

Understanding the World/Science Class 1 Long Term Plan

Characteristics of Effective Learning		
<p>Playing and Exploring – Engagement</p> <ul style="list-style-type: none"> • Finding out and exploring ✓ • Playing with what they know ✓ • Being willing to 'have a go' ✓ 	<p>Active Learning – Motivation</p> <ul style="list-style-type: none"> • Being involved and concentrating ✓ • Keeping on trying ✓ • Enjoying achieving what they set out to do ✓ 	<p>Creating and Thinking Critically – Thinking</p> <ul style="list-style-type: none"> • Having their own ideas (creative thinking) ✓ • Making links (building theories) ✓ • Choosing ways to do things (critical thinking) ✓
<p>Area of Science Areas of Development Matters and ELG being worked towards.</p>	<p>The knowledge and skills that the children will develop through Nursery and Reception</p>	<p>Vocab</p>
<p>Working Scientifically 3 and 4 year olds will be learning to: Communication and language: Understand 'why' questions, like: "Why do you think the caterpillar got so fat?" Be able to express a point of view and to debate when they disagree with an adult or a friend, using words as well as actions. Understanding the world: Talk about what they see, using a wide vocabulary. Children in reception will be learning to: Communication and language Learn new vocabulary. Ask questions to find out more and to check they understand what has been said to them. Articulate their ideas and thoughts in well-formed sentences. Working towards meeting ELGs: Listening, Attention & Understanding: Listen attentively and respond to what they hear with relevant questions, comments and actions when being read to and during whole class discussions and small group interactions; Make comments about what they have heard and ask questions to clarify their understanding; Hold conversation when engaged in back-and-forth exchanges with their teacher and peers. Participate in small group, class and one-to-one discussions, offering their own ideas, using recently introduced vocabulary; Speaking: Offer explanations for why things might happen, making use of recently introduced vocabulary</p>	<p>I can understand why questions. I can talk about what I can see, hear and touch.</p> <p>I can ask questions about the world around them. I can observe using simple equipment with support. I can make simple predictions. I can perform simple tests with support. I can name common objects, animals and plants I can sort with support I can talk to an adult about what I have found out and with support, explain why some things occur.</p>	<p>Nursery: why, name, sort,</p> <p>Reception: Why, how, when, where, observe, equipment, test, name, group, explain, same, different, patterns, compare, sorting, question, test, magnifying glass</p>

<p>from stories, non-fiction, rhymes and poems when appropriate; Express their ideas and feelings about their experiences using full sentences, including use of past, present and future tenses and making use of conjunctions, with modelling and support from their teacher.</p>		
<p>Understanding plants 3 and 4 year olds will be learning to: Understanding the world: Plant seeds and care for growing plants. Understand the key features of the life cycle of a plant and an animal. Children in reception will be learning to: Explore the natural world around them. Working towards meeting ELG: The Natural World: Explore the natural world around them, making observations and drawing pictures of animals and plants</p>	<p>Changes I show awareness of change and talk about what I notice using simple terms to describe. I understand that living things can change. I describe what I see, hear and feel whilst exploring inside and outside. Living things - Plants I can examine plants to find out more about them. I use my senses to explore. Living things - Conservation I can show care and respect for living things. Changes I understand through books and making close observations that living things can change. Living things - Plants I can use the correct basic scientific vocabulary to describe parts of plants. I can explain a simple lifecycle, E.g., sunflower, or oak tree. I can talk about what plants need to survive and grow healthily. I can explain where some plants grow. Describing habitats and some microhabitats. I make close observations of plants in the natural world. I make comparisons and identify similarities and differences. I understand through books and observations that plants change, and I explain a range of lifecycles. Living things - Conservation I can show care and respect for living things and the environment in which they live.</p>	<p>Nursery: plants, trees, grow, Reception: Plants, trees, grow, lifecycle, roots, stem, leaves, flower, trunk, branches, water, light, warmth/sun light, soil, wild flowers, garden plants, blossom, petal, seed, bulb, grow, habitat.</p>

