

**Shurdington C of E Primary School – Working Scientifically Progression (Maths/English skills)**

| Area of working scientifically | EYFS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
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| <b>Planning</b>                | <p>Show curiosity about objects, events and people (Playing &amp; Exploring)</p> <p>Questions why things happen. (Speaking)</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Observing</b>               | <p>Engage in open-ended activity (Playing &amp; Exploring)</p> <p>Take a risk, engage in new experiences and learn by trial and error (Playing &amp; Exploring)</p> <p>Find ways to solve problems/find new ways to do things/test their ideas (Creating &amp; Thinking critically)</p> <p>Develop ideas of grouping, sequences, cause and effect (Creating &amp; Thinking Critically)</p> <p>Knows about similarities and differences in relation to places, objects, materials and living things (The World)</p> <p>Comments and asks questions about aspects of their familiar world such as the place where they live or the natural world. (The World)</p> <p>Closely observes what animals, people and vehicles do (The World)</p> <p>Uses sense to explore the world around them (Playing &amp; Exploring)</p> <p>Make observations of animals and plants and explain why some things occur and talk about changes. (The World)</p> |
| <b>Recording</b>               | <p>Choose the resources they need for their chosen activities (Self Confidence &amp; Selg Awareness)</p> <p>Handle Equipment and tools effectively (Moving &amp; Handling)</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Concluding</b>              | <p>Makes links and notice patterns in their experiences (Creating &amp; Thinking Critically)</p> <p>Ask how and why questions about their experiences (Understanding)</p> <p>Develop their own narratives and explanations by connecting ideas of events (Speaking)</p> <p>Builds up vocabulary that reflects the breadth of their experience. (Understanding)</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

## Shurdington C of E Primary School – Working Scientifically Progression (**Maths/English** skills)

| Area of working Scientifically | Year 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Year 2<br>(Including all of the Year 1 objectives)                                                                                                                                                                                                                                                                                    |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Planning                       | <ul style="list-style-type: none"> <li>Asking simple questions about the familiar world</li> <li>Choosing resources to test their own ideas</li> <li>Beginning to suggest a way to test their ideas</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                  | <ul style="list-style-type: none"> <li>Raising their own relevant question and suggesting an appropriate enquiry to answer it</li> <li>Suggesting suitable information sources including, books internet and interviewing</li> </ul>                                                                                                  |
| Observing                      | <ul style="list-style-type: none"> <li>Sorting and grouping things in different ways, asking how things are the same and different</li> <li>Suggesting ways to sort</li> <li>Observing using simple equipment, identifying change over time.</li> <li>Handling simple equipment</li> <li>Making observations of people, animals and plants</li> <li>Carrying out scientific tests, suggested by an adult, that answers a question and talking about what they have found</li> <li>Making accurate measurement with simple equipment</li> <li>Using secondary sources to find answers</li> </ul> | <ul style="list-style-type: none"> <li>Independently carrying out an investigation</li> <li>Beginning to look for naturally occurring patterns                             <ul style="list-style-type: none"> <li>Taking accurate measurements using standard units.</li> </ul> </li> </ul>                                           |
| Recording                      | <ul style="list-style-type: none"> <li>Recording simple data using pictures, labels, captions and with support.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <ul style="list-style-type: none"> <li>Classifying with a simple key</li> <li>Recording using tally charts, pictograms and block diagrams to display their results</li> </ul>                                                                                                                                                         |
| Concluding                     | <ul style="list-style-type: none"> <li>Answer data related questions such as most/least, more than/higher than</li> <li>Explain what they have found out using scientific vocabulary</li> <li>Identifying obvious differences/patterns within data</li> <li>Explaining their findings in different ways: writing, presentations, drawings, computer science</li> </ul>                                                                                                                                                                                                                          | <ul style="list-style-type: none"> <li>Saying if things happened as they expected and if not, why not.</li> <li>Using simple features to compare and talk about similarities and differences within sorted groups</li> <li>Explaining their findings in different ways: writing, presentations, drawings, computer science</li> </ul> |

