Race Leys Infant School Science Progression

Science Long Term plan- Skills progression

Area	EYFS	Year 1	Year 2
Knowledge	**ELG – Know about similarities and differences in relation to places, objects, materials and living things. Talk about features of their own immediate environment and how environments might vary from one another. Make observations of animals and plants and explain why some things occur, and talk about changes.** **Children know about similarities and differences in relation to:** • Places • Objects • Materials • Living things **Changes** • The season • The weather • materials	**Animals, including humans** • 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 • 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 **Plants** • Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees • Identify and describe the basic structure of a variety of common flowering plants, including trees **Everyday materials** • 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 objects	**Animals, including humans** • 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, air) • Describe the importance for humans of exercising, eating the right amounts of different types of food, and hygiene **Plants** • 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 **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 • Find out how the shapes of solid objects made from some materials can be changed

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		• Compare and group together a variety of everyday materials on the basis of their simple physical properties **Seasonal changes** • Observe changes across the four seasons • Observe and describe the weather associated with the seasons and how day length varies	by squashing, bending, twisting and stretching **Living things and their habitats** • 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
Skills	**Ask simple questions** Comments and asks questions about aspects of their familiar world such as the place they live or the natural world. Ask questions about why things happen. Ask questions and make predictions based on observations. **Observe closely using simple equipment** Talk about why things happen. Explore and recognise features of living things. Explore and	**Ask simple questions** Ask simple questions stimulated by their exploration of their world. Begin to know that questions can be answered in different ways. Talk about what they are exploring or trying to find out. Notice a change and find out what will happen to something if it is left for a longer time. **Observe closely using simple equipment** Make observations of animals and plants. Explain why some things occur, and talk about changes. Observe closely using all senses.	**Ask simple questions** Ask relevant questions. Ask questions designed to help place things in groups based on similar observable or behavioural features. Know that questions can be answered in different ways. Recognise when a simple comparison or test is unfair. Suggest how to collect the identified data needed. Make a simple prediction when appropriate (based on something similar they have observed previously). Recognise they will need to make observations or measurements over a longer time and predict possible patterns and outcomes. **Observe closely using simple equipment** Make careful observations of animals and plants. Take accurate measurements using standard and non-standard measures. Explain why some things occur,

	use senses to investigate objects and materials. Recognise how things work. Explore changes. **Perform simple tests** Explore through play **Identify and classify** Begin to compare similarities and differences. Look closely at similarities, differences, patterns and change. Say similarities and differences between animals, objects and materials. Talk about simple changes. **Use observations and ideas to suggest answers to questions** Talk about some of the things they have observed such as plants, animals, natural and found objects. Draw a conclusion based on an investigation. Begin to solve problems. Start to make links and notice patterns. **Gather and record data to help in answering questions** Choose to record in their own way talking about what it shows. Place things in sorting hoops based on their own sorting criteria. Talk about any changes that happened during the investigation that the recording shows.	**Perform simple tests** Carry out a simple comparative test or exploration comparing 2 or 3 things by direct observation or comparison. Measure using non-standard measures. Be introduced to standard measures for temperature, mass, length **Identify and classify** Match things and organisms that are the same. Identify things and organisms that are similar. Identify differences between things and organisms. Begin to sort using observations of similarities and differences using their own criteria. **Use observations and ideas to suggest answers to questions** Say what happened. Say if something seems to have made a difference. Make comparisons and order results (1st, 2nd and 3rd). Explain why they have put things and organisms in the same group. **Gather and record data to help in answering questions** Choose to record in their own way talking about what it shows. Place things in sorting hoops based on their own sorting criteria. Talk about any changes that happened during the investigation that the recording shows.	and talk about changes. Observe closely using all senses. **Perform simple tests** Measure using simple measuring equipment in uniform non-standard units (e.g. straws) or simple standard units such as metre sticks, kg masses, L jugs and second timers. Change what is done to see how the outcome is changed. Read scale to the nearest labelled division. **Identify and classify** Make comparisons to group similar things or organisms together. Classify things into two groups so that one group (containing things or organisms) has an observable feature the other doesn't. Sort using observations of similarities and differences using their own criteria. **Use observations and ideas to suggest answers to questions** Describe observations and data. Describe patterns. Say what they have found out and whether it was what was expected. Identify which groups an object and organism should be placed in. Describe how things or organisms have been sorted. Describe simple changes and say whether the change was expected if predicted. **Gather and record data to help in answering questions** Draw pictures/take photos/write simple sentences/complete two column tables/complete tally charts. Make practical block graphs (e.g. using Lego) or pictograms with a 1:1 scale. Draw a block graph with a 1:1 scale. Record appropriately using tables, sorting

			circles and simple Venn diagrams to help distinguish sets of similar things or organisms.