 objects slow down?

Year 3
 Spring 2

Lesson 4 explore the properties of
 magnets and magnetic materials.
 How can we identify magnetic
 materials?

Iron, magnetic field, steel, magnetism,
 magnetic.

Lesson 5 Understand that magnetic
 forces can act at a distance.
 Which magnet attracts the paperclip
 from the furthest distance?

Non magnetic, attract, magnetism,
 recycle, non contact forces

Lesson 6 double page spread
 Use everything you have learned in
 this topic to produce a double page
 spread.
 Use all previous vocab to make your
 double page spread.

Lesson 1 Explore contact and non
 contact forces.

What is a force?



Friction, forces, contact force, non
 contact force, air resistance.

Lesson 2 compare how things move on
 different surfaces.

How do different surfaces affect how
 far different objects travel?



Motion, texture, resistance, tilt, surface.

Lesson 3 explore different types of
 magnets.

Which magnets are the strongest?



Repel, magnet, horseshoe magnet,
 attract, bar magnet.

Key Vocabulary	
force	A force is a push or pull .
push	A push is a force that often moves an object further away.
pull	A pull is a force that often moves an object closer.
contact force	A contact force is a type of force that occurs between two or more objects that are touching.
non-contact force	A non-contact force is a type of force that occurs between objects that are not touching.
friction	Friction is a type of contact force . It occurs between two touching surfaces that are either trying to move or are already moving across each other.

Contact Forces: Examples of Pushes and Pulls			
Pushes		Pulls	
foot ground	hands handle	hand bowstring	cord hand
The foot pushes against the ground, causing the scooter to move forwards.	The hands push on the trolley handle, causing the trolley to move forwards.	The hand pulls on the bowstring and arrow, causing the arrow to move closer to the person.	The hand pulls on the cord, causing the blind to lift up.

Forces can make objects start or stop moving, change speed, change direction or change shape.

Smooth		Rough	
polished marble	laminate floor	artificial grass	sandpaper

Moving on Rough Surfaces	Moving on Smooth Surfaces	Helpful Friction
Objects move differently on different surfaces because of a force called friction . Friction can be high on rough surfaces, causing objects to slow down more quickly. 	An object will travel further on a smooth surface because there are fewer bumps; therefore, there is less friction to slow it down. 	Bumpy surfaces, such as tyres or the soles of shoes, help to reduce the risk of sliding or skidding.

