

Science: Overview / Long term plan 2021-2022.



Working scientifically: Observation over time (OT), Pattern seeking (PS), Identifying, classifying and grouping (ICG), Comparative and fair testing (CFT), Research using secondary sources (RSS).

	8 weeks	8 weeks	8 weeks	3 weeks / 4 weeks	7 weeks
YEAR 1	Animals Including Humans (Topic)	Seasonal Changes (Autumn to Winter)	Everyday Materials	Seasonal Changes (Spring to Summer)	Plants
	Topic page/What I Know	Topic page/What I Know	Topic page/What I Know	Topic page/What I Know	Topic page/What I Know
	I can draw my body and label my body parts. TT5	I can describe how the weather changes across the seasons. TT1	I can identify and name different materials. TT2	I can describe how day length varies from winter to spring. TT2	I can write instructions to describe how to plant a bean.
	I know which parts of my body I use to see, hear, taste, smell and feel. TT5	I can observe and describe the weather in autumn. TT2	I can name the materials which specific objects are made from. TT1	I can observe and describe the weather in spring. TT2	I can identify and name common wild plants. TT1
	I can use my senses to do tests and to answer questions.	I can identify signs of autumn.	I can describe the properties of everyday materials. TT3	I can identify signs of spring. <hr/> Plants: 7 weeks	I can identify and name some garden plants. TT1
	I can identify and sort animals into groups. TT1	I can describe how day length varies from autumn to winter. TT2	I can identify which materials have certain properties.	I can describe how day length varies from spring to summer. TT2	I can identify trees by their leaves. I can sort deciduous and evergreen leaves.
	I can describe and compare common animals. TT4	I can observe and describe the weather in winter. TT2	I can test different materials by dropping water onto them, in a fair way.	I can observe and describe the weather in summer. TT2	I can identify and describe the parts of plants and trees. TT2
	I can name and sort some animals that are carnivores, herbivores and omnivores. TT2 TT3	I can explain how some animals adapt in winter.	I can sort objects by their properties. TT4	I can explain how to stay safe in the sun.	I can say what plants need to grow well and give reasons for my answers.
	What I remember End of unit test	What I remember	What I remember End of unit test	What I remember End of unit test	What I remember End of unit test

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	8 weeks	8 weeks	8 weeks	7 weeks	7 weeks
YEAR 2	Living Things and Their Habitats (Autumn objects)	Uses of Everyday Materials	Animals Including Humans	The Environment (Cafod /Lenten term)	Plants
	Topic page/What I Know	Topic page/What I Know	Topic page/What I Know	Topic page/What I Know	Topic page/What I Know
	I can compare the differences between things that are living, dead and have never been alive. TT1	I can identify uses of different everyday materials.	I can describe how animals change as they grow. TT1	I can measure the melting of ice in a comparative test.	I can look closely at plants and trees and record what I see. TT1
	I can classify objects as those that are living, dead and that have never been alive. TT1	I can identify and group the uses of everyday materials.	I can name the different stages in the human timeline.	I can sort items for recycling based on their materials.	I can plant seeds and bulbs and suggest how to care for them. TT1
	I can identify animals in their habitats. TT3	I can compare the suitability of different everyday materials. TT1	I can describe the basic needs of humans and animals. TT2	I can think of a way to teach people to use less energy.	I can explain the life cycle of plants.
	I can describe a habitat and identify animals live in it. TT3	I can tell you four ways the shapes of some objects can be changed. TT2	I can identify healthy and unhealthy food and say how much of them I should eat. TT3	I can ask and answer questions about the rainforest.	I can explain what plants need to grow well. TT2
	I can explain how living things in a habitat depend on each other. TT2	I can explain the process of recycling.	I can give reasons why humans need to exercise. TT3	I can accurately measure water and record my measurements.	I can describe what plants need to grow and stay healthy. TT2
	I can use a food chain to show how animals get their food. TT4	I can explain how John McAdam's invention has impacted on life today.	I know how and why I should keep myself clean.	I can ask and answer questions about endangered animals.	I can observe and describe the growth of different plants. TT2
	What I remember End of unit test	What I remember End of unit test	What I remember End of unit test	What I remember	What I remember End of unit test

