

Loseley Fields Primary School
Progression of Science Enquiry Skills

	Observing over time	Identifying and classifying	Pattern seeking	Research	Fair Testing
FS	<p>Plan</p> <ul style="list-style-type: none"> I am curious about things that change With help I ask questions about things changing I talk about my ideas for finding out how things change <p>Do</p> <ul style="list-style-type: none"> I use all of my senses to observe changes I look closely at how things change (with help where necessary) I use simple equipment to observe and record changes <p>Review</p> <ul style="list-style-type: none"> I talk about what I have done and what I have noticed 	<p>Plan</p> <ul style="list-style-type: none"> I am curious about similarities and differences With help I ask questions about similarities and differences I talk about my ideas for sorting or matching things <p>Do</p> <ul style="list-style-type: none"> I use my senses to sort and match things I match things that are the same I find things that are similar or different I sort or group things in my own way I use simple equipment to help me sort things e.g. boxes, hoops <p>Review</p> <ul style="list-style-type: none"> I talk about how I sorted or matched things 	<p>Plan</p> <ul style="list-style-type: none"> I am curious about patterns with help, I ask questions about patterns I talk about my ideas for finding about patterns <p>Do</p> <ul style="list-style-type: none"> I use my senses to look closely for patterns I observe more than one thing at a time I make simple records of what I notice, with help where necessary I use simple equipment to observe and record patterns <p>Review</p> <ul style="list-style-type: none"> I talk about what I have done and the patterns I noticed 	<p>Plan</p> <ul style="list-style-type: none"> I am curious about things in my surroundings With help, I ask questions that I can answer using secondary sources <p>Do</p> <ul style="list-style-type: none"> I listen carefully I know that information in books and electronic media can be used to answer questions I find pictures of things I talk to people about what they do and how things work <p>Review</p> <ul style="list-style-type: none"> I talk about things I found out 	<p>Plan</p> <ul style="list-style-type: none"> I am curious about how things behave With help, I ask questions about things I can test I talk about my ideas for testing and how things behave <p>Do</p> <ul style="list-style-type: none"> I use my senses to look closely at how things behave I carry out simple tests I make simple records of what I notice (with help if necessary) I use simple equipment to observe and record <p>Review</p> <ul style="list-style-type: none"> I talk about what I have done and what I notice I talk about whether something makes a difference

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KS 1	<p>Plan</p> <ul style="list-style-type: none"> I ask questions about how and why things change With help, I identify changes to observe and measure and suggest how to do it. <p>Do</p> <ul style="list-style-type: none"> I use non-standard units and simple equipment to record changes I record in words or pictures, or in simple prepared formats such as tables and charts <p>Review</p> <ul style="list-style-type: none"> I identify simple changes and talk about them I sequence the changes I begin to use scientific language to talk about changes I talk about whether the change was what I expected 	<p>Plan</p> <ul style="list-style-type: none"> I ask questions about how and why things are similar or different I decide what to observe to identify or sort things <p>Do</p> <ul style="list-style-type: none"> I make comparisons between simple features or objects, materials or living things I record my observations in words, pictures or simple tables I sort objects by observable and behavioural features I record my sorting in sorting circles or tables <p>Review</p> <ul style="list-style-type: none"> I identify similarities and differences and talk about them I begin to use simple scientific language to talk about how things are similar or different I try to use my records to help sort or identify other things 	<p>Plan</p> <ul style="list-style-type: none"> I ask questions about why and how things are linked With help, I decide what patterns to observe and measure and suggest how to do it <p>Do</p> <ul style="list-style-type: none"> I use non-standard units and simple equipment to record events that might be related I record in words or pictures, or in simple prepared formats such as tables, tally charts and maps. <p>Review</p> <ul style="list-style-type: none"> I identify simple patterns and talk about them I make links between two sets of observations I begin to use scientific language to talk about patterns I talk about whether the patterns was what I expected 	<p>Plan</p> <ul style="list-style-type: none"> I ask questions about how things are and the way they work With help, I make suggestions about how to find things out <p>Do</p> <ul style="list-style-type: none"> I use simple books and electronic media to find things out I ask questions to find out what people do and how things work I record words and pictures about what I found out <p>Review</p> <ul style="list-style-type: none"> I begin to use scientific language to talk about what I found out I talk about whether the information source with useful I give an opinion about some things I found out 	<p>Plan</p> <ul style="list-style-type: none"> I ask why and how questions I make comparisons about how things behave With help, I notice links between cause and effect With help, I identify simple variables to measure and change I plan simple comparative tests <p>Do</p> <ul style="list-style-type: none"> I use non-standard units and simple equipment to record data I record in words or pictures, or in simple prepared formats such as tables or tally charts <p>Review</p> <ul style="list-style-type: none"> I talk about my data I use comparative data to rank materials or objects I use simple scientific language to describe simple causal relationships With help, I can say if my test was fair I say if the relationship is what I expected

