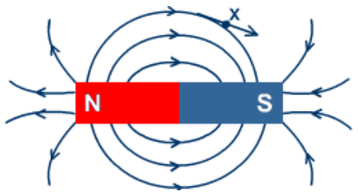
Knowledge Organiser

Forces, Magnets & Rocks	Year 3 Autumn 1

	Prior Knowledge	New Knowledge	Future Knowledge
Science	Distinguish between an object and the material from which it is made. Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock. Describe the simple physical properties of a variety of everyday materials. Compare and group together a variety of everyday materials on the basis of their simple physical properties. (Y1)	Compare how things move on different surfaces. Notice that some forces need contact between two objects, but magnetic forces can act at a distance Observe how magnets attract or repel each other and attract some materials and not others. 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. Describe magnets as having two poles. Predict whether two magnets will attract or repel each other, depending on which poles are facing.	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 that act between moving surfaces. Recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect. (Y5)
	Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses. Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.	Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties. Describe in simple terms how fossils are formed when things that have lived are trapped within rock. Recognise that soils are made from rocks and organic matter.	Compare and group materials together, according to whether they are solids, liquids or gases. Observe that some materials change state when they are heated or cooled, and measure or research the temperature at which this happens in °C. Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.
Art & Design	Observe and talk about patterns and textures shown in art. (Y1) Use different techniques (e.g. dotting, scratching) to imitate an artist/style of art. (Y2)	Barbara Hepworth Artist Study To manipulate malleable materials e.g. rolling, pinching, pulling, impressing. To know how to cover and join objects for structure/form. To develop joining with clay (e.g. pinch, cross hatching, slip, coil techniques).	To develop joining with clay (e.g. pinch, cross hatching, slip, coil techniques) to add more detail. [Anthony Gormley] To deliberately use effects and techniques for a given purpose To cover accurately with Paper Mache or Mod Rock. To plan with annotations finishing decoration with accurate application. [Canopic Jars] (Y4)

Key Questions	Key Individuals	Key Vocabulary
Why do different objects move differently on different surfaces? In what ways, could you group together different materials? How can you predict whether two magnets will attract or repel each other? How are fossils formed and how do they help us know more about the past? What inspired Barbara Hepworth and how can we describe her sculptures?	**Barbara Hepworth** (1903-1975) was an English artist and sculptor. Her work exemplifies Modernism and in particular modern sculpture. Some of her most famous works include *Single Form* and *Dual Form*. **Leonardo da Vinci** (1452-1519) was one of the first people to investigate and understand friction **Mary Anning** (1799–1847) was an English fossil collector, dealer, and palaeontologist who became known around the world for finds she made in Jurassic marine fossil beds in the cliffs along the English Channel.	**Magnet** - A magnet is a rock or a piece of metal that can pull certain types of metal toward itself. **Force** - A force is a push or a pull. Forces can make things move, change their speed, or change their shape. **Magnetism** - The force of magnets that is a basic force of nature, like electricity and gravity. Magnetism works over a distance. This means that a magnet does not have to be touching an object to pull it. **Modernism** - an art movement that began in the early 20th Century, which reflected the newly emerging industrial world.



Curriculum Leaflet	Year 3 Autumn 1

Year 3 will be exploring the topic: 'Forces and Magnets'. This unit of work will have a specific focus on developing the children's knowledge, skills and understanding in Art & Design and Science.

Maths	English	Home
Maths Unit **<u>Number: Place Value</u>** • Represent numbers to 1000 using dienes and place value counters. • To count in 100s and 50s • To learn a 3-digit number is made up of 100s, 10s and 1s. • To sort numbers to 1000 on a number line. • To find 10, 100 and 1000 more or less than a set number. • To compare and order 3-digit numbers from smallest to greatest and vice versa. **<u>Number: Addition and Subtraction</u>** • Add and subtract multiples of 100. • To add 3 digit numbers to 1 2 or 3 digit numbers with no exchanges • To add 3 digit numbers to 1 2 or 3 digit numbers with exchanges • To subtract 1 2 or 3 digit numbers from 3 digit numbers with no exchanges • To subtract 1 2 or 3 digit numbers from 3 digit numbers with exchanges • To apply these for problem solving Revisit and consolidation: 2 5 and 10 times tables.	We will be studying: ***Leon and the Place Between***, Angela McAllister and Grahame Baker-Smith **Genres:** **<u>Narrative</u>** • Explore characters' thoughts, feelings and emotions by performing in role. • Use double adjectives with comma splicing to describe nouns and expanded noun phrases for additional detail. • Use a range of punctuation accurately and consistently including inverted commas for speech and apostrophes for singular and plural possession as well as for contraction. • Create my own parallel narrative based on the story by changing key details using my own ideas for characters and setting. • Create a new picture book spread to include front cover and blurb. • Read your own compositions to an audience. • Show understanding through intonation, tone, volume and action **<u>Poetry</u>** • Create a list poem based on experiences and emotions • Performance reading using a range of registers	Families can support learning in the following ways: • Use the internet to research Barbara Hepworth / Forces and Magnets. • Visit examples of Hepworth's sculptures in London • https://londonist.com/london/art-and-photography/where-to-find-barbara-hepworth-sculptures-in-london • Explore everyday uses of magnets in the home • Accessing weekly home learning tasks via Google Classroom • Supporting the development of times tables skills via regular practice on Times Tables Rock Stars • Practise rapid recall of all multiplication and division facts and apply these to real life problems. • Reading daily at home • Accessing MyMaths for weekly maths homework