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	8 weeks	8 weeks	8 weeks	7 weeks	7 weeks
YEAR 3	Animals Including Humans	Forces and Magnets	Rocks	Light	Plants
	Topic page/What I Know Spellings	Topic page/What I Know Spellings	Topic page/What I Know Spellings	Topic page/What I Know Spellings	Topic page/What I Know Spellings
	I can explain how living things obtain food. TT1	I can say when there is a push or a pull acting on an object. TT2	I can name the three different types of natural rocks. TT1	I can explain that I need light to see things, and that dark is the absence of light. TT1	I can name the different parts of flowering plants and explain their jobs. TT1
	I can explain what the right amount of nutrients are. TT1	I can investigate the effects of friction on different surfaces. TT1	I can group rocks based on their properties. TT1	I can investigate which surfaces reflect light. TT2	I can set up an investigation to find out what plants need to grow well. TT2
	I can name the three different types of skeletons. TT2	I can sort magnetic and non-magnetic materials. TT2 TT4	I can explain how fossils are formed. TT2	I can use a mirror to reflect light and explain how mirrors works.	I can present the results of my investigation using scientific language. TT2
	I can identify and name the main bones in the body. TT2	I can investigate the strength of magnets.	I can understand why Mary Anning's fossil findings were important.	I can explain the benefits and dangers of the sun. TT3	I can investigate how water is transported in plants. TT3
	I can identify and explain the three main functions of a skeleton. TT2	I can look at poles to say whether two magnets will attract or repel each other. TT5 TT6	I can describe the 4 processes of soil formation. TT3	I can investigate which materials block light to form shadows. TT4	I can identify the different parts of a flower. TT1
	I can explain how muscles allow movement and can identify pairs of muscles in the body. TT2	I can explain that magnets attract some materials. TT3	I can observe how much water has filtered through different types of soil.	I can plan and set up an investigation about the way shadows change size. TT5	I can understand the processes of seed dispersal, pollination, fertilisation and germination. TT4
	What I remember Spelling test End of unit test	What I remember Spelling test End of unit test	What I remember Spelling test End of unit test	What I remember Spelling test End of unit test	What I remember Spelling test End of unit test

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	8 weeks	8 weeks	8 weeks	7 weeks	7 weeks
YEAR 4	Living Things and Their Habitats	Animals Including Humans	States of Matter	Sounds	Electricity
	Topic page/What I Know Spellings	Topic page/What I Know Spellings	Topic page/What I Know Spellings	Topic page/What I Know Spellings	Topic page/What I Know Spellings
	I can sort and group living things in a range of ways. TT1	I can identify and name parts of the human digestive system. TT1	I can sort materials into solids, liquids or gases. TT1	I can identify and describe sound sources around school. TT1	I can explain that there are different types of electricity.
	I can identify vertebrates by observing their similarities and differences. TT1	I can explain the functions of the digestive system. TT1	I can investigate gases and explain their properties.	I can explain how different sound travels. TT2	I can identify electrical appliances and the types of electricity they use. TT1
	I can use a key to identify invertebrates. TT2	I can identify the types and functions of teeth. TT2	I can investigate the melting and freezing temperature of a material. TT2	I can explore ways to change the pitch of a sound. TT3	I can identify complete and incomplete circuits. TT2 TT3
	I can show the characteristics of living things in a table and a key. TT2	I can ask scientific questions and create an enquiry to answer them.	I can identify the temperatures at which water changes state. TT2	I can identify how sounds change over distance. TT5	I can identify and sort materials into electrical conductors or insulators. TT5
	I can identify dangers to wildlife in the environment and suggest how to have a positive effect on it. TT3	I can record my findings using appropriate scientific language.	I can explain the effect of temperature on the process of evaporation.	I can explain how different sounds travel. I can investigate ways to absorb sound. TT4	I can explain how a switch works and why they are needed. TT4
	I can describe environmental dangers to endangered species. TT3	I can construct and interpret food chains and food webs. TT3	I can explain the role of evaporation and condensation in the water cycle. TT3	I can make a musical instrument to play different sounds.	I can record and report on an investigation.
	What I remember Spelling test End of unit test	What I remember Spelling test End of unit test	What I remember Spelling test End of unit test	What I remember Spelling test End of unit test	What I remember Spelling test End of unit test