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LKS2	<p>Plan</p> <ul style="list-style-type: none"> I talk about things changing and recognise when questions can be answered by observing over time I decide what observations to make, how often and what equipment to use. <p>Do</p> <ul style="list-style-type: none"> I use a range of equipment to collect data using standard measures I make records using tables and bar charts I begin to use and interpret graphs <p>Review</p> <ul style="list-style-type: none"> I draw simple conclusions from the changes I observed I talk about changes using some scientific language I suggest improvements to the ways I observe 	<p>Plan</p> <ul style="list-style-type: none"> I talk about what criteria I will use to sort and classify things I decide what equipment to use to identify and classify things I talk about things that can be grouped and recognise when questions can be answered by sorting and classifying <p>Do</p> <ul style="list-style-type: none"> I carry out simple tests to sort and classify according to properties or behaviour I use Carroll diagrams, Venn diagrams and more complex tables to sort things I use simple branching databases for things that have clear differences <p>Review</p> <ul style="list-style-type: none"> I draw simple conclusions about the things I have sorted and classified I talk about the similarities and differences I identified and use some scientific language I suggest improvements to the way I sort and identify things 	<p>Plan</p> <ul style="list-style-type: none"> I talk about where patterns might be found and recognise when questions can be investigated by pattern seeking I decide in which sets of data to collect, what observations to make and what equipment to use <p>Do</p> <ul style="list-style-type: none"> I use a range of equipment to collect data using standard measures I make records using tables, bar charts or simple scatter graphs I begin to use and interpret data collected <p>Review</p> <ul style="list-style-type: none"> I draw conclusion about simple patterns between 2 set of data I talk about patterns using some scientific language I suggest improvements to the way I looked for patterns 	<p>Plan</p> <ul style="list-style-type: none"> I talk about how things are and the way they work and recognise when questions can be answered by research using secondary sources <p>Plan</p> <ul style="list-style-type: none"> I use information sources to find the information I need I use someone else's data I record what I found out in my own words I present information in different ways <p>Review</p> <ul style="list-style-type: none"> I draw conclusions from what I found out from different sources I talk about what the information and data means using some scientific language I suggest ways to improve how I find out and use information 	<p>Plan</p> <ul style="list-style-type: none"> I talk about links between cause and effect and (with help) pose a fair test question I help to plan a comparative or fair test I decide what data to collect I decide what equipment to use and how to make observations <p>Do</p> <ul style="list-style-type: none"> I use a range of equipment to collect data using standard measures I make records using tables and bar charts I begin to use and interpret data collected <p>Review</p> <ul style="list-style-type: none"> I draw simple conclusion from my comparative and fair tests I talk about, and explain, simple causal relationships using some scientific language I suggest ways that I can improve my fair tests

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UKS2	<p>Plan</p> <ul style="list-style-type: none"> I decide when observing changes over time will help answer my questions I decide how detailed my observations need to be What equipment to use Make my measurements as accurate as possible <p>Do</p> <ul style="list-style-type: none"> I use equipment accurately without support I record data appropriately I present data in line graphs I interpret changes in the data I recognise the effect of changing the time and number of observations <p>Review</p> <ul style="list-style-type: none"> I draw valid conclusions from data about changes I recognise the significance of changing things over time I talk about and explain changes using scientific knowledge and understanding I evaluate how well I observed over time 	<p>Plan</p> <ul style="list-style-type: none"> I decide when identifying and classifying will be helpful to answer my questions I decide what equipment, tests and secondary sources of information to use to identify and classify things <p>Do</p> <ul style="list-style-type: none"> I use a series of tests to sort and classify materials I use secondary sources to identify and classify things I make my own keys and branching databases with for or more items I use more than one piece of scientific evidence to identify and classify things <p>Review</p> <ul style="list-style-type: none"> I draw valid conclusions when sorting and classifying I recognise the significance of sorting and classifying I talk about and explain what I have done using scientific knowledge I evaluate how well my keys worked. 	<p>Plan</p> <ul style="list-style-type: none"> I recognise when variables cannot be controlled and decide when patterns seeking will help to answer my question I decide how detailed my data needs to be, and which equipment to use, to make my measurements as accurate as possible <p>Do</p> <ul style="list-style-type: none"> I use equipment accurately to collect observations I record data appropriately and accurately I present data in scatter graphs and frequency charts I recognise patterns in results I recognise the effect of sample size on reliability. <p>Review</p> <ul style="list-style-type: none"> I draw valid conclusion from data about patterns and recognise limitations I recognise the significance of relationships between sets of data I talk about and explain cause and effect patterns using scientific knowledge and understanding I evaluate how well I looked for patterns 	<p>Plan</p> <ul style="list-style-type: none"> I decide what research using secondary sources will help to answer my questions I decide which sources of information might answer my questions <p>Do</p> <ul style="list-style-type: none"> I use relevant information and data from a range of secondary sources I recognise how data has been obtained I start to notice how data has been obtained I start to notice what information and data is biased or based in opinions rather than facts I present my findings in suitable formats <p>Review</p> <ul style="list-style-type: none"> I draw valid conclusions from my research I talk about and explain my research using scientific knowledge and understanding I evaluate how well my research has answered my questions I recognise that some scientific questions may not have been answered definitively 	<p>Plan</p> <ul style="list-style-type: none"> I recognise when variables cannot be controlled and decide when a comparative or fair test is the best way to answer my question I plan a comparative or fair test, selecting variables to measure, change and keep the same I decide what equipment to use to make my measurements as accurate as possible <p>Do</p> <ul style="list-style-type: none"> I use equipment accurately to collect observations I record data appropriately and accurately I present data in line graphs I identify causal relationships <p>Review</p> <ul style="list-style-type: none"> I draw valid conclusions based on the data I recognise the significance of the results of comparative and fair tests I talk about and explain causal relationships using scientific knowledge and understanding I evaluate the effectiveness of my comparative and fair testing, recognising variables that were difficult to control