The Mead Infant & Nursery School – Science Subject Progression Tracker

Science is part of the Early Years 'Understanding the World' Cuirriculum area. Please see separate Understanding the World Subejct Progression Tracker for key obejctives from the Understanding the World objectives and Early Learning Goals. Science is also present in other areas of the Early Years Curriculum, such as Physical Development through the exploration of healthy eating and looking after our bodies. Science is also present in Communication and Language which supports children in developing their vocabulary, reasoning skills and ability to ask questions which supports the children to work scientifically. Below are objectives from across all areas of the Early Years Curriculum that support early scientific enquiry development and development of key knowledge.

Science Subject Progression Tracker				
Red – additional objectives Blue – Mead topic	Nursery **See Understanding the World Progression Tracker**	Reception **See Understanding the World Progression Tracker**	Year 1 National Curriculum	Year 2 National Curriculum
Working Scientifically	***Asking Questions:*** Asking intentional questions. ***Observing and using equipment:*** Using their senses and talking about what they notice using a wide vocabulary. Exploring scientific equipment. ***Performing simple tests:*** Exploring how things work. Enquiry and exploring in the moment, supported by an adult helping them with planning and resources. ***Identifying and classifying:*** Spotting key features when making comparisons. ***Gathering and recording data:*** Representing findings with concrete resources, purposeful mark making and phpotographs. ***Using their observations and ideas to suggest answers to questions:*** Using talk to organise their thinking. talking about what they observed and how they found it out.	***Asking Questions:*** Using the 'why' question in context ***Observing and using equipment:*** Using scientific equipment more precisely and using some scientific vocabulary when describing what they notice. ***Performing simple tests:*** Adult supporting the planning process and chn choosing resources required from a selection. ***Identifying and classifying:*** Making comparisons and identifying similarities and differences. ***Gathering and recording data:*** Drawing, recording their observations verbally on taking tins and taking photographs. ***Using their observations and ideas to suggest answers to questions:*** Referring to recorded evidence and making comparisons including more detail.	***Asking Questions:*** Questions are more enquiry based. Recognise that questions can be answered in different ways. ***Observing and using equipment:*** Observing closely and knowing how to make careful measurements using scientific equipment. ***Performing simple tests:*** More independent planning and chn resourcing their own investigation and measuring with support. ***Identifying and classifying:*** Naming, sorting, classifying objects, materials and living things. ***Gathering and recording data:*** Making tally charts and simple graphs. ***Using their observations and ideas to suggest answers to questions:*** Explaining why some things occur and talk about changes using scientific vocabulary.	***Asking Questions:*** Questions relate to investigating in different ways and starting to consider variables. ***Observing and using equipment:*** Choosing equipment for a particular purpose and making precise measurements. ***Performing simple tests*:** Chn to plan, measure and resource a test with more independence, considering variables with support. ***Identifying and classifying:*** Sorting and grouping objects, materials and living things. ***Gathering and recording data:*** Written forms, tables and diagrams. ***Using their observations and ideas to suggest answers to questions:*** Noticing patterns and start to make relationships based on recorded data.

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Plants	• Plant seeds and care for growing plants. • Understand the key features of the life cycle of a plant • Begin to understand the need to respect and care for the natural environment and all living things.	• Explore the natural world around them. • Describe what they see, hear, and feel whilst outside.	• identify and name a variety of common wild and garden plants, including deciduous and evergreen trees – autumn walk to identify trees • identify and describe the basic structure of a variety of common flowering plants, including trees.	• 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.
Animals including humans	• Understand the key features of the life cycle of an animal. • Make healthy choices about food, drink, activity and toothbrushing.(PSED)	• Know and talk about the different factors that support their overall health and wellbeing: o regular physical activity o healthy eating o toothbrushing o sensible amounts of 'screen time' o having a good sleep routine • being a safe pedestrian (PSED) • **Manage their own basic hygiene and personal needs, including dressing, going to the toilet and understanding the importance of healthy food choices. (PSED)**	• identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals • Identify and name a variety of common animals that are carnivores, herbivores and omnivores – exploring animals from different continents • describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets) identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense	• 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. Life cycles / Healthy food
Every day materials / uses of materials	• Explore collections of materials with similar and/or different properties. • Talk about the differences between materials and changes they notice. • Explore and talk about different forces they can feel.	• **Understand some important processes and changes in the natural world around them, including changing states of matter.**	• distinguish between an object and the material from which it is made • identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock • describe the simple physical properties of a variety of everyday materials	• identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses – material walk around school • Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.

			• compare and group together a variety of everyday materials on the basis of their simple physical properties. Experiment with different materials waterproof flexibility strength & transparency & use knowledge to make a kite	Suitability Investigation – linked to London topic, building a London landmark
Seasonal changes		• Describe what they see, hear and feel while they are outside. • Understand the effect of changing seasons on the natural world around them. • **Understand some important processes and changes in the natural world around them, including the seasons and changing states ofmatter.**	• observe changes across the four seasons • observe and describe weather associated with the seasons and how day length varies. Seasonal walks & weather reports using symbols	
Living things & their habitats	• Make healthy choices about food, drink, activity and toothbrushing. • Begin to understand the need to respect and care for the natural environment and all living things.	• Describe what they see, hear and feel while they are outside. • Recognise some environments that are different to the one in which they live. • **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.**		• 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 micro-habitats • 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. Arctic animal topic