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	8 weeks	8 weeks	8 weeks	7 weeks	7 weeks
YEAR 5	Living Things and Their Habitats	Forces	Earth and Space (moon diary)	Properties and Changes of Materials	Animals Including Humans (RSE)
	Topic page/What I Know Spellings	Topic page/What I Know Spellings	Topic page/What I Know Spellings	Topic page/What I Know Spellings	Topic page/What I Know Spellings
	I can describe how some plants reproduce. TT2	I can identify and explain the different forces acting on objects.	I can explain why we know the Sun, Earth and Moon are spherical. TT3	I can compare materials according to their properties. TT1	I can describe the stages of human development. TT1
	I can identify advantages and disadvantages to sexual and asexual reproduction in plants. TT2	I can explain the effect of gravity on unsupported objects. TT1	I can order, name and describe features of the planets in our solar system. TT1	I can investigate thermal conductors and insulators. TT1	I can explain how babies grow and develop. TT1
	I can describe the life cycles of different mammals. TT2	I can plan and conduct an investigation into the effects of air resistance. TT2	I can explain how planets move in our solar system. TT1	I can identify electrical conductors and insulators. TT1	I can describe and explain the main changes that occur during puberty. TT1
Properties and Changes of Materials	I can explain what Jane Goodall discovered about chimpanzees.	I can explore and explain the effects of water resistance. TT2	I can explain day and night and the apparent movement of the sun across the sky. TT4	I can investigate materials which will dissolve. TT2	I can identify the changes that take place in old age. TT1
TT4: Give reasons based on evidence from comparative test for particular use of everyday materials including metal, wood and plastic	I can explain metamorphosis and give examples. TT2	I can investigate the effects of friction created by different materials. TT2	I can investigate night and day in different parts of the Earth.	I can use different processes to separate mixtures of materials. TT2 TT3 TT5	I can report findings from enquiries and written explanations in the context of the gestation period for animals.
	I can compare the life cycles of plants, mammals, amphibians, insects and birds. TT1	I can explain how different mechanisms work. TT3	I can explain the movement and phases of the Moon. TT2	I can identify and explain irreversible chemical changes. TT6	I can record complex data using graphs and models.
	What I remember Spelling test End of unit test	What I remember Spelling test End of unit test	What I remember Spelling test End of unit test	What I remember Spelling test End of unit test	What I remember Spelling test End of unit test

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	8 weeks	8 weeks	8 weeks	7 weeks	7 weeks
YEAR 6	Living Things and Their Habitats	Animals Including Humans	Electricity	Evolution and Inheritance	Light
	Topic page/What I Know Spellings	Topic page/What I Know Spellings	Topic page/What I Know Spellings	Topic page/What I Know Spellings	Topic page/What I Know Spellings
	I can give reasons for classifying animals based on their similarities and differences. TT2	I can identify and name the parts of the human circulatory system. TT1	I can explain the importance of the major discoveries in electricity. TT1	I can identify inherited characteristic that are passed on from parent to offspring. TT2	I can explain that light travels in straight lines from light sources to our eyes. TT1 TT3
	I can describe how living things are classified into groups. TT1	I can describe the functions of the main parts of the circulatory system. TT1	I can recognise and draw scientific circuit symbols. TT3	I can demonstrate understanding of the scientific meaning of adaptation. TT3	I can understand how mirrors reflect light, and how they can help us see objects. TT1 TT2
	I can identify the characteristics of different types of animals. TT1	I can explain how water and nutrients are transported within the body. TT3	I can observe and explain the effects of differing voltages in a circuit. TT1	I can identify the key ideas of the theory of evolution.	I can investigate how refraction changes the direction in which light travels.
	I can describe and investigate helpful and harmful microorganisms. TT1	I can describe how diet and exercise impact on human bodies. TT2	I can understand variations in how components function. TT2	I can identify evidence for evolution from fossil records. TT1	I can investigate how a prism changes a ray of light to show the spectrum.
	I can identify the characteristics of different types of microorganisms. TT1	I can record, report and present results appropriately.	I can record my data and report my findings.	I can compare modern humans with members of the same genus and family.	I can explain what Isaac Newton discovered about colour.
	I can identify the characteristics of different groups of organisms. TT1	I can explain the impact of drugs, alcohol and smoking on the body. TT2	I can differentiate between series and parallel circuits.	I can explain how human intervention affects evolution.	I can explain why shadows have the same shape as the object that casts them. TT4
	What I remember Spelling test End of unit test	What I remember Spelling test End of unit test	What I remember Spelling test End of unit test	What I remember Spelling test End of unit test	What I remember Spelling test End of unit test