EXPERIENTIAL COMMUNITY CREATIVITY RESPONSIVE

Year 3: Science Overview 2023-2024						
Topic	**<u>Autumn</u> Forces of Nature**		**<u>Spring</u> Pharaohs and Pyramids**		**<u>Summer</u> Here and There**	
Main focus	**Volcanoes and Earthquakes**	**Ancient Egypt**	**The Water Cycle**	**Stone Age to iron Age**	**Uk and Amazon Rainforest**	**A local History Study**
Knowledge **Plants** **Skeletal system** **Rocks** **Light** **Forces and Magnets**	**Rocks, fossils and Soils** **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	**Animals, including humans** **Identify** that animals, including humans, need the right types and amount of nutrition and that they cannot make their own food; they get nutrition from what they eat **Identify** that humans and some other animals have skeletons and muscles for support, protection and movement	**Forces and magnets** **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 but 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	**Light** **Recognise** that they need light in order to see things and that darkness is the absence of light **Notice** that light is reflected from surfaces **Recognise** that light from the sun can be dangerous and that there are ways to protect their eyes **Recognise** how shadows are formed when the light from a source is blocked by a solid object **Find** patterns in the way that the size of shadows change	**Plants** Identify and describe the function of different parts of a flowering plant:roots, stem/trunk, leaves and flowers **Explore** the requirements of plants for life and growth (air, light.water,nutrients from soil, and room to grow) and how they vary from plant to plant **Investigate** the way in which water is transported within plants **Explore** the part that flowers play in the life cycle of flowering plants, including	**Animals, including humans** **Identify** that animals, including humans, need the right types and amount of nutrition **Identify** that animals cannot make their own food; they get nutrition from what they eat **Understand** that animals get nutrition from what they eat

			Predict whether magnets will attract or repel each other, depending on which poles are facing		pollination, seed formation and seed dispersal	
Enquiries	**Classifying** Based on the children's own criteria, classify rocks. (At the beginning of the topic, this will most likely focus on appearance, leading to physical properties at the end of the unit.) **Classifying** Look at different soils and discuss how they are similar/different. **Observing Over Time** Observe how soil separates into different layers in water	**Classification** Classify animals (leading to sorting by into herbivores, carnivores and omnivores). **Classification** Based on the children's own criteria: classify food items (leading to sorting by nutrients) **Pattern Seeking** Children generate questions on nutrition such as: Do 'healthy' drinks have less sugar? Does brown bread have more fibre? **Classification** Children generate questions for investigation into purpose of muscles and skeletons such as: Do people with long arms throw further?	**Classifying** Based on the children's own criteria: sort materials (leading towards metal/non-metal and magnetic/not magnetic) **Classifying** Sort toys (leading to what makes them move e.g.push/pull). **Comparative/Fair Testing** Test how objects move on different surfaces e.g. cars, spinning tops, wind-up/clockwork toys. **Comparative/Fair Testing** Test the strength of different magnets. **Pattern Seeking** How do poles affect the way magnets move?	**Classifying** Based on the children's own criteria: classify light sources (leading to man-made/natural) **Classifying** Classify materials (leading to reflective/non-reflecti ve, transparent/translucent/opaque). **Comparative/Fair Testing** Test materials for reflectiveness. Test materials for transparency. Investigate shadows (size of shadows, shape of shadows). **Researching** Why is the sun a danger to our eyes?	**Classification** Classify food plants based on the children's own criteria as an opening activity and to assess prior knowledge. **Observing over time** Observe celery (with roots and leaves) in coloured water. **Observing over time** Observe white carnations (freshly cut) in coloured water. **Observing over time** Gather seeds and photographic evidence of blossoms/flowers and berries in the school vegetable garden over the half term. **Pattern seeking** Investigate what	**Classification** Based on the children's own criteria: classify food items (leading to sorting by nutrients) **Pattern Seeking** Children generate questions on nutrition such as: Do 'healthy' drinks have less sugar? Does brown bread have more fibre? **Researching** Look at food packaging to identify the amount of nutrients in different food items. **Researching** Research which types of food contain which nutrients.

		Can people with short legs jump higher? Can people with longer legs run faster? **Researching** Look at food packaging to identify the amount of nutrients in different food items. **Researching** Research which types of food contain which nutrients. **Researching** Generate questions to research about the human skeleton.	**Researching** Find out how magnets are used in everyday life. **Researching** Find out how Ancient Egyptians used magnets		happens when conditions are changed e.g. more/less light/water, change in temperature, nutrients (Baby Bio vs other brands).	
Knowledge Matrix	Knowledge Matrix - Prior Knowledge and Future Learning					
Working Scientifically	Working Scientifically Skills Years 3 and 4					
Experiences	Rock Museum -Make a rock museum, open to parents with children showing their exhibits National History Museum Geo bus	London			Kew Gardens Workshop	

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Vocabulary	**Rocks:** Rock, stone, pebble, boulder, grain, crystals, layers, hard, soft, texture, absorb water, soil, fossil, marble, chalk, granite, sandstone, slate, soil, peat, sandy/chalk/clay soil	**Animals including humans -** Nutrition, nutrients, carbohydrates, sugars, protein, vitamins, minerals, fibre, fat, water, skeleton, bones, muscles, joints, support, protect, move, skull, ribs, spine	**Forces and magnets** Force, push, pull, twist, contact force, non-contact force, magnetic force, magnet, strength, bar magnet, ring magnet, attract, repel, magnetic material, metal, iron, steel, poles, north pole, south pole	**Light** Light, Shadows, Mirror, Reflective, Dark, Reflection	**Plants -** Photosynthesis, pollen, insect/wind pollination, seed formation, seed dispersal (wind dispersal, animal dispersal, water dispersal)	**Animals including humans -** Nutrition, nutrients, carbohydrates, sugars, protein, vitamins, minerals, fibre, fat, water, skeleton, bones, muscles, joints, support, protect, move, skull, ribs, spine
Assessment Tasks	**TAPS Assessment Working scientifically Reporting on Rocks** Reporting on findings from enquiries		**TAPS Assessment Working scientifically Magnet Tests** Using results to draw simple conclusions, suggest improvements and raise further questions		**TAPS Assessment Working Scientifically** Close of observation of flowering plants	
Cross - curricular links	Using the theme of volcanoes to link with the theme of rocks by researching and examining pumice rock **21st Century Learning** The effects of Global warming on weather and landslides/soil erosion	**PSHE** The importance of a healthy diet, exercise and sleep	How did the Ancient Egyptians move heavy loads to build the pyramids? Shadoof -Getting water from the Nile using a shadoof.	Investigate shadow size using “Pyramids”	**Art** Botanical drawing - close observational drawing with labels.	**PSHE** The importance of a healthy diet, exercise and sleep
Events	**Harvest Assembly** **Black History Month** **Anti- Bullying Week**		**Big Garden Birdwatch** **Book Week** **Great Big School Clean**		**STEAM Exhibition** **Science Week** **Healthy Schools week** **Sports Day**	

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Science is:	**RESPONSIVE** Responds to what is happening right now **CREATIVE** Linked to science and the arts **COMMUNITY** Has a purpose **EXPERIENTIAL** Is enhanced by experiences