

Science Curriculum Map

	Autumn		Spring		Summer	
Year 1	Seasonal Changes part 1	Animals, including humans Part 1	Everyday materials	Plants Seasonal changes part 2	Animals, including humans part 2	Seasonal Changes pt 3
Year 2	Animals, including humans Observe Plants across the year	Animals, including humans Observe Plants across the year	Uses of everyday materials	Observe Plants across the year	Plants	Living things and their habitats
Year 3	Rocks	Light	Animals, including humans	Animals, including humans	Plants	Forces and magnets
Year 4	Sound	Electricity	Animals, including humans	Animals, including humans	Living things and their habitats	States of matter
Year 5	Living things and their habitats	Animals, including humans	Properties and changes of materials	Properties and changes of materials	Earth and space	Forces
Year 6	Animals, including humans	Evolution and inheritance	Light	Electricity	Living things and their habitats	Living things and their habitats

Working Scientifically Skills Progression

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Questioning, enquiring and planning					
<ul style="list-style-type: none"> • Ask simple questions about the world around us. • Begin to recognise that they can be answered in different ways (different types of enquiry including - observing changes over time, noticing patterns, grouping and classifying, carrying out simple comparative tests, finding things out from secondary sources). • I can ask a few simple questions about the world around us. • I can begin to use some different types of enquiry to answer questions 	<ul style="list-style-type: none"> • Ask questions about the world around us. • Recognise that they can be answered in different ways (different types of enquiry including - observing changes over time, noticing patterns, grouping and classifying, carrying out simple comparative tests, finding things out from secondary sources). • I can ask simple questions about the world around us. • I can begin to use different types of enquiry to answer questions 	<ul style="list-style-type: none"> • Ask some relevant questions and use different types of scientific enquiries to answer them. • Begin to explore everyday phenomena and the relationships between living things and familiar environments. • Begin to develop their ideas about functions, relationships and interactions. • Begin to raise their own questions about the world around them. • Begin to make some decisions about which types of enquiry will be the best way of answering questions.. • I can ask some relevant questions about the world. • I can use some different types of scientific enquiry to answer questions. • I am beginning to decide which type of enquiry is best to answer my question 	<ul style="list-style-type: none"> • Ask relevant questions and use different types of scientific enquiries to answer them. • Explore everyday phenomena and the relationships between living things and familiar environments. • Begin to develop their ideas about functions, relationships and interactions. • Raise their own questions about the world around them. • Make some decisions about which types of enquiry will be the best way of answering questions • I can ask relevant questions about the world. • I can use different types of scientific enquiry to answer questions. • I am beginning to decide which type of enquiry is best to answer my question 	<ul style="list-style-type: none"> • Begin to plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary. • Begin to explore and talk about ideas, ask their own questions about scientific phenomena, analyse functions, relationships and interactions more systematically. • Begin to recognise some more abstract ideas and how these ideas help them to understand the world. • Begin to recognise scientific ideas change and develop over time. • Begin to select the most appropriate ways to answer science questions • I am beginning to explore ideas and ask my own questions about scientific phenomena. • I am beginning to plan different types of scientific enquiry to answer questions. • I am beginning to decide which variables to control. 	<ul style="list-style-type: none"> • Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary. • Explore and talk about ideas, ask their own questions about scientific phenomena, analyse functions, relationships and interactions more systematically. • Begin to recognise more abstract ideas and begin to recognise how these ideas help them to understand how the world operates. • Begin to recognise scientific ideas change and develop over time. • Select the most appropriate ways to answer science questions using different types of scientific enquiry • I can explore ideas and ask my own questions about scientific phenomena. • I can plan different types of scientific enquiry to answer questions. • I can decide which variables to control.

