

Our School Values- Science	
Love	We show love by fostering a joy of discovery.
Courage	We show courage by being brave, challenging thinking, asking questions and investigating new ideas. We show courage knowing that we won't always find the answer.
Unity	We show unity by working collaboratively to discover more.
Inspiration	We show inspiration by not giving up and thinking creatively to seek answers.



Year 3 Science Forces and Magnets



NC Objectives

- 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
- know whether two magnets will attract or repel each other, depending on which poles are facing.

Knowledge I already know

Although forces is a new topic, I know the following about materials:

I can name an object and the material from which it is made

I know how to describe the simple physical properties of a variety of everyday materials

Knowledge I will learn

I know that a contact force occurs when two objects physically touch.

I know that a non-contact force is a force that acts on an object without touching it.

I know that forces act in opposite directions.

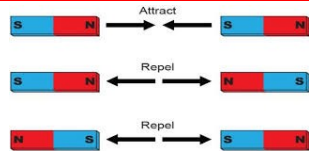
I know that friction is the force that stops things from moving.

I know that resistance is a force that slows down an object that is moving.

I know that the type of surface changes how something moves.

I know that magnets always have a north and south pole.

I know that opposite poles of a magnet attract whilst similar poles repel.



Key Vocabulary

Word	Definition
Consequence	A direct result or effect
Contact	State of touching something else
Force	Something that causes movement
Attract	Draw something closer
North	One end of a magnet
South	Opposite end of a magnet to north
Magnet	A material or object that attracts other objects such as iron
Resistance	A force that slows movement
Friction	Force acting against the direction of movement
Repel	Push something away
Pole	One of two ends of a magnet
Magnetic field	Area around a magnet in which its magnetic force acts

What is a contact force?	How do surfaces affect the resistance of an object's movement?	How does friction affect moving objects?	What is a non-contact force?	How do magnets attract and repel objects?	Which materials are magnetic?
Ball investigation	Car investigation	Predict and test different scenarios	Interpret results from magnet experiment	Make a floating compass	Venn diagrams to present results from investigation.
Challenge: what is meant by the term force of nature?	Challenge: what would be the affect of playing football on ice?	Challenge: how could you reduce friction in the scenarios?	Challenge: if the force of gravity halved, what would the impact be?	Challenge: what would happen if all magnets in the world lost their force?	Challenge:
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