

Banks Road Primary School  
Assessment of Scientific Skills and Enquiry Map



EYFS Materials	Year 1 Animals	Year 2 Animals	Year 3 Plants	Year 4 Materials	Materials	Year 6 Animals
<p><b>TAPS Brown Apples</b></p> <p><u>Enquiry Type</u></p> <p>Observation Over Time</p> <p><u>Enquiry Question Stem</u></p> <p>Let's predict which apple will turn brown first? Why? Which apple has changed the most throughout the time period?</p> <p><u>Assessment Skill</u></p> <p>Predicting</p>	<p><u>Enquiry Type</u></p> <p>Observation over time</p> <p><u>Enquiry Question Stem</u></p> <p>How will the _____ of the material change? (texture, appearance, smell)</p> <p><u>Assessment Skill</u></p> <p>Use observations and ideas to suggest answers to questions</p> <p><u>Maths</u></p> <p>Statistics: make practical pictogram (e.g. using Lego) with a 1:1 scale</p>	<p><u>Enquiry Type</u></p> <p>Pattern Seeking</p> <p><u>Enquiry Question Stem</u></p> <p>Can people with bigger _____? (legs, hands, feet.....jump higher, grab more, run faster)</p> <p><u>Assessment Skill:</u></p> <p>using their observations and ideas to suggest answers to questions</p> <p><u>Maths</u></p> <p>Statistics- practical block diagram</p>	<p><u>Enquiry Type:</u> Fair Test</p> <p><u>Enquiry Question Stem:</u></p> <p>Does _____ of water make plants grow taller? (change amounts of water)</p> <p><u>Assessment skill:</u></p> <p>Making systematic and careful observations and measurements using standard units</p> <p><u>Enquiry type</u> (2) Observation over time</p> <p><u>Question stem:</u> How is water transported in _____? (thicker/taller/more than one)</p> <p><u>Assessment skill:</u></p> <p>Use straightforward scientific evidence to answer questions or to support their findings</p> <p><u>Maths</u></p> <p>Measure- standard units (cm/m/mm, ml/l,g/kg, °C)</p>	<p><u>Enquiry Type:</u> Fair Test</p> <p><u>Enquiry Question Stem:</u></p> <p>Does the mass of wet clothes change in different locations?</p> <p><u>Assessment skill:</u></p> <p>Set up a fair test</p> <p><u>Enquiry Type:</u> Fair Test</p> <p><u>Enquiry Question:</u> Does the <b>temperature</b> of the _____ affect the rate of _____?</p> <p><u>Assessment Skills:</u></p> <p>take accurate measurements using standard units, use a range of equipment, including <b>thermometers</b> and <b>data loggers.</b></p> <p><u>Maths</u></p> <p>Measure- standard units (cm/m/mm, ml/l,g/kg, °C)</p>	<p><u>Enquiry Type</u> (1)</p> <p>Fair Test</p> <p><u>Question Stem</u></p> <p>If we change the amount of _____ what happens to the speed that the sugar dissolves? (number of stirs, volume of water, size of sugar grains, temperature of the water)</p> <p><u>Assessment Skill</u></p> <p>Plan different types of scientific enquiry, including recognising and controlling variables</p> <p><u>Enquiry Type</u> (2)</p> <p>Observation Over Time</p> <p><u>Question Stem</u></p> <p>How long does it take for the sugar stack to _____? (stack to fall, colour to reach the top, sugar to completely dissolve).</p> <p><u>Assessment Skill</u></p> <p>Gather and record data of increasing complexity using tables</p> <p><u>Enquiry type</u> (3)</p> <p>Sorting and Classifying</p> <p><u>Question Stem</u></p> <p>Which material will insulate an ice cube best?</p> <p><u>Assessment skill</u></p> <p>Use test results to make predictions to set up further comparative and fair tests</p> <p><u>Maths</u></p>	<p><u>Enquiry Type</u></p> <p>Fair Test</p> <p><u>Enquiry Question Stem</u></p> <p>How is our heart rate affected by the duration of _____? (stationary exercise e.g. raised arms, balance, yoga pose, plank)</p> <p><u>Assessment skill:</u></p> <p>Use test result to make predictions to set up further comparative and fair tests</p> <p><u>Maths</u></p> <p>standard units (cm/m/mm, ml/l,g/kg, °C)</p>