Investigating					
<ul style="list-style-type: none"> Perform simple tests with support. To begin to discuss my ideas about how to find things out. To begin to say what happened in my investigation. <ul style="list-style-type: none"> I can begin to perform simple tests. I can begin to discuss my ideas. I can begin to say what happened in an investigation. 	<ul style="list-style-type: none"> Perform simple tests. To discuss my ideas about how to find things out. To say what happened in my investigation. <ul style="list-style-type: none"> I can perform simple tests. I can discuss my ideas. I can say what happened in an investigation. 	<ul style="list-style-type: none"> Set up some simple practical enquiries, comparative and fair tests. Begin to recognise when a simple fair test is necessary and help to decide how to set it up. Begin to think of more than one variable factor. <ul style="list-style-type: none"> I can set up some simple practical enquiries. Including comparative and fair tests. I am beginning to help decide which variables to keep the same and which to change. 	<ul style="list-style-type: none"> Set up simple practical enquiries, comparative and fair tests. Recognise when a simple fair test is necessary and help to decide how to set it up. Can think of more than one variable factor. <ul style="list-style-type: none"> I can set up simple practical enquiries. Including comparative and fair tests. I can help decide which variables to keep the same and which to change. 	<ul style="list-style-type: none"> Begin to use test results to make predictions to set up further comparative and fair tests. Begin to recognise when and how to set up comparative and fair tests and explain which variables need to be controlled and why. Begin to suggest improvements to my method and give reasons. Begin to decide when it is appropriate to do a fair test. <ul style="list-style-type: none"> I can sometimes set up a range of comparative and fair tests. I am beginning to explain which variables need to be controlled and why. I am beginning to suggest improvements to my test, giving reasons. 	<ul style="list-style-type: none"> Use test results to make predictions to set up further comparative and fair tests. Recognise when and how to set up comparative and fair tests and explain which variables need to be controlled and why. Suggest improvements to my method and give reasons. Decide when it is appropriate to do a fair test. <ul style="list-style-type: none"> I can set up a range of comparative and fair tests. I can explain which variables need to be controlled and why. I can suggest improvements to my test, giving reasons.
Recording and reporting findings					
<ul style="list-style-type: none"> Gather and record data with some adult support, to help in answering questions. Begin to record simple data. Begin to record and communicate their findings in a range of ways. Can show my results in a simple table that my teacher has provided. <ul style="list-style-type: none"> I can begin to collect simple data. I can begin to record data in a table my teacher has provided. I can begin to communicate my 	<ul style="list-style-type: none"> Gather and record data to help in answering questions. Record simple data. Record and communicate their findings in a range of ways. Can show my results in a table that my teacher has provided. <ul style="list-style-type: none"> I can collect simple data. I can record data in a table my teacher has provided. I can communicate my findings in a variety of ways. 	<ul style="list-style-type: none"> Gather, record, and begin to classify and present data in a variety of ways to help in answering questions. Begin to record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables. Begin to report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions. Begin to use notes, simple tables and standard units and help to decide how to record 	<ul style="list-style-type: none"> 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 and tables. Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions. Use notes, simple tables and standard units and help to decide how to record and analyse their data. 	<ul style="list-style-type: none"> Begin to record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables and bar and line graphs. Begin to report and present findings from enquiries. Begin to decide how to record data from a choice of familiar approaches. Begin to choose how best to present data. I am beginning to record data and results of increasing complexity using – scientific diagrams and labels, 	<ul style="list-style-type: none"> Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables and bar and line graphs. Report and present findings from enquiries. Decide how to record data from a choice of familiar approaches. Can choose how best to present data. I can record data and results of increasing complexity using – scientific diagrams and labels classification keys, tables, bar

