

Evercreech CofE Primary School

Science Medium-Term Plan – Autumn

NC objective: Pupils should be taught to: Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for uses. Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.

| Week | Learning Objectives | Resources |
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| 1 | <ul style="list-style-type: none"> To identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, brick, rock, paper and cardboard for particular uses. <p>Discuss the difference between ‘material’ and ‘fabric’. List as many materials as the children can think of. Give out a variety of labels (wood, plastic, rubber, etc). Children work in pairs to label items around the room. All children fill out a table, recording materials found, uses for the materials, properties</p> | Collection of everyday materials English – vocabulary (describing properties of materials) |
| 2 | <ul style="list-style-type: none"> To identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, brick, rock, paper and cardboard for particular uses. <p>Choose one item to look at (eg, the window). Discuss the material that it is made from. What properties make that the most suitable material? List them. Children choose any object that they like. Draw it, label the material(s) it is made from and describe why that material is the most appropriate.</p> | Metal, plastic, wooden spoons |
| 3 | <ul style="list-style-type: none"> To identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, brick, rock, paper and cardboard for particular uses. <p>Look at three different spoons: wooden, plastic and metal. Ensure children understand they are the same object made from different materials. Why are different materials used for the same object?</p> | Variety of fabrics, clothing labels, magnifying glasses PSHCE – sustainability and use of materials. |
| 4 | <ul style="list-style-type: none"> To identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, brick, | Selection of clothing for specific purposes (hi-viz jackets, safety boots, etc) |

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| | <p>rock, paper and cardboard for particular uses.</p> <p>Look at a variety of fabrics (use own clothes/PE kits and any sample fabrics that can be gathered). Observe and describe properties. Look at natural/manufactured fabrics by looking at clothing labels. Use a magnifying glass to observe and draw fabrics.</p> | <p>PSHCE – keeping safe (be safe, be seen)</p> |
| <p>5</p> | <ul style="list-style-type: none"> To identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, brick, rock, paper and cardboard for particular uses. <p>Look at a suitcase containing a swimsuit, sun hat, flip flops, etc. Who would be wearing these things and why? Look again at a case containing boots, snow hat, gloves, scarf etc. Match the pictures of clothes to the scenarios. Ext: Design a 'Be safe, be seen' outfit.</p> | <p>Range of materials, paper towels, trays, pipettes (or similar, such as medicine dosing syringes) English – Links to Lighthouse Keeper's Lunch work</p> |
| <p>6</p> | <ul style="list-style-type: none"> To find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching. <p>Children work in pairs. Find facts about the scientists John Boyd Dunlop, John Loudon McAdam or Charles Macintosh.</p> | <p>Stones, playdough, eraser, sponge, ruler, elastic bands, wood, metal spoon</p> |
| <p>7</p> | <ul style="list-style-type: none"> To identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, brick, rock, paper and cardboard for particular uses. <p>Show the children a basket of food and a selection of materials. Ask which material would be best to keep Mr Grinling's lunch dry as it travelled along the basket? Give talking time and then share ideas and reasoning. Discuss how we would test each material. Carry out tests and discuss what we have seen. Come up with sensible conclusions</p> | <p>Selection of objects made from various materials, plastic objects with recycling symbols on. PSHCE – Recycling</p> |
| <p>8</p> | <ul style="list-style-type: none"> To identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, brick, rock, paper and cardboard for particular uses. <p>Sort materials into plastic/not plastic. Discuss the properties of plastic. Watch the video: https://www.youtube.com/watch?v=6PgiA3HISmw List Good and Bad properties of plastic in a table.</p> | <p>Range of plastic objects with recycling symbols PSHCE – Recycling English – writing to persuade</p> |

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| | <p>Ext: Find and draw a plastic object, listing properties making it suitable for purpose.</p> | |
| <p>9</p> | <ul style="list-style-type: none"> • To identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, brick, rock, paper and cardboard for particular uses. <p>Look at the problems associated with landfill. Decide which materials can be recycled. Design a poster that encourages recycling.</p> | <p>Jam jars (or similar to upcycle) DT – Creating appealing products</p> |

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Science Medium-Term Plan – Spring 1

NC objective: Pupils should be taught to: Notice that animals, including humans, have offspring which grow into adults. Find out about and describe the basic needs of animals, including humans, for survival (water, food and air). Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene.