<p>Understanding animals and humans 3 and 4 year olds will be learning to: Understanding the world: Understand the key features of the life cycle of a plant and an animal. Working towards meeting ELG: Managing Self: Manage their own basic hygiene and personal needs, including dressing, going to the toilet and understanding the importance of healthy food choices. The Natural World: Explore the natural world around them, making observations and drawing pictures of animals and plants</p>	<p>Changes I understand that living things can change. I describe what I see, hear and feel whilst exploring inside and outside. Living things - Animals I can examine animals to find out more about them. I use my senses to explore. Living things - Conservation I can show care and respect for living things. Changes I understand through books and making close observations that living things can change. Living things - Animals I can use the correct basic scientific vocabulary to describe parts of animals. I can explain a simple lifecycle, E.g., butterfly, chicks, or frogs. I can explain where a range of animals live. Describing habitats and some microhabitats. I make close observations of animals in the natural world. I make comparisons and identify similarities and differences. I understand through books and observations that animals change, and I explain a range of lifecycles. Living things - Conservation I can show care and respect for living things and the environment in which they live.</p>	<p>Nursery: Animals, birds, fish, pets, farm, animals, British animals, zoo animals, mini-beasts, body parts, Reception: Animals, birds, fish, amphibians, reptiles, mammals, pets, British animals, farm animals, wild animals, zoo animals, mini-beats. meat, plants, grass, carnivores, herbivores, omnivores, predator, prey, body parts e.g. legs, arms, head, wings, fur, skeleton. Adult and baby animal, life cycle, egg, caterpillar, chrysalis, cocoon, butterfly, water, food, air, hygiene, healthy, non- healthy. Germs. air, exercise. meat, potatoes, fruit, vegetables, milk, cheese, see, hear, feel, smell, taste.</p>
<p>Investigate living things Working towards meeting ELG: The Natural World: Explore the natural world around them, making observations and drawing pictures of animals and plants Know some similarities and differences between the natural world around them and contrasting environments, drawing on their experiences and what has been read in class;</p>	<p>Changes I understand that living things can change. I describe what I see, hear and feel whilst exploring inside and outside. Living things - Animals I can examine animals and their habitats to find out more about them. I use my senses to explore. Living things - Conservation I can show care and respect for living things. Changes I understand through books and making close observations that living things can change. Living things - Animals I can use the correct basic scientific vocabulary to describe parts of animals.</p>	<p>Nursery: pond, garden, woodland, seaside, Reception: Habitat, wild, wildlife, native, woodland, desert, ocean, seaside jungle, Arctic, Microhabitats, log, stone, tree, leaves, soil, pond, garden, river, stones, rocks, logs,</p>

	<p>I can explain a simple lifecycle, E.g., butterfly, chicks, or frogs.</p> <p>I can talk about what plants need to survive and grow healthily.</p> <p>I can explain where a range of animals live. Describing habitats and some microhabitats.</p> <p>I make close observations of animals in the natural world. I make comparisons and identify similarities and differences.</p> <p>I understand through books and observations that animals change, and I explain a range of lifecycles.</p> <p>Living things - Conservation</p> <p>I can show care and respect for living things and the environment in which they live.</p>	
<p>Investigate materials</p> <p>3 and 4 year olds will be learning to:</p> <p>Understanding the world: Use all their senses in hands-on exploration of natural materials.</p> <p>Explore collections of materials with similar and/or different properties.</p> <p>Talk about the differences between materials and changes they notice.</p> <p>Working towards meeting ELG:</p> <p>The Natural World: Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter.</p>	<p>Changes</p> <p>I show awareness of change, as I can talk about the differences between materials and changes that I notice using simple terms to describe.</p> <p>I understand that materials can change.</p> <p>I describe what I see, hear and feel whilst exploring inside and outside.</p> <p>Materials</p> <p>I can explore collections of different materials with similar and different properties.</p> <p>I can name some common materials, e.g. sand, wood, glass, brick, clay, fabric etc with adult support.</p> <p>I can describe and make comparisons between materials. I can talk about the changes to materials that I notice.</p> <p>Changes</p> <p>I understand through books and making close observations that materials can change.</p> <p>Materials</p> <p>I can name some common materials, e.g. sand, wood, glass, brick, clay, fabric.</p> <p>I can use language to describe common features of materials, e.g. colour, texture, size</p> <p>I can experiment with making changes to materials.</p> <p>I can ask and answer 'how' and 'why' questions, such as how things happened and how things work.</p> <p>I choose how I can classify objects according to their properties.</p>	<p>Nursery: wood, metal, plastic, paper, cardboard,</p> <p>Reception: Wood, metal, plastic, paper, card board, water, float and sink, waterproof and not waterproof, strong and weak, hard, soft, recycle, not recyclable, melting, glass, water, rock, brick, fabric, materials, shiny, dull, stretch, bend, twist, squash, Pollution, recycle, rubbish, environment, community.</p>