Science Skills, Knowledge and Vocabulary Map KS1 & KS2

findings in a variety of ways.		<p>and analyse their data.</p> <ul style="list-style-type: none"> • Begin to record results in tables and bar charts. I am beginning to collect data in a variety of ways, including labelled diagrams, bar charts and tables. • I am beginning to help decide how to record data. • I am beginning to communicate findings using simple scientific language. 	<ul style="list-style-type: none"> • Can record results in tables and bar charts. • I can collect data in a variety of ways, including labelled diagrams, bar charts and tables. • I can help decide how to record data. • I can communicate findings using simple scientific language 	<p>classification keys , tables ,bar graphs, line graphs</p> <ul style="list-style-type: none"> • I am beginning to choose how best to present data. • I am beginning to communicate findings using detailed scientific language. 	<p>graph and line graphs</p> <ul style="list-style-type: none"> • I can choose how best to present data. • I can communicate findings using detailed scientific language.
Research					
<p>To begin to use simple secondary sources to find answers.</p> <p>To begin to find information to help me from books and computers with help.</p> <p><i>I can begin to find information to help me from books, computers and other familiar sources.</i></p>	<p>Use simple secondary sources to find answers.</p> <p>Can find information to help me from books and computers with help.</p> <p><i>I can find information to help me from books, computers and other familiar sources.</i></p>	<p>Begin to recognise when and how secondary sources might help to answer questions that cannot be answered through practical investigations.</p> <p><i>I can begin to decide when research will help in my enquiry.</i></p> <p><i>I am beginning to carry out simple research on my own.</i></p>	<p>Begin to recognise when and how secondary sources might help to answer questions that cannot be answered through practical investigations.</p> <p><i>I can begin to decide when research will help in my enquiry.</i></p> <p><i>I can carry out simple research on my own.</i></p>	<p>Begin to recognise which secondary sources will be most useful to research their ideas.</p> <p><i>I am beginning to recognise which secondary source will be most useful to my research.</i></p> <p><i>I can begin to carry out research independently.</i></p>	<p>Recognise which secondary sources will be most useful to research their ideas.</p> <p><i>I can recognise which secondary source will be most useful to my research.</i></p> <p><i>I can carry out research independently.</i></p>
Conclusions					
<p>Begin to talk about what they have found out and how they found it out.</p> <p>To begin to say what happened in my investigation.</p> <p>To begin to say whether I was surprised at the results or not.</p> <p>To begin to say what I would change about my investigation.</p> <p><i>I can begin to talk about what I have found out.</i></p> <p><i>I can begin to explain</i></p>	<p>Talk about what they have found out and how they found it out.</p> <p>To say what happened in my investigation.</p> <p>To say whether I was surprised at the results or not.</p> <p>To say what I would change about my investigation.</p> <p><i>I can talk about what I have found out.</i></p> <p><i>I can explain how I carried out my enquiry.</i></p>	<p>I am beginning to use results to draw simple conclusions , make predictions for new values, suggest improvements and raise further questions.</p> <p>Am beginning to use straightforward scientific evidence to answer questions or to support their findings.</p> <p>With help, am beginning to look for changes, patterns, similarities and differences in their data in order to draw simple conclusions and answer questions. With support, am beginning to identify new questions arising from</p>	<p>Using results to draw simple conclusions , make predictions for new values, suggest improvements and raise further questions.</p> <p>Use straightforward scientific evidence to answer questions or to support their findings.</p> <p>With help, look for changes, patterns, similarities and differences in their data in order to draw simple conclusions and answer questions. With support, identify new questions arising from the data, make new</p>	<p>Am beginning to report and present findings from enquiries , including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations.</p> <p>Begin to identify scientific evidence that has been used to support or refute ideas or arguments.</p> <p>Begin to draw conclusions based on their data and observations, use evidence to justify their ideas, use scientific knowledge and understanding to explain their</p>	<p>Reporting and presenting findings from enquiries , including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations.</p> <p>Identify scientific evidence that has been used to support or refute ideas or arguments.</p> <p>Draw conclusions based on their data and observations, use evidence to justify their ideas, use scientific knowledge and understanding to explain their findings.</p> <p>Use test results to make predictions</p>

