

The Whitchurch CE Federation

The Inquisitive Me

Subject Overview Science

Year Group	Autumn Term		Spring Term		Summer Term	
1	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
	<p><u>Key Concepts</u> <u>Physics</u> <u>Polar places</u> -properties of materials -living things</p>	<p><u>Key Concepts</u> <u>Chemistry</u> <u>Celebrations</u> Investigate materials Physics Investigate light and seeing Work scientifically</p>	<p><u>Key Concepts</u> <u>Biology</u> <u>On Safari</u> Understand plants Investigate living things Work scientifically</p>	<p><u>Key Concepts</u> <u>Biology</u> <u>Who am I?</u> Understand animals and humans Investigate living things Work scientifically</p>	<p><u>Key Concepts</u> <u>Biology</u> <u>Plants and animals</u> Understand plants Investigate sound and hearing Work scientifically</p>	<p><u>Key Concepts</u> <u>Chemistry</u> <u>Holiday</u> Investigate materials Work scientifically</p>
	<p>Breadth Identify and name a variety of animals including fish, amphibians, reptiles, birds and mammals. Identify and name common animals that are carnivores, herbivores and omnivores. Describe and compare the structure of a variety of common animals. Describe the simple properties of a variety</p>	<p>Breadth Identifying materials - Name and group materials by property. Science Discovery day: Light and Dark Reflections</p>	<p>Breadth -Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees. - 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</p>	<p>Breadth Parts of animals including humans, human senses</p>	<p>Breadth Basic structure of common flowering plants, including trees. Science discovery day – Sound</p>	<p>Breadth Comparing materials - investigate properties of materials). Link to DT</p>

	of everyday materials. Compare and group together a variety of everyday materials on the basis of their simple properties		and omnivores. -Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets).			
2	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
	<u>Key Concepts</u> <u>Biology</u> <u>Healthy Me</u> Investigate living things Work scientifically	<u>Key Concepts</u> <u>Chemistry</u> <u>Squash, Bend, Twist and Stretch</u> Investigate materials Work scientifically	<u>Key Concepts</u> <u>Chemistry</u> <u>Material Monster</u> Investigate materials Work scientifically	<u>Key Concepts</u> <u>Biology</u> <u>Young Gardeners</u> Understand plants Investigate light and seeing Investigate sound and hearing Work scientifically	<u>Key Concepts</u> <u>Biology</u> <u>Our Local Environment</u> Understand animals and humans Work scientifically	<u>Key Concepts</u> <u>Biology/ working scientifically</u> <u>Little Masterchefs</u> Identify and classify Observe closely, using simple equipment Perform simple tests, using their observations and ideas to suggest answers to questions. Gather and record data to help answer questions.
	Breadth Feeding and exercise	Breadth Investigate materials	– Changing shapes Breadth Investigate Materials – Use of materials Links to D & T – practical uses of everyday materials – properties.	Breadth Growing plants Growth of seeds and bulbs grow into mature plants Basic requirements of life.	Breadth Habitats – basic needs of animals – plant and animal identification.	Breadth Find out about and describe the basic needs of humans for survival (water, food and air). Describe the importance for humans of eating the right amounts of different types of food, and hygiene. Observe and describe how seeds and bulbs grow into mature plants. Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses.

3	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
	Key Concepts Chemistry Investigate materials Work Scientifically	Key Concepts Biology Understand animals and humans including investigations Work Scientifically	Key Concepts Physics Investigate light and seeing Work Scientifically	Key Concepts Biology Understand plants Work Scientifically	Key Concepts Physics Understand movement, forces and magnets Work Scientifically	Key Concepts Working Scientifically
	Breadth Rocks and Soils – Classification, Fossil formation	Breadth Design a diet plan and explain the effects on skeletons and muscle.	Breadth Light and shadows and shadow puppets	Breadth Functions of parts of a flowering plant. Explore the requirements of a plant for life. Investigate the ways water is transported in plants.	Breadth Forces and magnets	Breadth The Nappy Challenge This topic looks at disposable nappies and provides opportunities for children to ask their own questions and make decisions on how to answer their questions using different scientific enquiry activities.

4	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
	Key Concepts Physics Investigate sound and hearing. Work Scientifically	Key Concepts Biology Investigate living things Work Scientifically	Key Concepts Chemistry Investigate materials Work Scientifically	Key Concepts Biology Understand animals and humans including investigation Work Scientifically	Key Concepts Physics Understand electrical circuits Work Scientifically	Key Concepts Working Scientifically
	Breadth Investigate sound and hearing	Breadth Group and identify a variety of living things.	Breadth Compare and group materials according to Their properties and set up experiments to change between the states.	Breadth Understand teeth and the digestive system in humans Compare and contrast human adaptations with gorillas.	Breadth Understand electric circuits Investigate simple circuits. Carry out investigations to make a light shine brighter.	Breadth In this topic, children learn about building towers and bridges, starting with constructing tall towers, then exploring bridges, next they look at animals as builders and finally engage in researching famous engineers and architects and the structures they built. They will use and develop working scientifically skills and understanding

					Learn about safety aspects of electricity.	though comparative and fair tests, measuring, repeat readings and drawing and reading bar and line graphs.
5	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
	Key Concepts Physics Understand the Earth's movement in space Work Scientifically	Key Concepts Chemistry Investigate materials Work Scientifically	Key Concepts Biology Understand animals and humans Investigate living things Work Scientifically	Key Concepts Physics Understand movement, forces and magnets Work Scientifically	Key Concepts Physics Understand movement, forces and magnets Work Scientifically	Key Concepts Biology Understand animals and humans Investigate living things Work Scientifically
	Breadth Describe movement of Earth, planets and moon. Explain day and night. Understand seasons and hemispheres of Earth	Breadth Solids, liquids and gases Reversible and irreversible changes Understand difference between solution and mixture Separate solutions and mixtures Comparative and fair testing	Breadth Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird Describe the life process of reproduction in some <u>plants</u> and animals.	Breadth Levers and pulleys Pushes and pulls Balanced and unbalanced forces	Breadth Gravity Air resistance Water resistance Friction	Breadth Describe the changes as humans develop to old age Human reproductive organs Understand life cycles
6	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
	Key Concepts Biology Investigate living things Work scientifically	Key Concepts Biology Understand animals and humans Investigate living things	Key Concepts Biology Understand evolution and inheritance Work scientifically	Key Concepts Physics Understand light and seeing Work scientifically	Key Concepts Electricity Understand electrical circuits Work scientifically	Key Concepts Working Scientifically The Titanic – floating/sinking/human survival needs
	Breadth Living Things and Habitats - classification	Breadth To understand animals and humans - circulatory and respiratory systems of the body. Importance of diet, exercise, drugs and lifestyle	Breadth Evolution including dinosaurs Fossils Inherited characteristics Adaptation	Breadth Investigate refraction, light travelling in a straight line. How we see things.	Breadth -Making and testing circuits (series and parallel) -drawing circuit diagrams -Include switches, buzzers etc	Children engage in a different approach to their science in this topic. They use their science and link it to an historical event in context; the sinking of the Titanic. This topic is based around applying the working scientifically skills that they have learned so far in their science lessons, to explore some of the scientific concepts behind the

						Titanic, e.g. floating and sinking. It can be used as a good opportunity to embed, assess and observe working scientifically skills, as well as laying foundations for transition to KS3 science
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