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					Measure- standard units (cm/m/mm, ml/l,g/kg, °C)	
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EYFS Materials	Year 1 Materials	Year 2 Materials	Year 3 Rocks	Year 4 Animals	Year 5 Animals	Year 6 Light
<p><b>TAPS Incy Spider shelter test</b></p> <p><u>Enquiry Type</u></p> <p>Comparative Testing</p> <p><u>Enquiry Question Stem</u></p> <p>Which materials make an effective shelter? Which material is the most waterproof.</p> <p><u>Assessment Skill</u></p> <p>Perform simple tests</p>	<p><u>Enquiry Type (1)</u></p> <p>Comparative Test</p> <p><u>Enquiry Question Stem</u></p> <p>Will the object float if it's _____? (light, heavy, big, small, made from different materials)</p> <p><u>Assessment Skill</u></p> <p>Perform simple tests</p> <p><u>Maths</u></p> <p>Measure: length/height, mass and, capacity and time using non-standard units (string, balancing scales, sand timer, cups)</p> <p><u>Enquiry Type (2)</u></p> <p>Grouping and Classifying</p> <p><u>Enquiry Question Stem</u></p> <p>Is _____ best for making a window?</p> <p><u>Assessment Skill</u></p> <p>Recognise that sorting questions can be answered in different ways</p>	<p><u>Enquiry Type (1)</u></p> <p>Sort and Classify</p> <p><u>Enquiry Question Stem</u></p> <p>Is _____ absorbent?</p> <p><u>Assessment Skills:</u></p> <p>Ask simple questions and recognise that they can be answered in different ways</p> <p>Identifying and classifying</p> <p><u>Enquiry Type (2)</u></p> <p>Comparative Test</p> <p><u>Enquiry Question</u></p> <p>Is _____ best for making a rocket?</p> <p><u>Assessment Skill</u></p> <p>Perform simple tests to answer questions</p> <p><u>Maths</u></p> <p>Statistics- practical Venn diagram using hoops</p> <p>Measure: length/height, mass and, capacity and time using non-standard units (string, balancing scales, sand timer, cups)</p>	<p><u>Enquiry Type:</u> Sort and Classify</p> <p><u>Enquiry Question Stem:</u> Are all rocks strong when you _____? (scratch/rub it on _____)</p> <p><u>Assessment Skill:</u></p> <p>Reporting on findings from enquiries</p> <p><u>Maths</u></p> <p>Statistics: Bar chart</p>	<p><u>Enquiry Type</u></p> <p>Observation over time</p> <p><u>Enquiry Question Stem</u></p> <p>How does _____ affect teeth over time?</p> <p><u>Assessment Skill:</u></p> <p>use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions</p> <p><u>Enquiry type (2)</u></p> <p>Research</p> <p><u>Enquiry Question Stem</u></p> <p>How has littering (could change e.g. deforestation) affected _____ and their habitat? (vertebrates and/or invertebrates to choose from)</p> <p><u>Assessment skill</u></p> <p>use straightforward scientific evidence to answer questions or to support their findings</p> <p><u>Maths</u></p> <p>Statistics: Bar chart</p>	<p><u>Enquiry Type:</u> Pattern Seeking</p> <p><u>Enquiry Question Stem:</u> Do all humans have bigger/longer _____ as they get older? (forearm, arm span, foot length).</p> <p><u>Assessment Skill:</u></p> <p>Take measurements using a range of equipment</p> <p><u>Maths</u></p> <p>Statistics: line or scatter graph (teacher led)</p>	<p><u>Enquiry Type:</u> Pattern seeking</p> <p><u>Question stem:</u> Can we change the size of a shadow by changing the _____? (e.g. size of object/number of blocks, distance/angle of torch).</p> <p><u>Assessment skill:</u></p> <p>Take accurate measurements and records data on a graph</p> <p><u>Maths</u></p> <p>Measure: angle, area, standard units (cm/m/mm, ml/l,g/kg, °C)</p> <p><u>Enquiry Type (2):</u> Observation over time</p> <p><u>Enquiry Question:</u> How do shadow size and direction change across the day?</p> <p><u>Additional skill:</u> use test results to make predictions to set up further comparative and fair tests</p> <p>record data and results of increasing complexity using scientific diagrams</p>