Science Skills, Knowledge and Vocabulary Map KS1 & KS2

<p>how I carried out my enquiry. I can begin to suggest simple changes to my enquiry.</p>	<p>I can suggest simple changes to my enquiry.</p>	<p>the data, make new predictions and find ways of improving what they have already done. Am beginning to see a pattern in my results. Am beginning to say what I found out, linking cause and effect. Am beginning to say how I could make it better. Am beginning to answer questions from what I have found out.</p> <p>I am beginning to draw simple conclusions based on the results of my enquiry. I am beginning to answer my questions using the results of my enquiry. I am beginning to use my findings to make new predictions, suggest improvements and think of new questions. I am beginning sometimes to think of cause and effect in my explanations.</p>	<p>predictions and find ways of improving what they have already done. Can see a pattern in my results. Can say what I found out, linking cause and effect. Can say how I could make it better. Can answer questions from what I have found out. I can draw simple conclusions based on the results of my enquiry. I can answer my questions using the results of my enquiry. I can use my findings to make new predictions, suggest improvements and think of new questions. I can begin to think of cause and effect in my explanations.</p>	<p>findings. Begin to use test results to make predictions to set up further comparatives and fair tests. Begin to look for different causal relationships in their data and identify evidence that refutes or supports their ideas. Use their results to identify when further tests and observations are needed. Begin to separate opinion from fact. Begin to draw conclusions and identify scientific evidence. Can use simple models. Know which evidence proves a scientific point. Begin to use test results to make predictions to set up further comparative and fair tests. I am beginning to draw scientific, causal conclusions using the results of an enquiry to justify my ideas.. I am beginning to explain my conclusion using scientific knowledge and understanding. I am beginning to distinguish opinion and facts. I am beginning to use my findings to make predictions and set up further enquiries. I can begin to use abstract</p>	<p>to set up further comparatives and fair tests. Look for different causal relationships in their data and identify evidence that refutes or supports their ideas. Use their results to identify when further tests and observations are needed. Separate opinion from fact. Can draw conclusions and identify scientific evidence. Can use simple models. Know which evidence proves a scientific point. Use test results to make predictions to set up further comparative and fair tests. I can draw scientific, causal conclusions using the results of an enquiry to justify my ideas.. I can explain my conclusion using scientific knowledge and understanding. I can distinguish opinion and facts. I can use my findings to make predictions and set up further enquiries I can begin to use abstract models to explain my ideas.</p>
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Key vocabulary

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<p>Seasonal Changes Summer, Spring, Autumn, Winter, Sun, Day, Moon, night, light, dark deciduous, evergreen trees, leaves,</p>	<p>Animals, including humans Herbivore, carnivore omnivore, survival, water, air, food, adult, baby, offspring, kitten, calf, puppy, exercise, hygiene</p>	<p>Rocks Slate, granite, sandstone, Chalk, soil, clay, sand, limestone, quartz, marble, Stone, pebble, texture, Absorbent, characteristic, Surface, permeable,</p>	<p>Sound Volume, Vibration, Wave, Pitch, Tone, Speaker</p>	<p>Living things and their habitats Mammal, Reproduction, Insect, Amphibian, Bird, Offspring,</p>	<p>Animals, including humans Circulatory, Heart, Blood Vessels, Veins, Arteries, Oxygenated, Deoxygenated, Valve, Exercise, Respiration</p>
<p>Animals, including humans Fish, Reptiles, Mammals, Birds, Amphibians (+ examples of each) Herbivore, Carnivore, Leg, Arm, Elbow, Head, Ear, Nose, Back, Wings, Beak</p>	<p>Uses of everyday materials materials, natural, man-made, manufactured, object, change, bake, bend, twist, stretch, squash, heat, cool, freeze, melt, boil, new material, Hard, Soft, Stretchy, Stiff, Shiny, Dull, Rough, Smooth, Bendy, Waterproof, Brick, Paper, Fabrics, Squashing, Bending, Twisting, Stretching Elastic, Foil</p>	<p>Light & Shadows Light, dark, shadow, transparent, opaque, direction, light travels straight lines, translucent, shortest, longest, highest, object, material, light, source, Sun, night, day</p>	<p>Electricity electricity, electrical, circuit, battery, bulb, crocodile clip, buzzer, motor, conduct, conductor, insulate, insulator, switch, break, power, bright, brightness, dim, batteries</p>	<p>Animals, including humans Foetus, Embryo, Womb, Gestation, Baby, Toddler, Teenager, Elderly, Growth, Development, Puberty</p>	<p>Evolution and inheritance Interdependence & Adaptation, plant growth, fertiliser, nutrients, consumer, producer, predator, prey, food chain, suited, plant food, produces, identify, habitats, life processes, Fossils, Evolution, Characteristics, Reproduction, Genetics,</p>
<p>Plants Deciduous, Evergreen trees, Leaves, Flowers (blossom), Petals, Fruit, Roots, Bulb, Seed, Trunk, Branches,</p>	<p>Plants Botanist, Mrs Nerg, Roots, stem, leaf, Seed, bulb, life cycle, egg,</p>	<p>Animals, including humans Movement, Muscles, Bones, Skull, Nutrition, Skeletons, Nutrients, Mineral, Vitamin, protein, Fat, Sugar,</p>	<p>Animals, including humans Tooth, teeth, incisor, molar, canine, diet, healthy, unhealthy, root, decay, food, balanced diet</p>	<p>Properties and changes of materials Hardness, Solubility, Transparency, Conductivity, Magnetic, Filter, Evaporation, Dissolving, Mixing,</p>	<p>Light Light, beam, reflect, reflection, opaque, Mirror, light travelling, Source, reflected, travel, Block, shiny surface</p>

