



Science Medium Term Plan

Intent	At Talavera Infant School we aim to provide a rich and hands-on science curriculum that fosters curiosity and a fascination about the world around us and both the living and non-living things within it. It is our intention that the National Curriculum objectives are met in a meaningful and relevant way, with topics building carefully upon the skills and knowledge gained in previous lessons. We intend for children to learn science through being scientists; for their experiences to mirror how science works in the 'real world'. We achieve this by following a 'problem-solving' approach where children learn new and valuable ideas and skills whilst tackling engaging questions. Sequences of learning begin with teachers posing exciting and thought-provoking questions before imparting just enough scientific knowledge for children to then explore and investigate these questions confidently. Scientists investigate questions they are not sure about and we believe it is critical that our children do the same, so as to foster excitement, a sense of wonder and to encourage deeper thinking. We want all our children to become confident observers, capable of planning and carrying out careful measurements and fair tests, then use these skills to analyse their own evidence and draw conclusions. We believe this type of scientific experience will give our learners the chance to discover, have fun and make better sense of the world in which they live.
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Reception Goals	Early Learning Goals Knowledge and Understanding of the World. 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. Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter. Educational Programme Understanding the world involves guiding children to make sense of their physical world and their community. The frequency and range of children's personal experiences increases their knowledge and sense of the world around them – from visiting parks, libraries and museums to meeting important members of society such as police officers, nurses and firefighters. In addition, listening to a broad selection of stories, non-fiction, rhymes and poems will foster their understanding of our culturally, socially, technologically and ecologically diverse world. As well as building important knowledge, this extends their familiarity with words that support understanding across domains. Enriching and widening children's vocabulary will support later reading comprehension
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	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Reception	- Children learn about their familiar environment and make observations of the school grounds and natural world - Children explore different textures and materials using vocabulary to describe them We make observations of the school grounds and look at the seasonal change as we move into Autumn. We learn about different materials exploring what objects are made of such as metal, wood and plastic. We describe their properties and learn the vocabulary of hard, soft, smooth and rough	- Children learn about their familiar environment and make observations of the school grounds and natural world - Children learn about different changing states such as water and ice, the mud kitchen We make observations of the school grounds and look at the seasonal change as we move into Winter and then Spring. We notice the difference and changes to the natural world in this time. We observe the differences in changing states exploring ice and water.	- Children learn about their familiar environment and make observations of the school grounds and natural world - Children learn about different changing states such as water and ice, the mud kitchen We make observations of the school grounds and look at the seasonal change as we move into Winter and then Spring. We notice the difference and changes to the natural world in this time. We observe the differences in changing states exploring ice and water.	- Children learn about their familiar environment and make observations of the school grounds and natural world looking and naming different animals - Children observe, learn about and notice the changes in the life cycle of a butterfly - Children learn about the different parts of a plant and make observations of them growing We make observations and go on bug hunts around the school grounds. We observe the growth and changes of our caterpillars, watching them grow to butterflies. We grow plants from seeds and learn all about the animals we see at the farm.		



