



## Eastover Primary School

### Whole school working scientifically progression overview



	FS	KS1	Lower ks2	Upper key stage 2
<b>Plan (National curriculum objectives)</b>		<b>Ask simple questions and recognise that they can be answered in different ways.</b>	<b>Ask relevant questions and use different types of scientific enquiry to answer them.  Set up simple practical enquiries, comparative and fair tests.</b>	<b>Plan different types of scientific enquiries to answer questions. Including recognising and controlling variable where necessary.</b>
What this looks like at Eastover		<p><u>Year 1</u> Encourage all scientific questions within class and make time for children to begin to ask these questions.</p> <p>Use a range of enquiry types with the children but very scaffolded by teaching.</p> <p><u>Year 2</u> Begin to ask questions related to the topic being taught (more focused questioning)</p> <p>Introduce different types of enquiries. Encourage discussion with the children, how could we find out the answer to this question?</p>	<p><u>Year 3</u> Children questions are more focused and topic specific. Questions build on their prior knowledge.</p> <p>Enquiry types are a key point of discussion, children should be becoming more familiar with the different types of enquiry and when to use them.</p> <p>Adult led enquiries teaching the skills needed for fair and comparative tests. Decide as a class what to change and what to measure/observe. Children become more independent with this throughout the year.</p> <p><u>Year 4</u> Children questions are more focused and topic specific. Questions build on their prior knowledge.</p> <p>Children will begin to recognise which enquiry should be used to answer questions. Children may start to recognise that more</p>	<p><u>Year 5</u> Children will begin to recognise which enquiry should be used to answer questions. Children may start to recognise that more than 1 enquiry could be used to answer a question and discuss which one would be the best.</p> <p>Enquiries are more child led, children choose from a range of questions and then plan their enquiry. E.g. If looking at friction, come up/provide children with a range of questions based on friction, children plan their own investigation.</p> <p>Model controlling and recognising variables in more adult led enquiries.</p> <p><u>Year 6</u> Enquiries are child led. Children can ask their own scientific questions and decide how they will find the answer to this question, including recognising and controlling variables.</p>

			<p>than 1 enquiry could be used to answer a question.</p> <p>Children will become more independent when carrying out comparative and fair tests. Children will measure using standard units where not all of the numbers are marked and recognise the importance of repeat readings.</p>	
<b>Do (National curriculum objectives)</b>		<p><b>Observe closely, using simple equipment.</b></p> <p><b>Perform simple tests.</b></p> <p><b>Identify and classify.</b></p>	<p><b>Make systematic and careful observations and, where appropriate, take accurate measurements using standard units.</b></p> <p><b>Use a range of equipment including thermometers and data loggers.</b></p>	<p><b>Take measurements using a range of scientific equipment with increasing accuracy and precision, taking repeat readings when appropriate.</b></p>
What this looks like at Eastover		<p><u>Year 1</u> Children begin to understand the word observe and are taught what this means/how we observe closely.</p> <p>Identify and classify is used regularly. Children may be given criteria to support them. Children begin to observe and compare based on two criteria.</p> <p>Towards the end of the year, children will be introduced to the ideas that this can be done in more than one way.</p> <p><u>Year 2</u> Children observe closely using simple equipment. They can make observations linked to the question. Children will be able to</p>	<p><u>Year 3</u> Measure using standard units, Children will begin to understand why we use repeat readings.</p> <p>Children will use a range of equipment and be given the time to understand how to use the equipment.</p> <p><u>Year 4</u> Children will measure using standard units where not all of the numbers are marked on the scale. Children will be able to explain if they need to take repeat readings and why.</p> <p>Children will begin to identify which equipment they will be need to use in the investigation.</p>	<p><u>Year 5</u> Children will be familiar with a range of scientific equipment and be able to discuss why we use each piece of equipment.</p> <p>Children will being to use smaller scales and be taught how to accurately measure.</p> <p><u>Year 6</u> Children will be confident and familiar with using a range of equipment to measure accurately, recognising if there measurements are not accurate.</p> <p>Children will use measuring equipment with smaller scales including decimals.</p>

		<p>compare objects based on observable features e.g. size, shape, and texture.</p> <p>Identify and classify is used regularly. Children are encouraged to think about different ways that this could be done, as well as their own criteria for identifying and classifying.</p>		
<b>Record (National curriculum objectives)</b>		<b>Gather and record data to help in answering questions.</b>	<p><b>Gather, record, classify and present data in a variety of ways to help in answering questions.</b></p> <p><b>Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables.</b></p>	<b>Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs.</b>
		<p><u>Year 1</u> Children will begin to record with they have found out using pictures and photos. As the year progresses children will be given pre prepared tables to collect simple data.</p> <p>Children can use the photos/pictures/data to talk about what they have found out.</p> <p><u>Year 2</u> Children will record data using a prepared, simple tables and tally charts.</p>	<p><u>Year 3</u> Children will be exposed and taught how to use more complex ways to record and present data.</p> <p><u>Year 4</u> Children will become more confident and independent when using different methods to record and present data.</p>	<p><u>Year 5</u> Children will be familiar with a range of ways to record and present information such as drawing tables, different types of graphs etc. They will be start to understand which way is the best for different enquiries.</p> <p><u>Year 6</u> Children will be able to confidently talk about different ways to record and present information and be able to identify the best method for each enquiry they do.</p>

		Children will be able to verbally talk about their results and begin to plot results using Venn diagrams and block diagrams.		
<b>Review (National curriculum objectives)</b>		<b>Use their observations and ideas to suggest answers to questions.</b>	<b>Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.</b>  <b>Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions.</b>  <b>Identify differences and similarities or changes related to simple scientific ideas and processes.</b>  <b>Use straightforward evidence to answer questions or to support their findings.</b>	<b>Use test results to make predictions to set up further comparative and fair tests.</b>  <b>Report and present findings from enquiries, including conclusions, casual relationships and explanations of and degree of trust in results. In oral and written forms such as displays and other presentations.</b>  <b>Identify scientific evidence that has been used to support or refute ideas or arguments.</b>
What this looks like at Eastover		<u>Year 1</u> Children can verbally discuss what they have observed e.g. how many objects are in each group. As the year progresses, children will be able to talk about what they have found out using simple sentences and age appropriate scientific language. <u>Year 2</u> Children will begin to use the data to answer the scientific question, this will be using age appropriate scientific language and knowledge.	<u>Year 3</u> Children will begin to draw simple conclusions and provide written and oral explanations using simple scientific language. Children will use their evidence to support their answers.  Children will begin to suggest improvements to make their investigations more accurate. <u>Year 4</u> Children will draw simple conclusions and be able to write an explanation/answer to the scientific questions. Children will begin to evaluate their enquiry and suggest ways to improve and any limitations. Children will suggest new questions that arose from the investigation.	<u>Year 5</u> Children will be able to provide written and oral explanations of their findings using their data as evidence to support what they are saying and drawing scientific conclusions.  Children will begin to understand what is meant by a degree of trust in enquiries and begin to explain their degree of trust in their results.  <u>Year 6</u> Children will be able to provide written and oral explanations of their findings and describe casual relationships and drawing scientific conclusions.

				<p>They can use their results to make predictions for further investigations.</p> <p>Children can explain their degree of trust in their results.</p>
--	--	--	--	---