Science Skills, Knowledge and Vocabulary Map KS1 & KS2

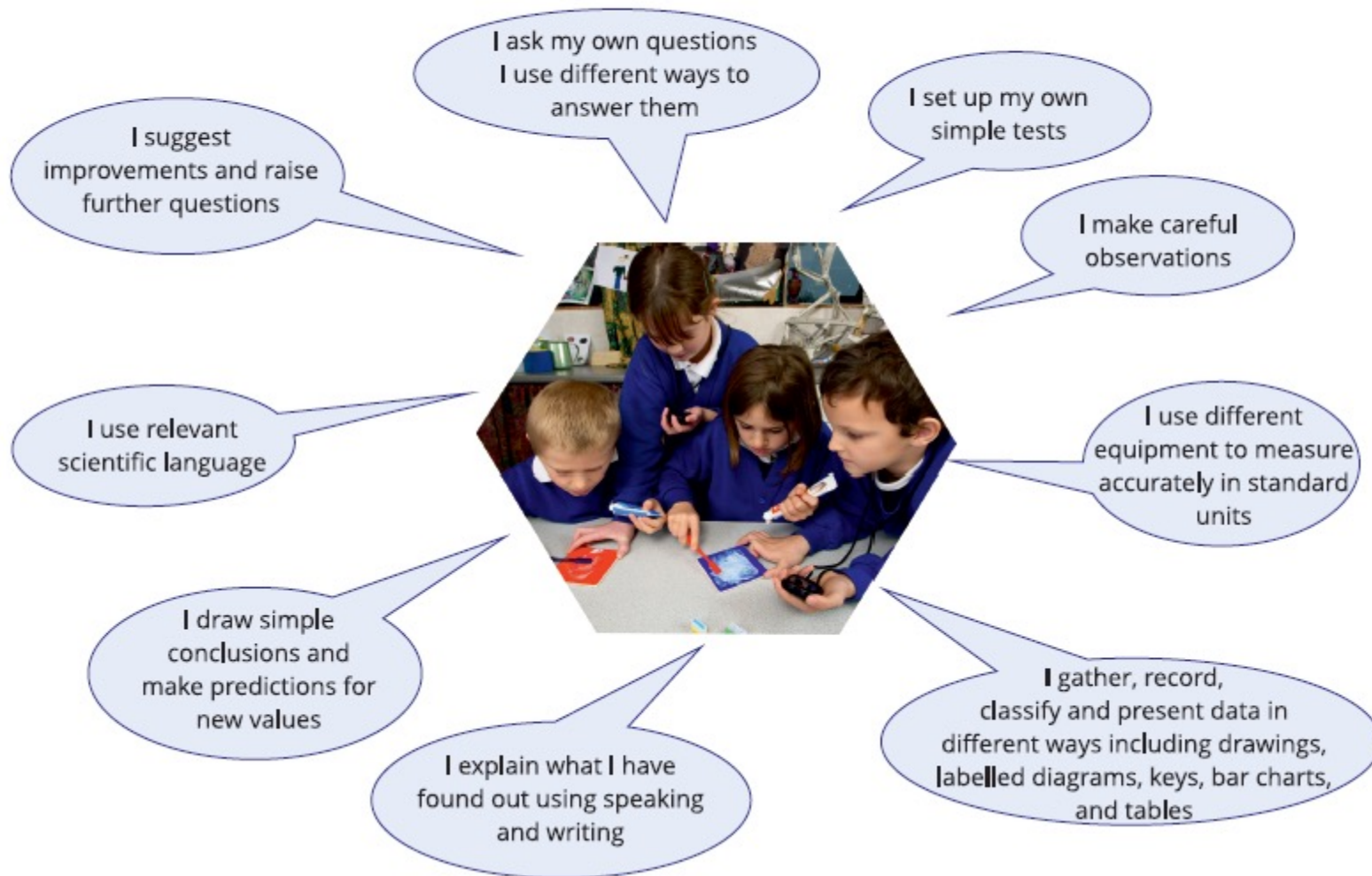
Stem,	Deciduous, evergreen, leaves, seeds, acorns, (conkers)	carbohydrate, growth, health, exercise,	feeding, growth, activity, food groups, vegetables, meat, fish, cereals, sugars, fats, fruits, starches,	Group, classify, properties, reversible changes, chemical reactions, mixtures	
Everyday materials Wood, Plastic, Glass, Paper, Water, Metal, Rock, Hard, Soft, Bendy, Rough, Smooth	Living things and their habitats Movement, (Respiration) breathing, Sensitivity, nutrition, Excretion, reproduce, growth	Living things and their habitats vertebrates, fish, amphibians, reptiles, birds, mammals, invertebrates, snails, slugs, worms, spiders, insects, environment, habitats	Living things and their Habitats vertebrates, fish, amphibians, reptiles, birds, mammals, invertebrates, snails, slugs, worms, spiders, insects, environment, habitats	Earth and space Earth, Sun, Moon, sphere Revolve, orbit, spin, rotation, axis, sunrise, Sunset, north, south, east, West, light, source, shadow, constellation, phases of the Moon, star,	Electricity Circuit, complete circuit, conductor, insulator, symbol, circuit diagram, electricity, component, voltage Cells, Wires, Bulbs, Switches, Buzzers, Battery, Circuit, Series, Conductors, Insulators, Amps, Volts
		Forces and magnets Friction, force meter, Newtons, surface area Forces, resists pull, push, from, stretch, squash, compress Magnet, metal, iron, copper aluminium, steel, brass attract, repel, magnetic field, non-magnetic, attraction, repulsion, force,	States of matter Solid, liquid, melt, Freeze, solidify, dissolve, Solution, filter, undissolved, dissolved, Separate, sieve, mix	Forces Air resistance, Water resistance, Friction, Gravity, Newton, Gears, Pulleys, newton, equal and opposite, force meter	Living things and their habitats Classification, Vertebrates, Invertebrates, Micro-organisms, Amphibians, Reptiles, Mammals, Insects Life Cycles, reproduce, reproduction, stamen, stigma, sepal, petal, ovary, pollen, style, germinate, germination, fertilise, fertilisation, pollinate, pollination, disperse, dispersal,

