



# Scotholme Primary

Science Curriculum 2018-19

Sean Hall

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# Scotholme Primary School

## 1 SCIENCE CURRICULUM 2014-2015

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## 1.1 AIMS OF THE SCIENCE CURRICULUM

1.1.1 At Scotholme, we want our children to build upon and enhance the inquisitiveness that they are born with. We want them to question the world around them and develop strategies for answering those questions.

1.1.2 It is our aim that children will:

- Ask increasingly sophisticated questions about their immediate environment, moving to their world and subsequently beyond that.
- Observe, measure and record in a variety of ways and to communicate their findings.
- Work systematically to answer these questions by investigating and experimenting.
- Learn and apply knowledge to help them understand increasingly complex concepts.
- Be able to group and classify.



## 1.2 CURRICULUM ORGANISATION

Strand	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>	<u>Year 6</u>
<b>Biology</b>		Living Things and Their Habitats		Living Things and Their Habitats	Living Things and Their Habitats	Living Things and Their Habitats
	Plants	Plants	Plants			
	Animals, including humans	Animals, including humans	Animals, including humans	Animals, including humans	Animals, including humans	Animals, including humans
		Movement				Evolution And Inheritance
<b>Chemistry</b>	Everyday Materials	Use of Everyday Materials				Changes that Form New Materials
			Rocks			
				States Of Matter	Properties and Changes Of Material	
<b>Physics</b>	Seasonal Changes		Light			Light
			Forces and Magnets		Forces and Magnets	
				Sound		
				Electricity		Electricity
					Earth And Space	



### 1.3 LONG TERM PLANS FOR EACH YEAR GROUP (\*ICT LINKS)

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2	Additional
<b>Foundation 2</b>							
<b>Year 1</b>	Plants			Everyday Materials	Animals, including humans*		
	Seasonal Changes*						
<b>Year 2</b>	Animals, including humans*	Movement	Plants		Use Of Everyday Materials		
	Living Things and Their Habitats						
<b>Year 3</b>	Animals, including humans		Plants		Rocks	Forces And Magnets	Using a range of equipment
	Light*						
<b>Year 4</b>	Animals, including humans (evolution intro.)		Electricity* (Data Loggers to measure light levels)	Sound* (Data loggers to measure sound levels)	Living Things and Their Habitats		Using various equipment to measure and present
	States Of Matter						
<b>Year 5</b>	Earth And Space		Forces	Magnets	Properties and Reversible Changes of Material		Using various equipment to measure and present
	Living Things and Their Habitats*						
<b>Year 6</b>		Electricity (Data Loggers)	Changes that form new materials	Living Things and Their Habitats*	Animals, including humans	Light (Data Loggers)	Using various equipment to measure and present
	Evolution and Inheritance						



## 1.4 WORKING SCIENTIFICALLY

The children should develop the skills shown by 'real' scientists by gradually being able to structure their investigations.

### 1.4.1 Structure of enquiries

1. Planning
2. Observing
3. Recording
4. Concluding
5. Evaluating

### 1.4.2 Approaches To Enquiry

1. Observing Over Time - children observe or measure how one variable changes over short, medium or long term
2. Grouping and Classifying - children identify features or tests that help them distinguish between different things
3. Noticing Patterns - children identify relationships between the data in their results/findings
4. Research - children use secondary sources of evidence to answer questions
5. Testing
  - a. Comparative (KS1) - children make simple comparisons, one thing with another
  - b. Fair (KS2) - children observe or measure the effect that changing one variable has on another whilst attempting to keep other variables **constant**

**Commented [SH1]:** Independent variable: what changes  
Dependent variable: outcome to measure or observe  
Controlled variables: things to keep the same



### 1.4.3 Programme of Working Scientifically (\*ICT links)

		KS1		Lower KS2		Upper KS2	
		Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6
Working Scientifically	Planning	<ul style="list-style-type: none"> <li>Ask simple questions</li> </ul>		<ul style="list-style-type: none"> <li>Ask relevant questions</li> <li>Set up simple practical enquiries, comparative and fair tests</li> </ul>		<ul style="list-style-type: none"> <li>Plan enquiries, including recognising and controlling variables</li> </ul>	
	Observing	<ul style="list-style-type: none"> <li>Observe closely, using simple equipment</li> <li>Perform simple tests</li> <li>Identify and classify</li> </ul>		<ul style="list-style-type: none"> <li>Make accurate measurements using standard units, using a range of equipment (e.g. thermometers and data loggers*)</li> </ul>		<ul style="list-style-type: none"> <li>Take measurements, using a range of scientific equipment* with increasing accuracy and precision</li> </ul>	
	Recording	<ul style="list-style-type: none"> <li>Gather and record data to help answer questions (mainly Yr 2)</li> </ul>		<ul style="list-style-type: none"> <li>Gather, record, classify and present data* in a variety of ways to help answer questions</li> <li>Record findings using simple scientific language, drawings, labelled diagrams, bar charts and tables*</li> </ul>		<ul style="list-style-type: none"> <li>Record data and results of increasing complexity using scientific diagrams* and labels, classification keys*, tables, bar and line graphs* and models</li> <li>Present findings in written form, displays and other presentations</li> </ul>	
	Concluding	<ul style="list-style-type: none"> <li>Use their observations and ideas to suggest answers to questions</li> </ul>		<ul style="list-style-type: none"> <li>Report on findings from enquiries, including oral and written, displays or presentations of results and conclusions</li> <li>Identify differences, similarities or changes related to simple scientific ideas and processes</li> <li>Use straightforward scientific evidence to answer questions or to support their findings</li> </ul>		<ul style="list-style-type: none"> <li>Report findings from enquiries, including oral and written explanations involving causal relationships and conclusions</li> <li>Use simple models to describe scientific ideas</li> </ul>	
	Evaluating			<ul style="list-style-type: none"> <li>Use results to draw simple conclusions and suggest improvements, new questions and predictions for setting up further tests</li> </ul>		<ul style="list-style-type: none"> <li>Use test results to make predictions to set up further comparative tests</li> <li>Identify scientific evidence that has been used to support or refute ideas or arguments</li> </ul>	