



EWELL GROVE PRIMARY AND NURSERY SCHOOL

SCIENCE – SUMMER 3A AND 3B



Plants	Plants	Plants	Plants	Plants	Electricity	Earth and space	Electricity
To develop an understanding of growth, decay and changes overtime.	To make observations of plants; explain why some things occur and talk about changes.	To identify and name a variety of common wild and garden plants, including deciduous and evergreen trees.	To observe and describe how seeds and bulbs grow into mature plants.	To identify and describe the functions of different parts of flowering plants. To explore the part that flowers play in the life-cycle of flowering plants, including pollination, seed formation and seed dispersal.	To identify common appliances that use electricity. To construct a simple series electrical circuit, identifying and naming the basic parts, including cells, wires, bulbs, switches and buzzers.	To describe the movement of the Earth and other planets relative to the Sun in the solar system.	To associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit.
Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Can name a range of plants found in immediate locality.	Can observe growth and change in plants over a period of time, days, and weeks or over the year.	Can name 10 common flowers and plants found around school and the local environment.	Can match different plants to whether they are grown from a seed or a bulb.	Can identify and name parts of a flowering plant. (roots, trunk/stem, leaves and flowers) Can make the connection between plant part and purpose, i.e. roots and stem for nutrition and support, leaves for nutrition and flowers for reproduction.	Can identify common appliances that run on electricity. Can identify common appliances that run on electricity stored in a battery. Can compare batteries according to voltage.	Can explain how the Sun is the centre of our solar system and that there are 8 planets in our solar system (Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus and Neptune)	Can compare the bulb ratings of different bulbs and link to brightness. Can compare voltages for different batteries and appliances.
Can demonstrate care and concern for plants.	Can investigate growing different plants from seed, bulb or cutting.	Can name the trees within the Orchard. Can name orchard, forest and copse	Can sort and recognise different seeds (e.g. sunflower, runner bean, poppy, sycamore...)	Can locate the named parts of a plant in a range of plants.	Can make a simple closed circuit and name the components used.	Can explain that "moon" relates to a celestial body that orbits a planet. (Earth has one	Can associate the brightness of a lamp or the volume of a buzzer with the number and voltage



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				Can explain the role and function of the named parts.	Can use recognised symbols when representing a simple circuit in a diagram.	moon, Jupiter has four moons)	of cells used in a circuit.
Can observe growth and change in plants over a period of time, days, and weeks or over the year.	Can name the features of a flowering plant.	Can identify and describe deciduous and evergreen trees across a year. Can observe a variety of changes across the four seasons.	Can sequence images showing the growth from a bulb/seed of a plant. Can sort and identify plants according to how long they will take to mature.	Can use scientific language to describe the life process of reproduction in plants including pollination, seed formation and dispersal.	Can associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit.	Can explain that the Sun is a star and that there are other stars in our Galaxy and other galaxies in the Universe.	Can use measurements of volts, battery and bulb ratings to explain differences in output.



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Living things and habitats		Plants	Plants	Plants	Electricity	Earth and space	Electricity
Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
To explore and talk about some of the things they have observed in the natural environment. To show care and concern for living things and the environment.	To look closely at similarities, differences, patterns and change. To make observations; explain why some things occur and talk about changes.	To identify and describe the basic structure of a variety of common flowering plants, including trees.	To find out and describe how plants needs water, light and a suitable temperature to grow and stay healthy.	To investigate the way in which water is transported within plants.	To recognise some common conductors and insulators and associate metals with being good conductors.	To use the idea of the Earth's rotation to explain day and night and the apparent movement of the Sun across the sky.	To use recognised symbols when representing a simple circuit in a diagram.
Can name a range of minibeasts.	Can describe minibeasts e.g. features; how they move and what they eat.	Can identify and name some parts of plants	Can explore varying the access to water/light/heat of different plants. Can identify how some plants have adapted to survive through drought or intermittent rainfall.	Can explore how plants take in water.	Can explore different materials for use as conductors /insulators using simple low voltage circuits. Can name some common conductors and insulators.	Can use a model to explain how the Sun and Earth move relative to each other creating day and night.	Can create a simple series circuit by following a circuit diagram.
Can explore and talk about microhabitats.	Can talk about life cycles and the changes that occur.	Can identify and describe the basic structure of a variety of common flowering plants including trees.	Can explore impact of position of light source on growth of a plant.	Can investigate the way in which water is transported within plants (carnation and coloured water)	Can talk about the hazards of working with electricity and demonstrate this awareness through safe working practices.	Can explain how day and night length varies throughout the year. Can link tilt of the Earth to seasons in different hemisphere.	Can use recognised symbols for representing a series circuit.
Can describe minibeasts e.g. features; how they move and what they eat.	Can identify similarities, differences, patterns and change when	Can identify and use scientific vocabulary to describe the basic structure of	Can explain how seeds and bulbs require different growing conditions due to the nature of	Can use scientific language to describe transpiration in plants. (plant in a sealed plastic bag)	Can identify where conductors and insulators are used and explain why they are needed.	Can explain how the absence of day/night occurs in different places around the Earth.	Can draw accurate diagrams for circuits using a range of recognisable symbols.



