



St Anne's Science Progression Map

2021-2022

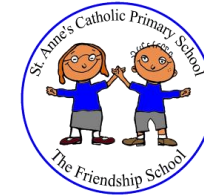


Year 5 and 6	Vocabulary	Working Scientifically	Knowledge, Skills and Understanding	Cross-Curricular Links	Enquiry Question
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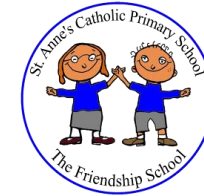


<p>Autumn</p> <p>Accuracy _____</p> <p>Accurate _____</p> <p>Answer _____</p> <p>Answers _____</p> <p>Bar charts _____</p> <p>Careful _____</p> <p>Causal relationships _____</p> <p>Changes _____</p> <p>Classification keys _____</p> <p>Classify _____</p> <p>Comparative tests _____</p> <p>Conclusions _____</p> <p>Controlled variable _____</p> <p>Data loggers _____</p> <p>Data/evidence/results _____</p> <p>Decrease _____</p> <p>Degree of trust _____</p> <p>Dependent variable _____</p> <p>Differences _____</p> <p>Equipment _____</p> <p>Evidence _____</p> <p>Fair tests _____</p> <p>Forces and magnets _____</p>	<p>Dwarf planet _____</p> <p>Astronomical clocks _____</p> <p>Celestial body _____</p> <p>Earth _____</p> <p>Geocentric model _____</p> <p>Heliocentric model _____</p> <p>Jupiter _____</p> <p>Mars _____</p> <p>Mercury _____</p> <p>Moon _____</p> <p>Neptune _____</p> <p>Night and day _____</p> <p>Orbit _____</p> <p>Planets _____</p> <p>Pluto _____</p> <p>Revolve _____</p> <p>Rotate/rotation _____</p> <p>Saturn _____</p> <p>Shadow clocks _____</p> <p>Solar system _____</p> <p>Sphere/spherical _____</p> <p>Spin _____</p> <p>Sun _____</p> <p>Sundials _____</p> <p>Uranus _____</p> <p>Venus _____</p>	<p>Planning</p> <ul style="list-style-type: none"> • Can they plan and carry out a scientific enquiry to answer questions, including recognising and controlling variables where necessary? • Can they make a prediction with reasons? • Can they use test results to make predictions to set up comparative and fair tests? • Can they present a report of their findings through writing, display and presentation? <p>Obtaining and presenting evidence</p> <ul style="list-style-type: none"> • Can they take measurements using a range of scientific equipment with increasing accuracy and precision? • Can they take repeat readings when appropriate? • Can they record more complex data and results using scientific diagrams, labels, classification keys, tables, scatter graphs, bar and line graphs? 	<p>Earth and Space</p> <p>□□describe the movement of the Earth, and other planets, relative to the Sun in the solar system</p> <p>□□describe the movement of the Moon relative to the Earth</p> <p>□□describe the Sun, Earth and Moon as approximately spherical bodies</p> <p>□□use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky.</p> <p>Forces and Magnets</p> <p>□□explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object</p> <p>□□identify the effects of air resistance, water resistance and friction, that act between moving surfaces</p>	<p>Art- Design and create own planets</p> <p>English - Planet non information text</p> <p>Maths - Tables and charts to present data.</p>	<p>How does the size of an object affect the rate it falls at?</p> <p>How do the planets in the solar system differ?</p> <p>Does the length of a lever affect the size of a force produced (making a shaduf/trabuchte)?</p>
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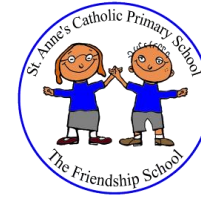


