FORCES AND MAGNETS (PHYSICS)

Statements in *red* are linked from other topics

Progression in Scientific knowledge, concepts & skills	EYFS (Early Learning Goals)	Year 1	Year 2	Year 3	Year 4	Year 5 (Forces)	Year 6	KS3
Concepts Cause and effect Similarity and difference Working Scientifically	Children know about similarities and difference in relation to places, objects, materials and living things. Children talk about features of their own immediate environment and how environments might vary from one another		*Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching (Materials)*	Compare how things move on different surfaces (friction) Know how magnets attract/ repel some materials (two pole +/-) and make predictions Know that some forces need contact whereas magnetic forces can act at a distance		Explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object Identify the effects of air resistance, water resistance and friction Recognise that some mechanisms (gears, leavers,		Magnetic fields by plotting with compass, representation by field lines. Earth's magnetism, compass and navigation. Forces as pushes or pulls, arising from the interaction between two objects. Using force arrows in diagrams, adding forces in one dimension, balanced and

	Children make observations of animals and plants and explain why some things occur and talk about changes			Compare and group magnetic/ non-magnetic materials		pulleys and springs) allow a smaller force to have a greater effect		unbalanced forces Moment as the turning effect of a force Forces: associated with deforming objects; stretching and squashing – springs; with rubbing and friction between surfaces, with pushing things out of the way; resistance to motion of air and water Forces measured in Newtons, measurements of stretch or compression as force is changed
Possible learning questions				Can you feel the force?		Can you feel a force?		

				How do forces affect our lives?				