



Spreyton School Science Overview

As we a very small school at Spreyton we have a unique challenge to ensure that all children make progress at their own level, and have a pathway through our curriculum that supports their learning at an appropriate level for their year group, while being taught in a class with 4 year groups.

In Science we follow the grammarsaurus curriculum. We have looked closely at the national curriculum and linked lower key stage 2 unit with upper key stage 2 units which are taught simultaneously to the whole class which is split into 2 groups, upper and lower KS2. We have done this for all units where there is knowledge that builds progressively through the key stage. Other units where children only encounter the knowledge once in the key stage are taught to the whole class, but with skills applied which are appropriate for the age of the children, taken from our working scientifically documents for lower and upper key stage 2. In Ks1 we operate a 2 year rolling programme through the Y1 and 2 units, with EYFS objectives fitting into these topics as appropriate.

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
KS1 Year A	Animals including humans 1 <ul style="list-style-type: none"> - What are our body parts called? - What are senses? - Are all humans the same? 	Animals, including humans 1 (6) <ul style="list-style-type: none"> - What is this animal? - How are animals different? - Do all animals eat the same thing? Seasonal changes 1 (2) <ul style="list-style-type: none"> - What is Autumn? - What is Winter? 	Everyday Materials 1 (6) <ul style="list-style-type: none"> - What are materials? - How are materials different? - What are objects made from? - How can we sort materials? - Which material would be best for an umbrella? - Which material would be best for curtains? 	Seasonal changes 1 (1) <ul style="list-style-type: none"> - What is Spring? 	Seasonal changes 1 (3) <ul style="list-style-type: none"> - What is Summer? - Rain Seasonal changes	Plants 2 (5) <ul style="list-style-type: none"> - Which plants can we eat? - Are all seeds the same? - What do plants need? - Where will they grow? - How do plants grow and change?

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<p>EYFS</p>	<p>Look at the similarities between myself and my classmates.</p> <p>Learn about body parts and the 5 senses.</p> <p>EYFS Knowledge and Understanding of the world</p> <p>Explore what they see hear and feel when they are outside.</p> <p>Talk about members of their immediate family and community</p> <p>Begin to make sense of their own life story and family history.</p>	<p>Learn the names of different animals.</p> <p>Look at the features of some animals.</p> <p>EYFS Knowledge and Understanding of the world</p> <p>Recognise the effect of changing seasons on the natural world around them.</p> <p>Recognise some similarities and differences between life in this country and life in other countries.</p> <p>Recognise that some environments are different to the one in which they live.</p> <p>Use all their senses in hands on exploration of natural materials</p> <p>Know there are different countries in the world and talk about the differences they have experienced or seen in photos.</p>	<p>Explore different materials</p> <p>Discuss the texture of different materials</p> <p>Use different materials in model making activities.</p> <p>EYFS Knowledge and understanding of the world</p> <p>Use all their senses in hands on exploration of natural materials</p> <p>Explore collections of materials with similar and/or different properties</p> <p>Talk about what they see, using a wide vocabulary</p> <p>Talk about the differences between materials and changes they notice</p>	<p>EYFS Knowledge and Understanding of the World</p> <p>Recognise the effect of changing seasons on the natural world around them.</p>	<p>EYFS Knowledge and Understanding of the World</p> <p>Recognise the effect of changing seasons on the natural world around them.</p>	<p>Understand the key features of the life cycle of a plant and an animal.</p>
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<p>KS1 Year B</p>	<p>Animals including humans 2 (8)</p> <ul style="list-style-type: none"> - What do humans need? - What are offspring? - How do animals change as they grow into adults? - Do we all grow the same? - Do we need to exercise? - What is a healthy diet? - Why do we need to have good hygiene? - How can we feel better when we are ill? 	<p>Materials 2 (5)</p> <ul style="list-style-type: none"> - What are materials? - What are things made from? - Which material should the pigs make their house from? - Which material will protect Humpty Dumpty? - How can we change materials 	<p>Living things and their habitats 2 (6)</p> <ul style="list-style-type: none"> - Is it living, dead or never been alive? - What is a microhabitat? - How are habitats different around the world? - What conditions do woodlice prefer? - How are living things adapted to their habitat? - What is a food chain? <p>Plants 1 (8)</p> <ul style="list-style-type: none"> - What is a plant? - What are the parts of a plant called? - Do plants grow? - Do wild plants grow in our local area? - How can we group plants? - Can we eat plants? - Are trees a type of plant? - What is a leaf? 	
<p>EYFS</p>	<p>Talk about members of their immediate family and community.</p> <p>Name and describe people who are familiar to them.</p> <p>Explore what they see hear and feel when they are outside.</p> <p>Begin to make sense of their own life story and family history</p>	<p>Explore different materials</p> <p>Discuss the texture of different materials</p> <p>Use different materials in model making activities.</p> <p>Use all their senses in hands on exploration of natural materials</p> <p>Explore collections of materials with similar and/or different properties</p> <p>Talk about what they see, using a wide vocabulary'</p> <p>Talk about the differences between materials and changes they notice</p>	<p>Explore the natural world around them.</p> <p>Familiarise children with the name of the road, and or village/town/city the school is located in.</p> <p>Begin to understand the need to respect and care for the natural environment and all living things.</p>	<p>Explore the natural world around them.</p> <p>Plant seeds and care for growing plants.</p> <p>Understand the key features of the life cycle of a plant and an animal.</p>