EYFS Materials	Year 1 Animals	Year 2 Living Things	Year 3 Light	Year 4 Sound	Year 5 Forces	Year 6 Electricity
<p><b>TAPS Scavenger Sort</b></p> <p><u>Enquiry Type</u></p> <p>Sort and Classify</p> <p><u>Enquiry Question Stem</u></p>	<p><u>Enquiry Type</u></p> <p>Sort and Classify</p>	<p><u>Enquiry Type</u></p> <p>Pattern Seeking (1)</p> <p><u>Enquiry Question Stem:</u></p>	<p><u>Enquiry type:</u> Pattern Seeking</p> <p><u>Question stem:</u> Does _____ form a shadow when a torch is shone on it?</p>	<p><u>Enquiry Type (1):</u> Comparative Test</p> <p><u>Enquiry Question Stem:</u> Does _____ make a better phone?</p>	<p><u>Enquiry Type (1):</u> Fair Test</p> <p><u>Enquiry Question Stem:</u> How does the _____ affect time</p>	<p><u>Enquiry Type:</u> Fair Test</p>

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<p><b>Enquiry Type</b> Identifying, classifying and Grouping</p> <p><b>Enquiry Question Stem</b> What sets have we grouped? What is different about these objects? Do the objects have anything in common?</p> <p><b>Assessment Skill</b> Identify and Classify</p>	<p>How are _____ similar?</p> <p><b>Assessment Skill</b> Identify and classify</p> <p><b>Maths</b> Statistics: practical sorting circles</p> <p><b>Enquiry Type 2</b> <b>Research</b></p> <p><b>Enquiry Question Stem</b> What do _____ eat?</p>	<p>Which microhabitat do _____ prefer to live?</p> <p><b>Assessment Skill:</b> Gather and record data to help in answering questions.</p> <p><b>Maths:</b> Statistics- practical tally and pictogram showing the number found in different areas (e.g. under stones in the grass and on trees)</p> <p><b>Enquiry Type (2)</b> <b>Research</b></p> <p><b>Enquiry Question Stem:</b> Why do _____ live in this habitat?</p>	<p><b>Assessment skill-</b> Gather and record data to answer questions.</p> <p><b>Enquiry Type (2):</b> Fair Test</p> <p><b>Enquiry Question Stem:</b> Does the number of _____ pieces affect the amount of <b>light (lux)?</b> (a selection of materials e.g. cardboard, fabric, cello, paper)</p> <p><b>Assessment Skill:</b> make systematic and careful observations and, where appropriate, take accurate measurements using standard units, use a range of equipment, including thermometers and <b>data loggers</b></p> <p><b>Maths</b> Measure- standard units (cm/m/mm, ml/l,g/kg, °C) using data logger.</p>	<p><b>(longer/shorter/thicker/thinner string, bigger/ smaller cups)</b></p> <p><b>Assessment Skill:</b> identify differences, similarities or changes related to simple scientific ideas and processes</p> <p><b>Enquiry Type(2) Fair Test</b></p> <p><b>Enquiry Question Stem:</b> How does the _____ affect the <b>pitch?</b> (size, length, width)</p> <p><b>Assessment Skill:</b> Ask relevant questions and use different types of scientific enquiries to answer them</p> <p><b>Additional skill: make systematic and careful observations and, where appropriate, take accurate measurements using standard units, use a range of equipment, including data loggers</b></p> <p><b>Maths</b> Measure- standard units (cm/m/mm, ml/l,g/kg, °C) using data logger.