

Science Progression Framework: Forces and Magnets (Year 3 and Year 5 with some links made in Year 2)

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
				Explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object	
				Chn to understand and explain why unsupported objects fall to the Earth	

	No specific Year 2 PoS, however, chn will:	Compare how things move on different surfaces		Identify the effects of air resistance, water resistance and friction, that act between moving surfaces	
	Link to Materials: Explore how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching	Chn notice that a range of objects move differently on a range of surfaces		Chn to investigate friction, air resistance and water resistance in depth in order to identify the effects that act between moving surfaces	

		<p>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</p> <p>Observe how magnets attract or repel each other and attract some materials and not others</p> <p>Predict whether two magnets will attract or repel each other, depending on which poles are facing.</p>		Recognise that some mechanisms including levers, pulleys and gears allow a smaller force to have a greater effect	
		<ul style="list-style-type: none"> • Chn to sort, group and classify a range of materials on the basis of whether they are attracted to a magnet • Chn to explain that magnetic materials are always metal but not all metal is magnetic • Chn to identify that any material with iron in it will be attracted to a magnet • Chn to predict then investigate whether two magnets will attract or repel each other, depending on which poles are facing and how magnets attract or repel each other and attract some materials and not others 		<ul style="list-style-type: none"> • Chn to explore and build simple models involving pulley, lever and gear systems • Chn to recognise that some mechanisms including levers, pulleys and gears allow a smaller force to have a greater effect 	

		Notice that some forces need contact between two objects, but magnetic forces can act at a distance		No specific Year 5 objective, however, chn will:	
--	--	---	--	--	--

		Chn notice that some forces need contact between two objects, but magnetic forces can act at a distance		Linked to 'Properties and Changes of Materials' compare and group together everyday materials on the basis of their properties, including their response to magnets	
--	--	---	--	---	--

		Describe magnets as having two poles			
		<ul style="list-style-type: none"> • Chn to know that every magnet has a North and a South pole • Chn to name different types of magnets including: bar magnet, wand magnet, horseshoe magnet, ring magnet, marble magnet 			