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	exploring minibeasts.	a variety of common flowering plants including trees	internal food storage.				
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		Seasonal change	Plants	Plants	Electricity	Earth and space	Electricity
		To observe changes over the 4 seasons. To observe and describe weather associated with the 4 seasons.	To know how some plants reproduce.	To explore the requirements of plants for life and growth and how they vary from plant to plant.	To identify whether or not a lamp will light in a simple series circuit, based on whether or not the lamp is part of a complete loop with a battery. To recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit.	To describe the movement of the Moon relative to the Earth. To describe the Sun, Earth and Moon as approximately spherical bodies.	To compare and give reasons for variations in how components function, including the brightness of bulbs, the loudness of buzzers and the on/off position of switches.
		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
		Can name the 4 seasons in order and know which season they are currently experiencing.	Can describe the life cycle of a dandelion, noting the formation of the flower and the production of a seed head.	Can recognise the need for air, light, water, nutrients from the soil and room to grow, as conditions for growth for a plant.	Can talk about how a switch can be used to change a circuit.	Can use models to compare and describe the approximate shape of the Sun, Earth and Moon.	Can recognise that a switch opens or closes a circuit and link this to whether the bulb will light or not.
		Can describe the changes across the year to the trees in the Orchard.	Can make a cutting from a plant and observe the development of roots.	Can explore the requirements for plants to grow; how they vary from plant to plant through practical exploration.	Can associate whether a switch is open or closed with whether a bulb will light up or not.	Can explain how the phases of the Moon relate to its apparent shape.	Can make a parallel circuit with more than one bulb/buzzer. Can explain the difference between



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							a series and a parallel circuit.
		Can associate temperature, rainfall and strength of the sun to different seasons. Can link seasonal change to position of the Earth relative to the Sun.	Can find out about plants that self-divide in order to reproduce.	Can identify causal relationships between amounts of plant growth and the conditions they have experienced.	Can use a switch in a simple circuit to control the working of a motor or a buzzer.	Can use scientific language to describe the phases of the moon and the impact of these on the Moon's apparent shape.	Can compare and give reasons for variations in how components function in simple series and parallel circuits. (there is no expectation for Year 6 to learn about parallel circuits)

Working Scientifically

Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<p>Talk about things that have been observed and experienced. Talk about why things happen and how things work. Use a developing vocabulary to describe similarities and differences. Record findings through photographs and drawing.</p>	<p>Can observe closely using magnifying glasses, comparing and contrasting familiar plants.</p> <p>Can observe and record how plants have changed over time; leaves falling off the trees and buds opening.</p> <p>Can use observations and ideas to suggest answers to questions.</p>	<p>Can sort and classify using given criteria and record using charts.(seeds and bulbs) Can justify sorting using criteria.</p> <p>Can observe and record the growth of two plants that have different rates of growth.</p>	<p>Can compare the effect of different factors on plant growth, e.g. amount of light, water, and fertiliser.</p> <p>Can compare the shape and formation of different seeds from different plants.</p> <p>Can observe the differing stages of plant life cycles over time.</p> <p>Can look for patterns in the structure of fruits that relate to seed dispersal.</p>	<p>Can observe patterns, e.g. bulbs get brighter if more cells are added.</p> <p>Can test and record which materials make effective conductors and insulators.</p>	<p>Can find out about geocentric model of the solar system and how this changed due to a heliocentric model by considering the work of scientists such as Ptolemy, Alhazen and Copernicus.</p> <p>Can compare the time of day across the Earth.</p> <p>Can construct simple shadow clocks and sundials.</p> <p>Can consider views of others relating to</p>	<p>Can design and make a circuit involving a motor to generate movement.</p> <p>Can design and make a set of traffic lights, burglar alarm.</p> <p>Can systematically identify the effect of changing components within a circuit.</p>	



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					the use of Stonehenge for an astronomical clock.	
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