</p>	<p>taken to fall? (wing length, number of clips, size of paper)</p> <p><b>Assessment Skill:</b> Measure, taking repeat readings</p> <p><b>Enquiry Type (2):</b> Comparative Test</p> <p><b>Enquiry Question Stem:</b> Does the _____ of platicine affect the speed that it falls through water? (e.g. shape, mass, position)</p> <p><b>Assessment Skill:</b> Explain the degree of trust in the results</p> <p><b>Maths</b> Measure- standard units (cm/m/mm, ml/l,g/kg, °C)</p>	<p><b>Enquiry Question Stem:</b> Does the number/amount of _____ affect the bulb brightness?</p> <p><b>Assessment Skill:</b> Plan a scientific enquiry to answer a question, recognising and controlling variables.</p> <p><b>Maths</b> Scatter and line graph</p>
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EYFS Our Senses	Year 1 Plants	Year 2 Plants	Year 3 Animals	Year 4 Living things	Year 5 Life Cycle	Year 6 Evolution
<p><b>TAPS Taste Tests</b></p> <p><b>Enquiry Type</b> Pattern Seeking</p> <p><b>Enquiry Question Stem</b> Are all orange-coloured drinks orang flavoured? Does the</p>	<p><b>Enquiry Type</b> Pattern seeking</p> <p><b>Enquiry Question Stem</b> Do all plants have _____?</p> <p><b>Assessment Skill:</b> Observe closely using simple equipment</p> <p><b>Maths</b></p>	<p><b>Enquiry Type:</b> Observation over time and Comparative Test</p> <p><b>Enquiry Question Stem:</b> Do plants need _____ to germinate? (light, temperature, sunlight)</p> <p><b>Assessment Skill:</b> Observe closely, using simple equipment</p> <p><b>Maths:</b> Measure: length/height, mass and, capacity and time using non-</p>	<p><b>Enquiry Type</b> <b>Research</b></p> <p><b>Enquiry Question Stem</b> Do all _____ have a backbone? (mini-beasts, fish, pets, mammals, reptiles, amphibians, birds)</p> <p><b>Assessment Skill</b> record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables</p>	<p><b>Enquiry Type:</b> Sort and Classify</p> <p><b>Enquiry Question Stem:</b> Can I sort animals into _____ and _____? (vertebrate, invertebrate, mammal, bird, flowering, non-flowering).</p> <p><b>Assessment Skill:</b> gather, record, classify and present data in a variety of ways to help in answering questions</p>	<p><b>Enquiry Type:</b> Research</p> <p><b>Enquiry Question Stem:</b> How is the life cycle of _____ different to _____? (contrasting- mammal, amphibian, insect, bird)</p> <p><b>Assessment Skill:</b> Report and present findings from enquiries, in oral and written forms such as displays and other presentations</p> <p><b>Maths</b></p>	<p><b>Enquiry Type:</b> Research</p> <p><b>Enquiry Question Stem:</b> What do fossils and research tell us about how living things _____? (looked, lived, ate)</p> <p><b>Assessment Skill:</b> Identifying scientific evidence that has been used to support or refute ideas or arguments.</p> <p><b>Maths</b> Scatter and line graph</p>

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<p>colour give you a clue about the flavour?</p> <p><b>Assessment Skill</b> Observing closely and testing</p>	<p>Statistics: make practical block graphs (e.g. using Lego) with a 1:1 scale</p>	<p>standard units (string, balancing scales, sand timer, cups)</p> <p>Statistics: Practical bar chart of height</p>	<p>use straightforward scientific evidence to answer questions or to support their findings</p> <p><b>Enquiry Type (2)</b> Pattern Seeking</p> <p>Do _____ have bigger _____ than _____? (girls/boys/older children/younger children/adult/child) (feet/legs/hands/heads)</p> <p><b>Assessment Skill</b> Ask relevant questions and use different types of scientific enquiries to answer them</p> <p><b>Maths</b> Statistics: scientific drawings and labelled diagrams</p>	<p><b>Maths</b></p> <p>Statistics: Classification key (practical)</p>	<p>Statistics: classification keys</p>	