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Year 1	Science Focus: Longitudinal Study Objective To identify and name the plants/trees in our local area (school grounds) To identify deciduous and evergreen trees - Observe changes across the four seasons and the effect on plants and trees - Observe and describe weather associated with the seasons and how day length varies Making tables and charts about the weather - Making displays of what happens in the world around them as the seasons change. Length of the day Gather and record data (table) Key Vocab: Seasons, Spring, Summer, Autumn, Winter, Evergreen, Deciduous, Hibernating	Science Focus: How animals survive Objective To identify and name a variety of common animals including fish amphibians, reptiles, birds and mammals To know that animals need food to survive To understand that all animals are different and eat different foods (carnivore, omnivore, herbivore) To name the five senses and say which part of the body they are associated with To describe how animals protect themselves to stay alive Observing closely Identifying and classifying Performing simple test Testing senses Jelly Key Vocab: Carnivore, Herbivore, omnivore, fish, amphibian, reptile, birds, mammals	Science Focus: Materials Objective To distinguish between an object and the material from which it is made To identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock To describe the simple physical properties of a variety of everyday materials To compare and group together a variety of everyday materials on the basis of their simple physical properties. Gather and record data (table) Performing simple test Strongest Waterproof Key Vocab: Metal, rock, fabric, wood, plastic, glass, bendy, hard, soft, smooth, rough, waterproof, strong	Science Focus: Pushes and Pulls Objective To understand how objects move in different ways. To examine how different objects move by pushing and pulling. To understand that we can change the speed and direction of an object with a force. To predict how different materials can affect forces. To investigate how different materials effect forces. To investigate how far your car can travel Asking simple questions Gathering and recording data Performing simple test Key Vocab: pushing, pulling, slow down, speed up, change direction	Science Focus: Plants Objective To know a plant grows from a seed or a bulb To name the different parts of a plant. To understand that plants need water, light and warmth to grow healthily. To know what are the best conditions for their seeds to grow. To investigate how much water a plant needs. Observing closely Gathering and recording data Identifying and classifying Using observations and ideas to suggest answers to questions Performing simple tests Key Vocab: leaves, seed, bulb, growth, warmth, flowers, petals, roots, trunk, branches, stem	Science Focus: Classifying animals Objective To identify and name a variety of common animals including fish amphibians, reptiles, birds and mammals To describe and compare the structure of common animals (fish, amphibians, reptiles, birds and mammals including pets) Identifying and classifying Observing closely Gathering and recording data to answer questions Key Vocab: fish, amphibian, reptile, birds, mammals, fly, swim, wings, fins, feathers, fur



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	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 2	Science Focus: Longitudinal study and habitats To understand that the changing seasons have an effect on plants, which has an impact on the animals that feed on them To compare the differences between things that are living, dead, and things that have never been alive To 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 To identify and name a variety of plants and animals in their habitats, including microhabitats Observing closely using simple equipment Identifying and classifying Key vocab: Habitat, Micro habitat, Food Water, Shelter, Living Dead, Non -Living	Science Focus: Changing materials To know materials that have similar properties are grouped into metals, rocks, fabrics, wood, plastic, ceramics (including glass) To identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses To investigate the properties of a material to determine whether they are suitable for a purpose. Observing closely Gathering data/comparing Performing simple tests Grouping and Classifying Key vocab: Absorbent, Insulation, Investigate, Experiment, Suitable, Properties, Evidence, A lot, Some, None	Science Focus: Animal lifelines To know that animals, including humans, have offspring which grow into adults To describe the basic needs of animals, including humans, for survival (water, food and air) To describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene. Performing simple tests – humans Key vocab: Offspring Grow, Adult, Reproduce Baby, Toddler, Child Teenager, Egg, Duckling Duck, Tadpole, Frog Adult spawn, Caterpillar Pupa, Butterfly	Science Focus: Longitudinal study and habitats To observe and consider what type of conditions a woodlouse might prefer based on what they know about habitats To 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. To understand that Living things are adapted to survive in different habitats. Observe and record habitat Key vocab: Adaptation Hibernation, Migration Food chain, Predators Prey, Carnivores, Herbivores, Omnivores Storing food, Seasons	Science Focus: New Plants and Longitudinal study To identify and describe the basic structure of Plants (Retrieve) To know that flowering plants make seeds that grow into new plants To understand that plants need, water light and a suitable temperature to stay healthy Observe and record habitat Key vocab: Shoot Leaves, Stem, Roots Petals, Plant, flower Germinate, Bulb Seed, Life cycle Seed dispersal	Science Focus: Investigating materials To identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses by identifying their properties To investigate the properties of a material to determine whether they are suitable for a purpose. To know the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching Key vocab: Absorbent, bendy Bounciest, brittle Fabric, flexible, fragile Stretchiness, stretchy stretchiest, twisty, investigate, properties experiment, evidence



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