| Week | Learning Objectives | Resources |
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| <p style="text-align: center; font-size: 2em;">1</p> | <ul style="list-style-type: none"> Notice that animals, including humans, have offspring which grow into adults. <p>Talk about any experiences with babies (siblings/cousins). What are babies like? What can/can't they do? How do they survive? Talk about what might change now for the children. How might the teacher change? Give the children a series of pictures. Place the pictures in order. Explain what has changed between each picture</p> | <p>Pictures of baby, toddler, child, teenager, young adult, adult, elderly person.</p> |
| <p style="text-align: center; font-size: 2em;">2</p> | <ul style="list-style-type: none"> Notice that animals, including humans, have offspring which grow into adults. <p>Ask: Do children who are the tallest have the biggest feet? Give talking time. Share suggestions. Ask: How can we prove it? Give talking time and, in pairs/small groups, plan an investigation. Share ideas about how we can answer the initial question. Ask children in pairs to measure and record their height and foot length. Discuss measurements by ordering children first from tallest to smallest and then from longest to shortest foot. What does our ordering tell us? Take photos of the ordering activities. Children write a conclusion to answer the initial question.</p> | <p>Tape measures/long rulers. Maths link</p> |
| <p style="text-align: center; font-size: 2em;">3</p> | <ul style="list-style-type: none"> Notice that animals, including humans, have offspring which grow into adults. <p>Read 'The Very Hungry Caterpillar'. Discuss what the story is telling us. Reinforce the term 'life cycle'. Discuss similarities between this life cycle and the life cycle of the frog (from English).</p> <p>Children draw a butterfly life cycle, labelling with appropriate vocabulary. Write an explanation of the life cycle.</p> | <p>Pictures of frogs at various stages of life cycle. The Very Hungry Caterpillar</p> |

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| <p style="text-align: center; font-size: 2em; font-weight: bold;">4</p> | <ul style="list-style-type: none"> • Notice that animals, including humans, have offspring which grow into adults. <p>Discuss what animals (including humans) need in order to stay alive and healthy.</p> <p>How can we care for our pets? Draw a picture of a pet (real or imagined) and list things needed for survival and health.</p> | <p>Maths link: symmetry English link: reading text</p> |
| <p style="text-align: center; font-size: 2em; font-weight: bold;">5</p> | <ul style="list-style-type: none"> • Notice that animals, including humans, have offspring which grow into adults. <p>Children work in mixed ability groups. Give each group a set of food pictures to sort. Allow them to choose the number of groups and the categories. Each group share how they have sorted their foods.</p> <p>Bring children together. Introduce the 5 main food groups, including appropriate vocabulary.</p> <p>Go back to places. Give each group a set of labels. Children now resort the foods into the 5 food groups.</p> <p>Swap groups to see if everyone is in agreement. Address any misconceptions.</p> <p>Ask: Why are there more foods in the fruit/veg group than the dairy group? Why is there very few food in the fats and sugars group?</p> <p>Draw foods into blank eat well plate.</p> | <p>Eggs, ipad (screen shared to IWB)</p> |



Science Medium-Term Plan – Spring 2

NC objective: Pupils should be taught to: Observe and describe how seeds and bulbs grow into mature plants
Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.

| Week | Learning Objectives | Resources |
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| 1 | <ul style="list-style-type: none"> • Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy • Observe and describe how seeds and bulbs grow into mature plants <p>Discuss the term 'germination' and what plants need to continue to grow healthily. Look at a broad bean seed.</p> <p>Talk about what we think will happen if the seed has:</p> <ol style="list-style-type: none"> a) water and light b) water and no light c) no water and light d) no water and no light up seeds in each condition (work in groups). <p>Fill in first parts of bean growing diary. Watch the video clip: http://www.bbc.co.uk/learningzone/clips/what-do-plants-need-for-healthy-growth-no-narration/2282.html</p> | Plants, magnifying glasses |
| 2 | <ul style="list-style-type: none"> • Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy • Observe and describe how seeds and bulbs grow into mature plants <p>Lesson carried over from last week – planting broad beans.</p> | Seeds, bulbs, pots, soil, cotton wool, poly pockets |
| 3 | <ul style="list-style-type: none"> • Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy • Observe and describe how seeds and bulbs grow into mature plants <p>Observe, measure and discuss what has happened to the seeds.</p> | Selection of seeds, magnifying glasses |
| 4 | <ul style="list-style-type: none"> • Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy • Observe and describe how seeds and bulbs grow into mature plants <p>Complete Week 3 section of bean growing diary</p> | Leaves, school grounds |

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| 5 | <ul style="list-style-type: none"> • Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy • Observe and describe how seeds and bulbs grow into mature plants <p>Look at the beans growing. Write a description of each bean and write a simple conclusion: A seed needs water to germinate. A plant needs light and water to grow healthily.</p> | Bulbs, seeds |
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Science Medium-Term Plan – Summer 1

NC objective: Pupils should be taught to: Notice that animals, including humans, have offspring which grow into adults. Find out about and describe the basic needs of animals, including humans, for survival (water, food and air). Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene.

