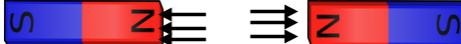


Key Vocabulary

Key Word	Definition
push, pull twist	Words associated with a force
contact force	A contact force is any force that requires contact to occur.
non-contact force	A non-contact force is a force which acts on an object without coming physically in contact with it. (gravity, magnetic force)
magnetic force	The force exerted between magnets. The force exerted between a magnet and a moving, electrically charged particle.
attract	
repel North pole South Pole	 
magnetic material	Magnetic materials are always made of metal, but not all metals are magnetic. Aluminium and copper won't stick to a magnet.
iron Steel	Iron is magnetic. Steel has iron in, so also magnetic

LKS2 Science Unit Forces and Magnets



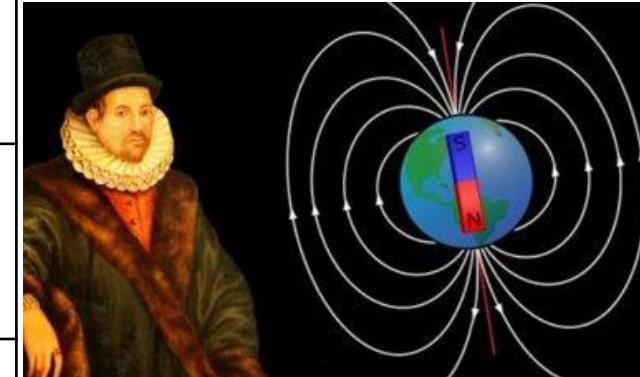
Different Magnets

bar magnet

ring magnet

button magnet

horse shoe magnet



William
Gilbert

1544 – 1603

Discovered that our planet has two magnetic poles.

Working Scientifically Skills



Science Enquiry



Lesson 1

Explore contact and non-contact forces

Lesson 2

Why do things move differently on different surfaces?
(Contact force -Friction)

Lesson 3

Do different types of magnets have different strengths?

Lesson 4

What everyday objects are magnetic?
(Classify materials based on magnetic properties)

Lesson 5

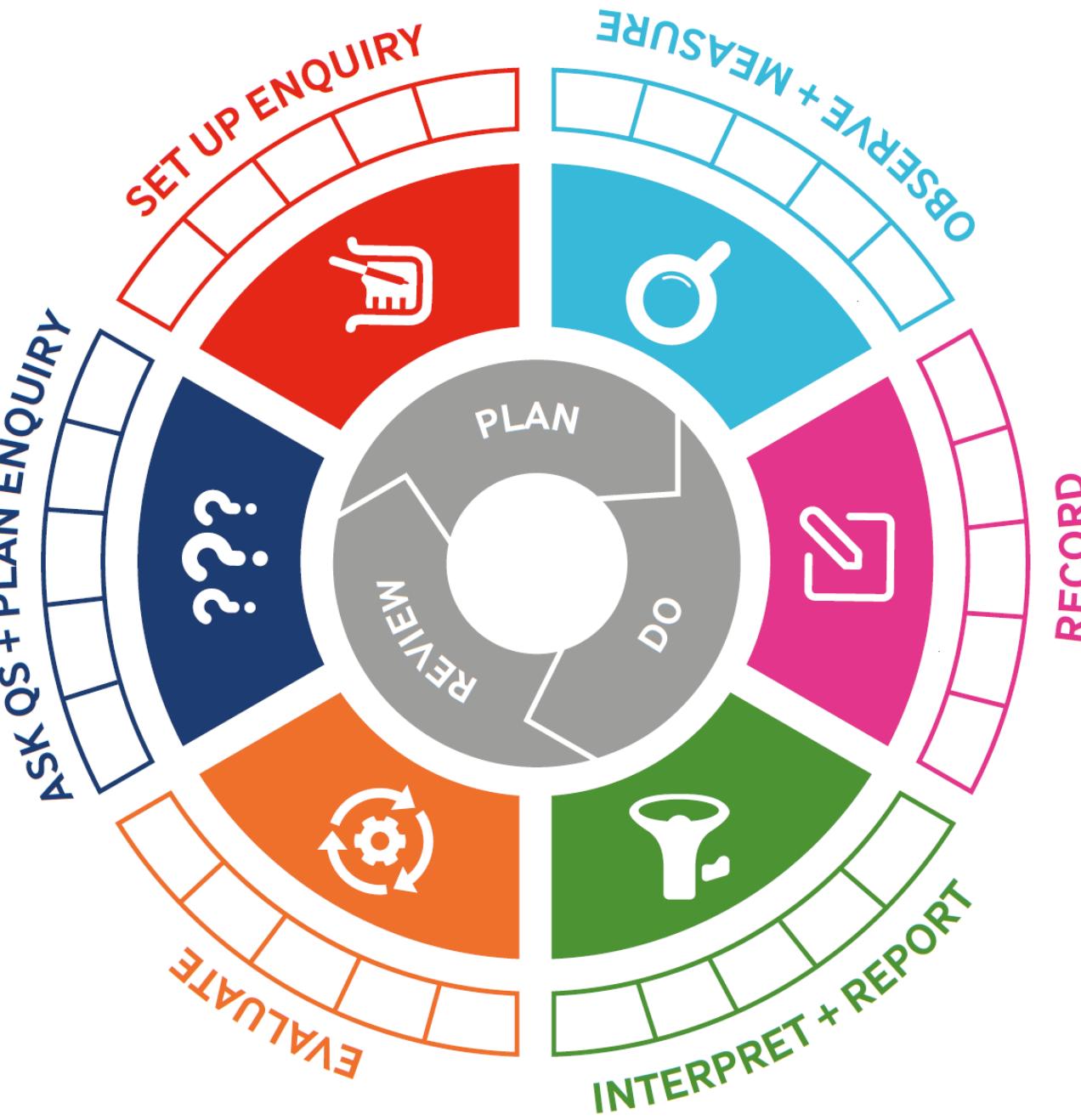
Can magnetic forces act at a distance?

Lesson 6

Investigate and explain how forces can move objects.

Learning Sequence

Today, we are focussing on:



Working Scientifically

Asking questions

Asking questions that can be answered using a scientific enquiry.



Making predictions

Using prior knowledge to suggest what will happen in an enquiry.



Setting up tests

Deciding on the method and equipment to use to carry out an enquiry.



Observing and measuring

Using senses and measuring equipment to make observations about the enquiry.



Recording data

Using tables, drawings and other means to note observations and measurements.



Interpreting and communicating results

Using information from the data to say what you found out.



Evaluating

Reflecting on the success of the enquiry approach and identifying further questions for enquiry.



Types of Enquiry

Comparative / fair testing

Changing one variable to see its effect on another, whilst keeping all others the same.



Research

Using secondary sources of information to answer scientific questions.



Observation over time

Observing changes that occur over a period of time ranging from minutes to months.



Pattern-seeking

Identifying patterns and looking for relationships in enquiries where variables are difficult to control.



Identifying, grouping and classifying

Making observations to name, sort and organise items.



Problem-solving

Applying prior scientific knowledge to find answers to problems.

