



Science Skills Progression

Subject:	Science	Subject Leader/s:	Catherine Cutler, Sarah Rumbol, Maya Harwood, Roisin Burns, Fiona McManus
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Aspect	Key Stage 1		Lower Key Stage 2		Upper Key Stage 2	
	End of Y1 expectation	End of Y2 expectation	End of Y3 expectation	End of Y4 expectation	End of Y5 expectation	End of Y6 expectation
Electricity						
Identifying and naming	Identify and discuss things that use electricity			Identify and name a variety of familiar devices and equipment that need electricity for power.		Identify and name components of a circuit and define terms, such as voltage and current in relation to series circuits.
Series Circuits		Create working circuits in the context of D and T (Eg lighting a bulb/working a buzzer)		Construct operational simple series circuits, using a range of components and switches for control and use these to make simple devices.		Work scientifically to construct a series circuit for a specific device or outcome and explain how it works.
Circuit symbols				Predict if a circuit will work based on whether it is a complete loop and draw simple circuits using own or traditional symbols.		Draw a series circuit using the conventional circuit symbols.
Current and Voltage				Recognise that a cell (battery) is a power source, generating and pushing current (electricity) through		Describe the relationship between the number or voltage of cells and the effect it has on a

				a circuit and by adding cells the power increases.		buzzer or bulb.
Conductors and Insulators				Sort and classify materials into those that are conductors and those that are insulators identifying similarities within the groups.		Predict materials that could be good conductors of electricity and conduct a fair test to show this.
Safety	Recognise that electricity can be dangerous	Identify dangerous scenarios from pictures or video clips	Create rules that show an understanding of electrical safety requirements in the home.	Recognise the dangers of working with electricity and explain how to work safely.		Demonstrate how to work safely with electrical circuits.
Earth and Space						
Identifying and naming					Name the eight planets in the solar system and describe their position and movement relative to the sun and neighbouring planets.	
Moons					Describe what a moon is, how they maintain an orbit around a planet and which planets in our solar system have them.	
Spherical bodies					Describe the key force responsible for planets being spherical	
Day and Night					Explain day and night using the Earth's rotation, correct terminology and a model if	Compare times in other parts of the world and relate this to the use of timezones.

					required	
Day length and the seasons					Explain how the Earth's 'position' affects the length of a day.	Explain how the day length changes to a greater or lesser degree in other parts of the world eg Arctic or equatorial regions.
Plants						
Identifying and naming	Identify and name common flowers and trees found growing in the local area.	Identify what eats plants as a food source and recognise simple food chains.	Identify and describe the functions of common plant parts. Explain how their structure is suited to their function (eg roots are long and branched to provide good anchorage).	Identify and name a wide variety of plants in the local and a contrasting environment from their physical appearance.	Identify the key structures in plant sexual reproduction.	Identify plants which have survived on Earth for millions of years and how we know this.
Classification	Sort trees into groups to show those that are evergreen and those that are deciduous.	Sort seeds and bulbs into groups according to their physical features.	Sort and classify a range of seeds into broad dispersal methods, such as wind (dandelion), water (coconut) or animal (yew)	Use classification keys to classify plants into groups such as flowering or non-flowering plants, compound or palmate or single blade leaves.	Classify plant types according to how they reproduce.	Devise classification keys to identify plants in the immediate environment. Give reasons for classification and understand the significance of scientists' work from study.
Plant parts and their functions	Identify the basic structural parts of common flowering plants and trees including root, stem,	Describe the different plant parts and give examples of different foods that we eat which are taken from these plants eg rhubarb (stem) carrot (root)	Draw a simple diagram to show how water is transported through plant.	Identify uncommon specialised plant parts such as tendrils and suckers and explain their functions.	Explain why plants have flowers and why it is important for them to attract insects and other pollinators	Research and describe similarities and differences between petals, leaves, stamen and stigma on a variety of plants found in the locality and elsewhere.
Habitats and adaptations	Identify their locality as a habitat for living things	Explain how plants are suited to their habitats and give examples of plants	Compare and describe how requirements for growth vary from	Describe how a plant's habitat may naturally change throughout the year	Describe features of flowers such as scent, colour, shape, and size, and how they	Describe how plants have adapted and ultimately evolved to suit their

		growing in different habitats.	plant to plant and how this relates to a plants environment such as with climbing and alpine plants.	and how plants adapt to these changes.	have evolved to ensure successful pollination.	environments using specific examples.
Growth and survival	Care for a growing seedling, observing and describing its growth	Describe how plants grow identifying what a plant needs for healthy growth and survival.	Recognise that plants make their own food necessary for growth and survival storing it in their leaves	Explain how humans can impact on a plant's environment in both positive and negative ways giving examples from their locality.	Describe the different ways in which new plants can be grown from the parent plant including seeds, bulbs, tubers, cuttings and grafting.	Suggest why some plants have survived over time and some have not.
Life cycles	Identify the seeds as a part of a plant that makes a whole new plant.	Recognise that plants produce seeds in order to reproduce and generate new plants.	Order pictures showing the stages in the life cycle of a plant.	Draw a labelled diagram to show the life cycle of a familiar plant including germination, flower production, pollination, seed formation and seed dispersal.	Describe the process of plant reproduction using t correct scientific language. Observe /comment on/record plant life cycles.	Define the terms 'annual' 'biennial' and 'perrenial', describing differences in life cycles and identifying plants of each type.
Seasonal Changes	Describe how plants change over time including seasonal changes (leaves falling off, new buds opening)	Describe how bulbs help plants to grow in winter.	Allocate different stages of a plant's life cycle to different seasons suggesting reasons why the stages occur in a familiar tree or plant over the seasons.	Describe in detail the changes that occur in a familiar tree or plant over the seasons.	Grow a range of plants/vegetables from seeds, cuttings, tubers and bulbs across the different seasons and note the conditions needed for successful growth.	Identify relationships between the seasons and a typical plant life cycle using observations from the school environment.
Comparisons	Name compare and contrast familiar plants according to their observable features.	Make comparisons between seeds or bulbs grown in different conditions (eg with and without light and water).	Compare and explain the effect of different factors on plant growth including light and nutrition.	Compare plants growing in a local habitat to those in a contrasting one such as a cacti in the desert and notice how they are adapted.	Make comparisons between asexual and sexual reproduction plants suggesting reasons why plants may reproduce in different ways.	Compare native plants with non-native plants and determine whether non- native plants can be classified in the same way as native plants.