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EYFS Changes in our world	Year 1 Seasons	Year 2 Physics	Year 3 Magnets and Forces	Year 4 Electricity	Year 5 Earth and Space	Year 6 Living Things
<p><b>TAPS Making Butter</b></p> <p><b>Enquiry Type</b> Research using secondary sources</p> <p><b>Enquiry Question Stem</b> Where does butter come from? How close is the nearest milk farm?</p>	<p><b>Enquiry Type:</b> Observation over time</p> <p><b>Enquiry Question Stem:</b> What happens to the _____ the tree across all seasons?</p> <p><b>Assessment Skill:</b> Gather and record data to help in answering questions</p> <p><b>Maths</b> Measure: length/height, mass and, capacity and time using non-standard units (string, balancing scales, sand timer, cups)</p>	<p><b>Enquiry Type:</b></p> <p><b>Enquiry Question Stem:</b> _____?</p> <p><b>Assessment Skill:</b></p> <p><b>Maths</b> Measure: length/height, mass and, capacity and time using non-standard units (string, balancing scales, sand timer, cups)</p>	<p><b>Enquiry Type:</b> Comparative Test</p> <p><b>Enquiry Question Stem:</b> Does the _____ affect the strength of the magnet? (size, shape, number of)</p> <p><b>Assessment Skill:</b> Set up simple practical enquiries, comparative and fair tests</p> <p><b>Enquiry Type: (2) Comparative Test</b> <b>Enquiry Question Stem:</b> Does the car travel further/faster on a _____ or _____ surface?</p> <p><b>Assessment Skill:</b></p>	<p><b>Enquiry Type:</b> Pattern Seeking</p> <p><b>Enquiry Question Stem:</b> Will all _____ conduct/not conduct electricity? (metal, plastic, fabric)</p> <p><b>Assessment Skill:</b> Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions</p> <p><b>Maths</b> Statistics: Carroll Diagram</p>	<p><b>Enquiry Type:</b> Research</p> <p><b>Enquiry Question Stem:</b> How does planet _____ move in the solar system?</p> <p><b>Assessment Skill:</b> Report and present findings from enquiries using appropriate scientific language</p> <p><b>Maths</b> Statistics: line or scatter graph (teacher led)</p>	<p><b>Enquiry Type:</b> Group and Classify</p> <p><b>Enquiry Question Stem:</b> Can I ask yes no questions to classify vertebrates such as _____ and invertebrates such as _____?</p> <p><b>Assessment Skill:</b> Record the results of a survey using a classification key</p> <p><b>Enquiry Type (2):</b> Research</p> <p><b>Enquiry Question Stem:</b> Why do _____ belong to this invertebrate group?</p> <p><b>Assessment Skill:</b></p>

<b>Assessment Skill</b> Record and communicate findings and observations.			Gather, record and present data (in a table or bar chart) to help in answering questions  <b>Maths</b> <b>Statistics: Bar chart</b>			Report and present findings using appropriate scientific language  <b>Maths</b> Classification key
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Equipment introduction						
EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Equipment:  Magnifying glasses	Equipment:  Magnifying glasses, microscopes, sand timer  *other equipment may include: balancing scales, non-unit measuring equipment such as cubes, string or jugs..	Equipment:  Magnifying glasses, microscopes, sand timer  With teacher support: rulers (cm/m), measuring beakers/cylinders	Equipment:  Magnifying glasses, thermometers. data loggers, measuring beakers/cylinders, magnets, rulers and metre rulers, microscopes, scales,	Equipment:  As before.	Equipment:  As before and newton metres	Equipment:  As before.

		(ml), scales (g) and stopwatches.	stopwatches. pipettes, test tubes			
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