<p>Understand movement, forces and magnets 3 and 4 year olds will be learning to: Understanding the world: Explore how things work. Explore and talk about different forces they can feel.</p>	<p>Forces and Movement I can explore how things work, and I can talk about 'contact' forces such as pushes and pulls. I can explore 'non-contact' forces such as gravity or magnetism. I describe what I see, hear and feel whilst exploring inside and outside.</p> <p>Forces and Movement I notice links between cause and effect as I explore changes such as speed, direction, shape or magnetism. I can describe and make comparisons.</p>	<p>Nursery: Magnets, push, pull</p> <p>Reception: Magnets, forces, pushed, pulled, force, push, pull, move, movement,</p>
<p>Understand the Earth's movements in space Children in reception will be learning to: Understand the effect of changing seasons on the natural world around them. Working towards meeting ELG: The Natural World: Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter.</p>	<p>Seasonal Change I can talk about some natural features that I see and feel during different seasons, including different weather. I can talk about the clothes that I need for different seasons/ weather and why.</p> <p>Seasonal Change I can name the four seasons. I can order the four seasons. I can describe about how the seasons can affect the natural world and how things grow. e.g. acorns and conkers are found in autumn and some trees have no leaves in winter. I notice and describe seasonal weather patterns. I can ask and answer 'how' and 'why' questions.</p>	<p>Nursery: Space, earth, moon,</p> <p>Reception: Space, earth, moon, name of the planets, shadows, Seasons, winter, spring, summer, autumn, weather, sun, rain, snow, wind, cold, warm, hot, day length, day light</p>
<p>Other areas of the EYFS that Science will enable the children to work towards meeting in reception will be: Understanding the world: Describe what they see, hear and feel whilst outside. Communication and language Engage in non-fiction books. Listen to and talk about selected non-fiction to develop a deep familiarity with new knowledge and vocabulary. Use talk to help work out problems and organise thinking and activities explain how things work and why they might happen</p> <p>Other areas of the EYFS that Science will enable the children to work towards meeting ELGs: Listening, Attention & Understanding: Listen attentively and respond to what they hear with relevant questions, comments and actions when being read to and during whole class discussions and small group interactions; Make comments about what they have heard and ask questions to clarify their understanding; Hold conversation when engaged in back-and-forth exchanges with their teacher and peers. Speaking: Participate in small group, class and one-to-one discussions, offering their own ideas, using recently introduced vocabulary; Offer explanations for why things might happen, making use of recently introduced vocabulary from stories, non-fiction, rhymes and poems when appropriate; Express their ideas and feelings about their experiences using full sentences, including use of past, present and future tenses and making use of conjunctions, with modelling and support from their teacher. Self-Regulation: Show an understanding of their own feelings and those of others, and begin to regulate their behaviour accordingly; Give focused attention to what the teacher says, responding appropriately even when engaged in activity, and show an ability to follow instructions involving several ideas or actions. Managing Self: Be confident to try new activities and show independence, resilience and perseverance in the face of challenge;</p>		

Building Relationships: Show sensitivity to their own and to others' needs.

Writing: Write recognisable letters, most of which are correctly formed;

Spell words by identifying sounds in them and representing the sounds with a letter or letters;

Write simple phrases and sentences that can be read by others.

Creating materials: Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function;

What you might see children doing

- Sharing knowledge linked to scientific interests.
- Sharing books about the world, weather, the environment, growing, the human body etc.
- Talking about how we can look after our planet.
- Investigating how different materials can be used and changed.
- Growing plants from seeds and caring for plants.
- Talking about how we can look after our planet.
- Exploring how materials can be changed through cooking activities.
- Closely observing minibeasts and animals.
- Noticing and talking about the changing seasons.
- Investigating objects which float and sink during water play.
- Using basic scientific vocabulary.
- Explaining how they things will work or what will happen.
- Investigating and talking about how things change over time, for example, as ice melts.
- Showing interest in and learning about life cycles.
- Recording the local weather.
- Recreates animal habitats through creative activities or role play.
- Representing science based learning in writing and creative and digital mediums.
- Starting to record scientific data using tallies and numerical/pictorial representations.
- Exploring how their body works during exercise.
- Investigating how magnets work by using magnetic construction kits.
- Using all their senses to explore food

Green = 3 and 4-year-olds

Blue = Reception

Black = ELG