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<p>KS2 Year A</p>	<p>Electricity 4 (5) Physics</p> <ul style="list-style-type: none"> - Which appliances use electricity? - How can I make a simple circuit? - Why don't some circuits work? - How can we test if a material is a conductor or an insulator? - How do switches affect a circuit? <p>Electricity 6 – Physics</p> <ul style="list-style-type: none"> - How do I draw a scientific diagram of a circuit? - How does voltage in a circuit affect the brightness of a bulb? - How do I plan a fair test experiment to investigate variations in how components function? - How do I write a conclusion for my investigation? - What is renewable and non-renewable energy? 	<p>Forces 5 (6) - Physics</p> <ul style="list-style-type: none"> - What is gravity? - What is friction? - Friction investigation - Identify the effects of air resistance - What is water resistance? - Gears, levers and pulleys <p>Magnets 3 (6) - Physics</p> <ul style="list-style-type: none"> - What is a force? - Do objects move the same on different surfaces? - How do magnetic forces work? - Which materials are magnetic? - Do magnets attract each other? - Are all magnets the same strength? 	<p>Earth and space 5 (6) – Physics</p> <ul style="list-style-type: none"> - What are the names of the planets in the solar system? - How do we know the Earth is a sphere? - How long does it take for Earth (and other planets) to orbit the Sun once? - What is the largest object that orbits the Earth? - Why is there day and night on Earth? - Does the Moon change shape? 	<p style="text-align: center;">-</p>	<p>Animals including Humans 4 (5) - Biology</p> <ul style="list-style-type: none"> - What is the digestive system? - Why are teeth different shapes? - What drink causes the most tooth decay? - How can I construct a food chain? 	<p>Living things and their habitats 4 (6) - Biology</p> <ul style="list-style-type: none"> - What are the seven life processes? - How can we sort and group animals? - What are vertebrate animals? - Which living things can be found in the local area? - What is a classification key? - How is our environment changing? - Living things and their Habitats 6 (6) - Biology - How are animals classified? - What is a classification key? - How can we classify plants? - Is yeast a living microorganism? - What are the five main groups of microorganisms? - Who was Carolus Linnaeus?
<p>KS2 Year B</p>	<p>3/4 Light 3 (6) – Physics</p> <ul style="list-style-type: none"> - What is a light source? - What is reflected light? - Is the Sun dangerous? - What is a shadow? - Does moving the light source above the object make the object's 	<p>Sound 4 (7) Physics</p> <ul style="list-style-type: none"> - How are sounds made? - What is a sound vibration? - What is inside your ear? - Does the size of the pinna affect the volume of the sound? 	<p>3/4 -Rocks and soils 3 (6) - Chemistry</p> <ul style="list-style-type: none"> - What are rocks? - Are all rocks the same? - How are rocks formed? - Which rocks make up the Earth? - What are soils? 	<p>3/4States of Matter 4 (7) - Chemistry</p> <ul style="list-style-type: none"> - What are solids, liquids and gases? - Do all liquids behave the same? - What is a thermometer used for? 	<p>¾ - Living things 5 (6) - Biology</p> <ul style="list-style-type: none"> - What are the seven life processes? - How do mammals reproduce? - Do animals reproduce in the same way? 	<p>Animals including humans 3 (5) - Biology</p> <ul style="list-style-type: none"> - How does our skeleton help us? - Do our bones affect what we can do? - What do our muscles do?

