Switched On Science: Stage Two (Embedding and Deepening) Rolling Programme (Sensory Pathway)

Stage Two Classes: P3, P2A, S1A, S2a	Autumn	Spring	Summer
2022-2023	**Year 3 - Topic 5** **Topic: Rocks, soil and fossils**	**Year 3 - Topic 5** **Topic: How does your Garden grow**	**Year 3 - Topic 5** **Topic: Forces and Magnets**

Rocks, soil and fossils
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

How does your Garden grow
Leaf, flower, blossom, petal, fruit, berry, root, seed, trunk, branch, stem, bark, stalk, bud Names of trees in the local area Names of garden and light, shade, sun, warm, cool, water, grow, healthy
wild flowering plants in the local area
Photosynthesis, pollen, insect/wind pollination, seed formation, seed dispersal (wind dispersal, animal dispersal, water dispersal)

Forces and Magnets
magnet: an object or device that attracts iron or another magnetic material magnetic: attracted to a magnet magnetic push pull Toy cars Tape measures wheels Paperclips Iron filings Materials for testing magnetic attraction
attract compass contact pole: prediction: repel:
North: the direction of the Earth's magnetic North pole non-contact: not touching

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			non-magnetic: not attracted to a magnet
Sensory activities	• Using microscopes (light or digital) to observe different types of rocks. • Using "Bioviewers" to look at various rock types. • Test for hardness of rocks by scratching – scratched by fingernail are very soft, scratched by iron nail are soft, scratched by steel knife are hard, cannot be scratched by steel knife very hard. *Risk assessment needed when using sharp objects with class. Take care that the particles do not go in the pupils' eyes.* • Test the rocks to see if they break easily – wrap in cloth, put it on floor and push down with heel to see if it breaks. • Test the rocks to see if they soak up water – use a pipette to drop water on a sample and observe.	• Add Color To Flowers Using Science - ScienceBob.com  • Make leaf or bark rubbings. • Make plant jigsaws. • Go on a plant hunt and/or a tree hunt. • Explore/Discuss which parts of a plant people eat. • Pull up weeds to find which roots make the best anchor. Which need gentle pulling, strong steady pulls or roots snap when pulled? • Make a visual list of which plant leaves humans can eat.	• Liquid sensory hourglass demonstrating density and gravity. How to make an anti-gravity hourglass | Do Try This At Home | We The Curious - YouTube • Magnetic sensory bin/tuff tray. Place magnetic and non-magnetic items in a box and give children a magnet wand. Children to find the magnetic and non magnetic items and catagorise.

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2023-2024	Year four – Topic 1 Topic: Whats that sound Assessment Area: sound	Year four– Topic four Topic: teeth and eating Assessment Area: Animals, including Humans	Year four– Topic five Topic: power it up Assessment Area: Electricity
	Topic: Whats that sound Sound, source, vibrate, loud, quiet, fast, slow, ear vibration, travel, pitch (high, low), volume, parts of the ear faint, loud, insulation	**teeth and eating** mouth, teeth, stomach teeth, food, healthy, Digestive system, swallow digestion, saliva, nutrients, predator, prey, food chain small intestine,large intestine, rectum, anus, incisor, canine, molar, premolars, herbivore, carnivore, omnivore, producer, oesophagus, ,	**power it up** battery: a portable electricity supply bulb: part of a circuit that gives out light switch: a component that turns a circuit on and off Wire Range of everyday materials including insulators and conductors e.g Paperclip Plug Electricity Power On Off Buzzer Bulb cell: the scientific name for a battery circuit: the path followed by an electric current. Electricity must flow in a circuit to do useful work mains: the electricity that comes from a socket rechargeable: a battery that we can put 'electricity' back into

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			Positive motor Negative Crocodile clip Bulb holder components: the items that make up a circuit conductor: a material that transmits electricity in the wall and through wires insulator: a material through which electricity cannot flow terminals: the ends of the battery. One is negative and one is positive wires: used to connect components together
	• Listen for sounds in normal classroom environment with eyes shut, to focus on sense of hearing. • Listen for sounds in other parts of school and out of doors (explore echoes if available, no need for detailed explanations) • Using a simple object, explore range of sounds that can be made with it (could be musical instrument). • What happens when you cover your ears?	• Look at each other's teeth – colour, size, shape, hardness. • Try eating different foods and observe what teeth can do e.g. *carrot, banana, hard biscuit.* • Bring in own baby teeth to look at. • Look at specimen of real teeth or models • Compare with animals' teeth with human teeth. • Care of teeth – brushing, healthy foods. • Use of disclosing tablets to stain plaque on teeth. Try eating apples or carrots to see if this removes plaque. Look at teeth (dentist will often save them for you), false teeth or animal skulls (SAFETY	• Explore single switch toys for cause and effect – battery and mains operated. • Explore in light room – cause and effect. • Talk about dangers associated with electricity and electrical appliances/ • Operate everyday appliances with adult supervision e.g.: *Cassette player* *vacuum cleaner* *Blender* *microwave* *Whisk* *fan heater* • Explore electrically operated devices around school – mains and battery operated.

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	• Listen to a variety of sounds e.g. *music, recorded sound effects, bodily noises, instruments, toys.* • Experience silence (near silence) to show contrast between silence and noise. • Experience contrast between different types of sound e.g. *drone; shout; sharp sounds; pleasant; unpleasant.* • Pupils create voluntary or involuntary sounds using their body or other objects. • Use a selection of musical instruments or other noisy objects – have 2 sets of these, one which is hidden. Teacher makes a noise on one instrument and pupils select same one from the other set. • Play sound lotto using a tape. • Carry out activities e.g. *turning on tap; opening the door; someone moving with a bell*. Pupils locate these noises when blindfolded. • Tape record pupils' vocalisations and playback. • Make a noise behind a door – how do we know a sound has been made? • Explore how to make sounds softer or louder e.g. *put radio, ticking clock, wind-up music box in container (e.g. bucket, metal box, wooden box) add different materials as padding.* • Explore how sound is used in everyday life to carry a message or warning e.g. sirens, telephone, doorbell.	SYMBOL). Discuss different teeth for different jobs. • Use mirrors and get pupils to draw the different teeth they have. • Compare human and animal teeth for similarities and differences. • Survey each other's mouth for the numbers and types of teeth. • Use egg shell to equate to enamel and put one piece into undiluted squash and another piece into plain water. Leave for a week and examine. • Use disclosing tablets, or cotton buds dipped into food colouring and left to dry work just as well (SAFETY SYMBOL), to show up plaque. •	• Explore battery-operated devices – e.g. *insert batteries the right way round, correct battery type for appliance.* • Electricity can produce heat, light, sound, movement – look at examples of each in class. • Explore electrical devices that produce heat, light, sound, movement. • Make a circuit with other components, e.g. *buzzers, motors, switches*. • Disconnect one component in a circuit and see what happens – talk about making a complete circuit to make the bulb light/buzzer sound. • Make a simple circuit to light a bulb.

	• Explore vibration from sound e.g. *rice on drum, guitar-strings, hand on throat while speaking, elastic band stretched across box, resonance-boards*. • Make a "telephone" with string and yoghurt pots (could locate ends of string out of sight round corners). • Go out of doors, listen for far-away sounds, compare with near sounds. Does your distance away from sound make a difference?		