

# Medium Term Plan – Science – Forces and Magnets & Rocks



Lesson	National Curriculum links	Objective	Substantive knowledge	Disciplinary knowledge	Specific Vocabulary	Activities and resources
4/1	Notice that some forces need contact between two objects	To identify the forces acting on objects	Name types of forces Identify pushes and pulls	Know that some forces require direct contact	Force, push, pull	<a href="#">Pushes and Pulls</a> Mind Map Freeze frame Forces bingo
8/1	Compare how things move on different surfaces	To investigate the effects of friction on different surfaces	Explain force of friction Make predictions Record results	Know the effects of friction	Friction, surface	<a href="#">Faster and Slower</a> Investigate movement of toy car over different surfaces
15/1	Notice that magnetic forces can act at a distance Notice that magnets attract some materials but not others	To sort magnetic and non-magnetic materials	Use magnets to sort Name magnetic materials	Explain that magnets produce a force which attracts some materials	Magnetic, magnetic field, attract,	<a href="#">Scrap yard Challenge</a> Use magnets to sort objects
22/1	Observe how magnets attract or repel each other and attract some materials but not others	To investigate the strength of magnets	Different types of magnets Predict Record results	Understand that magnets have different strengths	Strength, force	<a href="#">Magnet strength</a> Investigate strength of magnets by how many paper clips it can attract
29/1	Describe magnets as having two poles Predict whether two magnets will attract or repel each other depending on which way the poles are facing	To explore magnetic poles	Identify magnets have two poles Predict according to poles	Understand why a compass always points North-South	Pole, North, South, direction	<a href="#">Magnetic poles</a> Make a compass Treasure hunt
5/2	Notice that magnetic forces can act at a distance Notice that magnets attract some materials but not others	To know magnets attract some materials and not others	Sort materials Use magnetic force	Name materials attracted to magnets	Recap all vocabulary	<a href="#">Marvellous magnets game</a> Make a magnetic game

						Assessment quiz
12/2	HALF TERM					
19/2	Compare different kinds of rocks based on their appearance in the context of understanding the difference between natural and human-made rocks.	To name the three different types of rocks. To explain the difference between natural and human-made rocks.	Identify the three types of rocks and how they are formed	Name the three types of rocks	Rocks, igneous, sedimentary, metamorphic, formation, volcano, sea, seabed, natural, human-made, strata,	Look at types of rock and how they are formed. Show short video Sort into natural and man-made
26/2	Group together different kinds of rocks on the basis of their simple physical properties in the context of natural rocks	To group rocks based on their properties	Use scientific vocabulary to describe rocks	Know what permeable and non-permeable means	permeable, impermeable, hard, soft, durable, buoyancy, split.	Recap on types of rocks, what causes them to be different? Describe rocks using adjectives
4/3	Describe in simple terms how fossils are formed when things that have lived are trapped within rock	To understand how fossils are formed	Explain the difference between a bone and a fossil	Order the process of how a fossil is formed	Fossil, fossilisation, animals, bones, chemical fossils, body fossils, trace fossils, layers, pressure, coprolite, footprints.	Are dinosaurs real? How do you know? The difference between bones and fossils information sheet. The fossilisation process
11/3	Identifying changes related to simple scientific ideas in the context of theories about fossils	To explain Mary Anning's contribution to palaeontology	Describe how palaeontology has changed our understanding of prehistoric animals	Understand why Mary Anning's fossil findings were important	Mary Anning, fossils, ichthyosaur, dinosaurs, Jurassic, Lyme Regis, scientists, William Buckland.	<b>Types of Fossils:</b> Children recap and feedback on the main types of fossils. <b>Mary Anning:</b> Show children the <a href="#">video</a> of Mary Anning's life and her fossil find. Children focus

						on the types of fossils she found e.g. body fossils.
18/3	Recognise that soils are made from rocks and organic matter by explaining how soils are formed	To understand how soils are formed	Explain that soil is composed of different things	Describe the 4 processes of soil formation	Soil, organic matter, animals, top soil, sub soil, bedrock, additions, losses, translocations, transformations.	What is soil? Go to quad and look at the soil, What might be in the soil? Layers of soil- show diagram, explain the soil formation process