Fen Ditton C. P. School

Science Coverage for Years 4 and 5
2021 - 2022
National Curriculum Statements

ANGLIAN LEARNING

1½ - 2 hour weekly sessions.	Term 1	Term 2	Term 3	Continuous Provision (Working Scientifically)
Week 1	**Year 4 *Living things and their Habitats*** Recognise that living things can be grouped in a variety of ways.	**Year 4 *Living things and their Habitats*** *(Y4) Recognise that environments can change and that this can sometimes pose dangers to living things.	**Year 5 *Living things and their Habitats*** *(Y5) Describe the life process of reproduction in some plants and animals.	**Year 4** • Ask relevant questions and using different types of scientific enquiries to answer them. • Set up simple practical enquiries, comparative and fair tests. • Make systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers. • Gather, record, classify and present data in a variety of ways to help in answering questions. • Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts,
Week 2	**Year 4 *Living things and their Habitats*** Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment.	**Year 5 *Living things and their Habitats*** *(Y5) Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird.	***Consolidation Week*** *Use/move as needed.*	
Week 3	**Year 4 *Animals, including Humans*** *(Y4) Describe the simple functions of the basic parts of the digestive system in humans. Identify the different types of teeth in humans and their simple functions.	**Year 4 *Animals, including Humans*** *(Y4) Construct and interpret a variety of food chains, identifying producers, predators and prey.	**Year 5 *Animals, including Humans*** Describe the changes as humans develop to old age.	
Week 4	**Year 4 *States of Matter***	**Year 4 *States of Matter***	**Year 4 *States of Matter***	

	Compare and group materials together, according to whether they are solids, liquids or gases.	*(Y4) Observe that some materials change state when they are heated or cooled, and measure or research the temperature at which this happens in degrees Celsius (°C).	*(Y4) Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.	and tables. • Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions. • Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions. • Identify differences, similarities or changes related to simple scientific ideas and processes. • Use straightforward scientific evidence to answer questions or to support their findings. **Year 5** • Plan enquiries, including recognising and controlling variables where necessary. • Use appropriate techniques, apparatus, and materials during fieldwork and laboratory
Week 5	**Year 5 *Properties and change of materials*** *(Y5) Compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets.	**Year 5 *Properties and change of materials*** *(Y5) Know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution.	**Year 5 *Properties and change of materials*** *(Y5) Demonstrate that dissolving, mixing and changes of state are reversible changes. *(Y5) Explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda.	
Week 6	**Year 5 *Properties and change of materials*** *(Y5) Give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic.	**Year 5 *Properties and change of materials*** *(Y5) Use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating.	**Year 5 *Properties and change of materials*** *(Y5) Explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda.	
Week 7	**Year 4 *Sound***	**Year 4 *Sound***	**Year 4 *Sound***	

	*(Y4) Identify how sounds are made, associating some of them with something vibrating. *(Y4) Recognise that vibrations from sounds travel through a medium to the ear.	*(Y4) Find patterns between the pitch of a sound and features of the object that produced it. *(Y4) Find patterns between the volume of a sound and the strength of the vibrations that produced it	*(Y4) Recognise that sounds get fainter as the distance from the sound source increases.	work. • Take measurements, using a range of scientific equipment, with increasing accuracy and precision. • Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, bar and line graphs, and models. • Report findings from enquiries, including oral and written explanations of results, explanations involving causal relationships, and conclusions. • Present findings in written form, displays and other presentations. • Use test results to make predictions to set up further comparative and fair tests. • Use simple models to describe scientific ideas, identifying scientific evidence that has been used to support or refute ideas or arguments.
Week 8	**Year 4 *Electricity*** Identify common appliances that run on electricity. Construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers.	**Year 4 *Electricity*** 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. Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit.	**Year 4 *Electricity*** Recognise some common conductors and insulators, and associate metals with being good conductors.	
Week 9	**Year 5 *Earth and Space*** Describe the movement of the Earth, and other planets, relative to the Sun in the solar system. Describe the movement of the Moon relative to the Earth.	**Year 5 *Earth and Space*** *(Y5) Describe the Sun, Earth and Moon as approximately spherical bodies.	**Year 5 *Earth and Space*** *(Y5) Use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky.	
Week 10	**Year 5 *Forces*** *(Y5) Explain that unsupported objects fall towards the Earth	**Year 5 *Forces*** *(Y5) Identify the effects of air resistance, water resistance	**Year 5 *Forces*** *(Y5) Recognise that some mechanisms, including levers,	

	because of the force of gravity acting between the Earth and the falling object.	and friction that act between moving surfaces.	pulleys and gears, allow a smaller force to have a greater effect.	

	Autumn Term	Spring Term	Summer Term
Possible Investigation Ideas	*Possible Ideas:* Model the Digestive System (orange juice and crackers demonstration). Test and group a range of materials based on their properties.	*Possible Ideas:* Model changes to the environment, e.g. the Crown of Thornes Starfish and the Great Barrier Reef, through Drama Games. Test the solubility of materials. Investigate suitable materials to make switches.	*Possible Ideas:* Complete reversible changes by heating and cooling. Investigate the volume of sound compared to distance. Design a Thermos to keep a drink warm or cool by testing insulating materials.