| Week | Learning Objectives | Resources |
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| 1 | <ul style="list-style-type: none"> • Find out about and describe the basic needs of animals, including humans, for survival (which are water, food and air). <p>Discuss bedtimes and why sleep is important. Create pictogram of class bedtimes using J2e pictograms (iPads required) (Maths and Computing link)</p> | Pictures of various animals |
| 2 | <ul style="list-style-type: none"> • Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene. <p>Discuss what happens if germs/bacteria enter our bodies. How can medicines help? How might medicines be dangerous? Discuss how medicines can help but come up with rules. Design a poster for safe use of medicines.</p> | Pictures of foods PSHCE links – staying healthy |
| 3 | <ul style="list-style-type: none"> • Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene. <p>(Carried over from last week) Discuss what happens if germs/bacteria enter our bodies. How can medicines help? How might medicines be dangerous? Discuss how medicines can help but come up with rules.</p> | Food diary PSHCE links – staying healthy |

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| | Design a poster for safe use of medicines. | |
| 4 | <ul style="list-style-type: none"> • Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene. <p>Talk about any vaccinations the children remember having or pets having annual vaccinations. Discuss why handwashing also helps prevent disease and share techniques. Write instructions for hand hygiene (English link)</p> | <p>Pictures of skeletons, muscular systems, heart, lungs. Space for exercise.</p> <p>Links with PE and PSHCE</p> |
| 5 | <ul style="list-style-type: none"> • Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene. <p>List things that we know to be alive. How can we tell they're alive? Introduce MRS NERG as the life processes needed (movement, reproduction, sensitivity, nutrition, excretion, respiration, growth) Match life process to its definition to create a glossary of life processes (English link) Draw an animal and label the life processes around it.</p> | <p>Maths links – data handling</p> |
| 6 | <ul style="list-style-type: none"> • Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene. <p>Identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other.</p> | <p>Pictures of familiar medicines (paracetamol, calpol, inhaler, etc). Olive oil, cinnamon, soap and water.</p> <p>PSHCE links</p> |



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Science Medium-Term Plan – Summer 2

NC objective: Pupils should be taught to: Explore and compare the differences between things that are living, dead, and things that have never been alive. Identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other. Identify and name a variety of plants and animals in their habitats, including microhabitats. Describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and name different sources of food.

| Week | Learning Objectives | Resources |
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| 1 | <ul style="list-style-type: none"> • Explore and compare the differences between things that are living, dead, and things that have never been alive. <p>To understand what a microhabitat is and to identify a variety of microhabitats in a local environment. Watch the video about microhabitats below... 113 - Exploring Micro-Habitats: Life Under Logs (Updated see video#213) - YouTube</p> <p>Start the session outside. Explain to the chn that they are going to be looking carefully at microhabitats. Ask: <i>Have you heard of the word 'micro' before? Where have you heard it used? (Microwave, micro scooter, micro SD card.)</i> Explain that the term 'micro' means little. Ask: <i>What do you think the word 'habitat' means? (A type of environment/special place where animals or plants live)..</i> Organise pupils into working partners and give them a clipboard, pencil, device for taking photographs and the Investigating microhabitats resource. Pupils to complete the Investigating microhabitats sheet.</p> | |
| 2 | <ul style="list-style-type: none"> • Explore and compare the differences between things that are living, dead, and things that have never been alive <p>To understand what a microhabitat is and to identify a variety of microhabitats in a local environment. Watch the video about microhabitats below... 113 - Exploring Micro-Habitats: Life Under Logs (Updated see video#213) - YouTube</p> <p>Start the session outside. Explain to the chn that they are going to be looking carefully at microhabitats. Ask: <i>Have you heard of the word 'micro' before? Where have you heard it used? (Microwave, micro scooter, micro SD card.)</i> Explain that the term 'micro' means little. Ask: <i>What do you think the word 'habitat' means? (A type of environment/special place where animals or plants live)..</i> Organise pupils into working partners and give them a clipboard, pencil, device for taking photographs and the Investigating microhabitats resource. Pupils to complete the Investigating microhabitats sheet.</p> | Treasure hunt, hoops for sorting, collection of objects (if treasure hunt is not feasible) |
| 3 | <ul style="list-style-type: none"> • Identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on one another <p>NB: iPads/laptops needed. Remind children of habitats and micro-habitats. Children research a contrasting habitat. Find the following information Description of habitat. Weather n habitat Plants found in habitat Animals found in habitat Create a poster about this habitat.</p> | Pictures of various habitats, baby and pets. |

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| | Could work in small groups on sugar paper and present info to each other. | |
| 4 | <ul style="list-style-type: none"> Identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on one another | Pictures of an oak tree |
| 5 | <ul style="list-style-type: none"> Identify and name a variety of plants and animals in their habitats, including micro-habitats | Pond-dipping equipment, magnifying glasses, identification books/keys. |
| 6 | <ul style="list-style-type: none"> Identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other | Trays with cardboard divisions to create choice chambers, soil, sand, stones, water, leaves, woodlice (!) |
| 7 | <ul style="list-style-type: none"> Describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and name different sources of food | Pictures of various animals to include in a food chain. |