Working Scientifically Poster for Key Stage One



Science Skills, Knowledge and Vocabulary Map KS1 & KS2

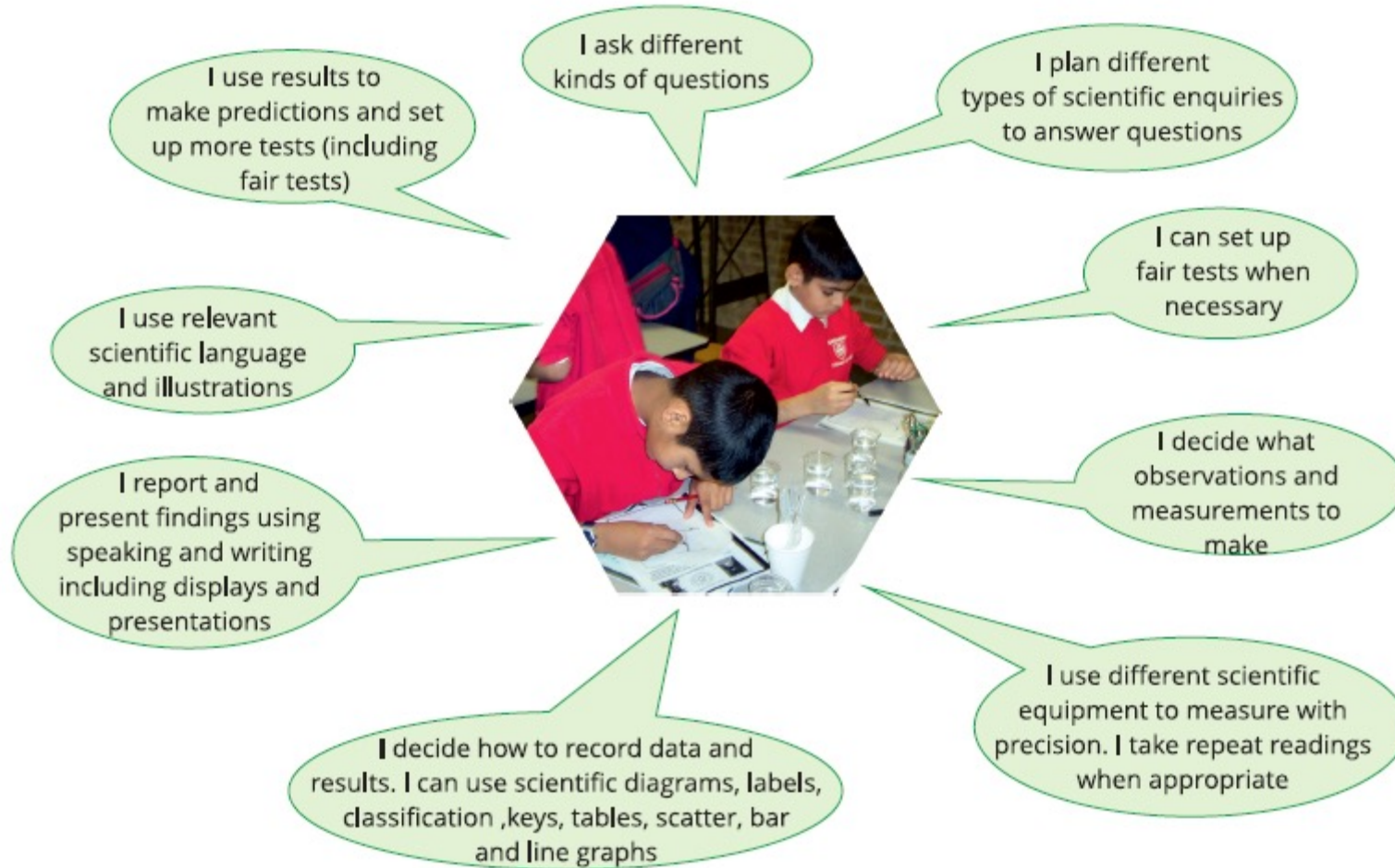
Working Scientifically Poster for Lower Key Stage Two



Science Skills, Knowledge and Vocabulary Map KS1 & KS2

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Working Scientifically Poster for Upper Key Stage Two



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Key Vocabulary

Autumn	Spring	Summer
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Science Skills, Knowledge and Vocabulary Map KS1 & KS2

Year 1	Plants Deciduous, Evergreen trees, Leaves, Flowers (blossom), Petals, Fruit, Roots, Bulb, Seed, Trunk, Branches, Stem	Animals, including humans Fish, Reptiles, Mammals, Birds, Amphibians (+ examples of each) Herbivore, Omnivore, Carnivore, Leg, Arm, Elbow, Head, Ear, Nose, Back, Wings, Beak	Everyday materials Wood, Plastic, Glass, Paper, Water, Metal, Rock, Hard, Soft, Bendy, Rough, Smooth	Seasonal changes Summer, Spring, Autumn, Winter, Sun, Day, Moon, Night, Light, Dark		
Year 2	Living things and their habitats	Plants	Animals, including humans	Uses of everyday materials		
Year 3	Plants	Animals, including humans	Rocks	Light	Forces and magnets	
Year 4	Living things and their habitats	States of matter	Animals, including humans	Sound	Electricity	
Year 5	Living things and their habitats	Animals, including humans	Properties and changes of materials	Earth and space	Forces	
Year 6	Living things and their habitats	Animals, including humans	Evolutions and inheritance	Light	Electricity	