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	<ul style="list-style-type: none">- shadow longer?- How do mirrors work? <p>5/6 Light 6 (5) - Physics</p> <ul style="list-style-type: none">- How does light travel?- Which materials make the best reflectors?- How does the eye work?- How do shadows change during the day?- Why do objects look different in water?- How do mirrors work?	<ul style="list-style-type: none">- What is pitch?- What is volume?- Which material is best at muffling sound?	<ul style="list-style-type: none">- How are fossils formed <p>Evolution 6 (6) - Biology</p> <ul style="list-style-type: none">- How are plants adapted to their environment?- How are animals adapted to their environment?- What is natural selection, how does this lead to evolution?- How do adaptations lead to evolution?- What characteristics can you inherit from your parents?- How can fossils help us explain evolution?	<ul style="list-style-type: none">- How do materials change state?- What is the water cycle?- Do all liquids evaporate?- Does temperature affect the rate of evaporation? <p>Materials 5 (7) – Chemistry</p> <ul style="list-style-type: none">- What are the properties of solids, liquids and gases?- How can I describe the properties of materials?- Which materials make the best thermal insulators?- Which materials are magnetic?- Which materials are soluble, and which are insoluble?- How can mixed materials be separated?- What is irreversible changes?	<ul style="list-style-type: none">- How do plants reproduce?- What is a lifecycle?- What are the stages in the lifecycle of a plant?	<ul style="list-style-type: none">- Do all animals have the same skeleton?- What types of nutrition do we need?
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KS2 Year C	<p>Electricity 4 (5) Physics</p> <ul style="list-style-type: none">- Which appliances use electricity?- How can I make a simple circuit?- Why don't some circuits work?- How can we test if a material is a conductor or an insulator?- How do switches affect a circuit? <p>Electricity 6 – Physics</p> <ul style="list-style-type: none">- How do I draw a scientific diagram of a circuit?- How does voltage in a circuit affect the brightness of a bulb?- How do I plan a fair test experiment to investigate variations in how components function?- How do I write a conclusion for my investigation?- What is renewable and non-renewable energy?	<p>Animals including humans 5 (4) - Biology</p> <ul style="list-style-type: none">- How do humans change throughout their life?- How do we develop in the womb?- How do we change through puberty?- How do we change when we are senior?		<p>Living things and their habitats 4 (6) - Biology</p> <ul style="list-style-type: none">- What are the seven life processes?- How can we sort and group animals?- What are vertebrate animals?- Which living things can be found in the local area?- What is a classification key?- How is our environment changing? <p>Living things and their Habitats 6 (6) - Biology</p> <ul style="list-style-type: none">- How are animals classified?- What is a classification key?- How can we classify plants?- Is yeast a living microorganism?- What are the five main groups of microorganisms?- Who was Carolus Linnaeus?	<p>Plants 3 (6) - Biology</p> <ul style="list-style-type: none">- What do plants need?- Do the different parts of the plant have a function?- What are roots?- How do plants transport water?- How do plants reproduce?- How are seeds dispersed?	<p>Magnets 3 (6) - Physics</p> <ul style="list-style-type: none">- What is a force?- Do objects move the same on different surfaces?- How do magnetic forces work?- Which materials are magnetic?- Do magnets attract each other?- Are all magnets the same strength? <p>Forces 5 (6) - Physics</p> <ul style="list-style-type: none">- What is gravity?- What is friction?- Friction investigation- Identify the effects of air resistance- What is water resistance?- Gears, levers and pulleys
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<p>KS2 Year D</p>	<p>3/4 States of Matter 4 (7) - Chemistry</p> <ul style="list-style-type: none"> - What are solids, liquids and gases? - Do all liquids behave the same? - What is a thermometer used for? - How do materials change state? - What is the water cycle? - Do all liquids evaporate? - Does temperature affect the rate of evaporation? <p>Materials 5 (7) - Chemistry</p> <ul style="list-style-type: none"> - What are the properties of solids, liquids and gases? - How can I describe the properties of materials? - Which materials make the best thermal insulators? - Which materials are magnetic? - Which materials are soluble, and which are insoluble? - How can mixed materials be separated? - What is irreversible changes? 	<p>Animals including humans Heart and Blood 6 (6) - Biology</p> <ul style="list-style-type: none"> - What is the circulatory system? - How does our heart work? - How does exercise affect my heart rate? - What does the blood transport around the body? - How can I live a healthy lifestyle? - What can damage our health? 		<p>3/4 Light 3 (6) - Physics</p> <ul style="list-style-type: none"> - What is a light source? - What is reflected light? - Is the Sun dangerous? - What is a shadow? - Does moving the light source above the object make the object's shadow longer? - How do mirrors work? <p>5/6 Light 6 (5) - Physics</p> <ul style="list-style-type: none"> - How does light travel? - Which materials make the best reflectors? - How does the eye work? - How do shadows change during the day? - Why do objects look different in water? - How do mirrors work? 	<p>3/4 -Rocks and soils 3 (6) - Chemistry</p> <ul style="list-style-type: none"> - What are rocks? - Are all rocks the same? - How are rocks formed? - Which rocks make up the Earth? - What are soils? - How are fossils formed <p>5/6 Evolution 6 (6) - Biology</p> <ul style="list-style-type: none"> - How are plants adapted to their environment? - How are animals are adapted to their environment? - What is natural selection, how does this lead to evolution? - How do adaptations lead to evolution? - What characteristics can you inherit from your parents? - How can fossils help us explain evolution? 	
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