Forces and Magnets

Prior Learning	
This unit is the first forces related science unit in the primary science curriculum although they will develop their scientific enquiry skills, making observations, predictions and conclusions. The aim is to give children a basic overview of forces, friction and magnetic attraction Prior learning will be children's own knowledge of forces through the reading of books etc. and comparing how things move.	
Key vocabulary for this unit	
Forces Pushes Pulls Friction Magnet Poles Magnetic Field	Attract Repel Compass Prediction Bar chart Electromagnet
Learning Sequence	
Pushes and Pulls	• To notice that some forces need contact between two objects by identifying the different types of forces acting on objects.
Faster And Slower	• To compare how things move on different surfaces by investigating the speed of a toy car over different surfaces.
Scrapyard Challenge	• To compare and group materials according to whether they are magnetic by sorting materials.
Magnet Strength	• To observe how magnets attract or repel each other and attract some materials and not others by investigating the strength of different magnets.
Magnetic Poles	• To describe magnets as having two poles and to predict whether two magnets will attract or repel each other, depending on which poles are facing by making a compass to hunt for treasure.
Marvellous Magnets	• To observe how magnets attract or repel each other and attract some materials and not others by making, playing and evaluating a magnetic game.
Electromagnets	• To make systematic and careful observations by exploring electromagnets.

	• To use results to draw simple conclusions and make new predictions by exploring electromagnets. • To explore how electromagnets attract some materials.
Assessment milestones	
Working Scientifically: • Set up reliable and accurate investigations. • Construct a bar chart on labelled axes. • Form a conclusion from their results.	**Scientific Knowledge:** • Identify forces as pushes and pulls • Describe friction as a force that slows objects down. • Sort materials according to whether they are magnetic or not.