	<p>Air resistance</p> <hr/> <p>Attract</p> <hr/> <p>Earth</p> <hr/> <p>Fall</p> <hr/> <p>Force</p> <hr/> <p>Friction</p> <hr/> <p>Gears</p> <hr/> <p>Gravity</p> <hr/> <p>Levers</p> <hr/> <p>Magnet</p> <hr/> <p>Magnetic force</p> <hr/> <p>Mechanisms</p> <hr/> <p>Moving surfaces</p> <hr/> <p>Pulleys</p> <hr/> <p>Transfers</p> <hr/> <p>Water resistance</p>	<p><u>Considering evidence and evaluating</u></p> <ul style="list-style-type: none">• Can they report and present findings from enquiries through written explanations and conclusions?• Can they use a graph to answer scientific questions?	<p>☐☐recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect.</p>		
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<p>Spring</p> <p>Gather _____</p> <p>Group _____</p> <p>Identify _____</p> <p>Increase _____</p> <p>Independent variable _____</p> <p>Keys _____</p> <p>Line graphs _____</p> <p>Link _____</p> <p>Magnifying glass _____</p> <p>Measure _____</p> <p>Microscope _____</p> <p>Notice patterns _____</p> <p>Observations _____</p> <p>Observe changes over time _____</p> <p>Order _____</p> <p>Precision _____</p> <p>Prediction _____</p> <p>Present _____</p> <p>Questions _____</p> <p>Questions _____</p> <p>Record _____</p> <p>Results _____</p>	<p>Reversible changes _____</p> <p>Rigid _____</p> <p>Rough _____</p> <p>Rusting _____</p> <p>Sieving _____</p> <p>Smooth _____</p> <p>Soft _____</p> <p>Solid _____</p> <p>Solubility _____</p> <p>Soluble _____</p> <p>Solute _____</p> <p>Solution _____</p> <p>Solvent _____</p> <p>States of matter _____</p> <p>Stretchy _____</p> <p>Strong/weak _____</p> <p>Thermal conductivity _____</p> <p>Translucent _____</p> <p>Transparent _____</p> <p>Waterproof _____</p>	<p>(Continuing to build on from Autumn term)</p> <p><u>Planning</u></p> <ul style="list-style-type: none"> • Can they plan and carry out a scientific enquiry to answer questions, including recognising and controlling variables where necessary? • Can they make a prediction with reasons? • Can they use test results to make predictions to set up comparative and fair tests? • Can they present a report of their findings through writing, display and presentation? <p><u>Obtaining and presenting evidence</u></p> <ul style="list-style-type: none"> • Can they take measurements using a range of scientific equipment with increasing accuracy and precision? • Can they take repeat readings when appropriate? • Can they record more complex data and results 	<p><u>Everyday materials/ use of everyday materials/ properties and changes of materials</u></p> <ul style="list-style-type: none"> □□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 □□know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution □□use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating □□give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic 	<p>Maths - Tables and charts to present data. Venn diagram to sort.</p> <p>English- Science investigation write up.</p>	<p>What size wing makes the best paper sycamore helicopter?</p> <p>What is the best material to make a parachute out of?</p> <p>Where do you find gears in the real world?</p> <p>How much sugar can be dissolved in a cup of water? (How sweet can you make your tea?)</p> <p>What material is best for making a coat?</p> <p>Which of the following experiments (give some reversible and some irreversible) can be reversed?</p> <p>How can you get the salt back from the water?</p> <p>What amount of vinegar/ bicarbonate of soda best inflates the balloon?</p> <p>Which material is the</p>
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		<p>using scientific diagrams, labels, classification keys, tables, scatter graphs, bar and line graphs?</p> <p><u>Considering evidence and evaluating</u></p> <ul style="list-style-type: none"> • Can they report and present findings from enquiries through written explanations and conclusions? • Can they use a graph to answer scientific questions? 	<ul style="list-style-type: none"> □□demonstrate that dissolving, mixing and changes of state are reversible changes □□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. 		<p>best thermal insulator?</p> <p>How can we separate these mixtures?</p> <p>Which material is the most soluble?</p> <p>How can we make the sugar dissolve faster?</p> <p>Which material would make the best flask?</p> <p>How can we make the water clean?</p>
<p>Summer</p>		<p>(Continuing to build on from Autumn and Spring term)</p> <p><u>Planning</u></p> <ul style="list-style-type: none"> • Can they plan and carry out a scientific enquiry to answer questions, including recognising and controlling variables where necessary? • Can they make a prediction with reasons? 	<p><u>Animals Including Humans</u></p> <ul style="list-style-type: none"> □□describe the changes as humans develop to old age. <p><u>Living Things and Their Habitats</u></p> <ul style="list-style-type: none"> □□describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird 	<p>English - Non information text about the life process of reproduction.</p>	<p>How does the body change as we grow older?</p> <p>Why does the body change? Is it good or bad?</p> <p>What changes do you think will happen to you in the future?</p> <p>What stages are there in the life cycles of</p>



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