**Shurdington C of E Primary School – Working Scientifically Progression (Maths/English skills)**

| Area of working Scientifically | Year 3<br>(Including all previous years objectives)                                                                                                                                                                                                                                                                                                                           | Year 4<br>(Including all previous years objectives)                                                                                                                                                                                                                                                                               |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Planning</b>                | <ul style="list-style-type: none"> <li>Raising their own relevant questions and selecting an appropriate enquiry to answer it</li> <li>Using scientific knowledge to create a prediction</li> </ul>                                                                                                                                                                           | <ul style="list-style-type: none"> <li>Suggesting the appropriate enquiry to make</li> <li>Recognising when it is appropriate to test or to use a secondary source</li> </ul>                                                                                                                                                     |
| <b>Observing</b>               | <ul style="list-style-type: none"> <li>Suggesting more than one way of grouping animals and plants and explaining their reasons</li> <li>Setting up and carrying out a suggested investigation</li> <li>Looking for naturally occurring patterns and relationships and deciding what data to collect to identify them</li> <li>Using data loggers and thermometers</li> </ul> | <ul style="list-style-type: none"> <li>Recognising when a test is fair and how to keep it fair</li> <li>Planning and carrying out an investigation by controlling variables fairly and accurately</li> <li>Using classification keys to identify</li> <li>Beginning to separate fact and opinions in secondary sources</li> </ul> |
| <b>Recording</b>               | <ul style="list-style-type: none"> <li>Collecting and grouping observations and measurements in their own tables, bar charts and diagrams</li> <li>Taking accurate measurements using standard units</li> </ul>                                                                                                                                                               | <ul style="list-style-type: none"> <li>Deciding how to record their data</li> <li>Recording more complex data and results by using scientific diagrams, classification keys, tables, bar charts, line graphs and models</li> </ul>                                                                                                |
| <b>Concluding</b>              | <ul style="list-style-type: none"> <li>Using their findings to explain what they have found out, referring back to their original question</li> <li>Explaining their findings in different ways: display, presentation, writing, artwork, computer science</li> </ul>                                                                                                         | <ul style="list-style-type: none"> <li>Using their findings to explain what they have found out, referring back to their original question and using scientific vocabulary explain why this may have occurred</li> </ul>                                                                                                          |
| <b>Evaluating</b>              | <ul style="list-style-type: none"> <li>Suggesting improvements for further tests</li> <li>Suggesting how to improve their work if they were to do it again</li> </ul>                                                                                                                                                                                                         | <ul style="list-style-type: none"> <li>Suggesting improvements and predictions for further tests</li> <li>Suggesting how and why they would improve their work if they were to do it again</li> </ul>                                                                                                                             |

**Shurdington C of E Primary School – Working Scientifically Progression (Maths/English skills)**

| Area of working Scientifically | Year 5<br>(Including all previous years objectives)                                                                                                                                                                                                                                                                             | Year 6<br>(Including all previous years objectives)                                                                                                                                                                                                |
|--------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Planning</b>                | <ul style="list-style-type: none"> <li>Raising their own question and applying their scientific knowledge to make predictions</li> <li>Selecting and planning the most appropriate type of enquiry</li> </ul>                                                                                                                   | <ul style="list-style-type: none"> <li>Using secondary source information to help them make a prediction</li> <li>Choosing the ‘best way’ to answer a question</li> <li>Making a prediction which links with other Scientific knowledge</li> </ul> |
| <b>Observing</b>               | <ul style="list-style-type: none"> <li>Varying one factor whilst keeping others the same in an experiment</li> <li>Deciding which units of measurement they need to use</li> <li>Taking repeat measurements where appropriate and explaining why a measurement needs to be repeated</li> </ul>                                  | <ul style="list-style-type: none"> <li>Carrying out an investigation by controlling variables fairly and accurately</li> <li>Identifying the key factors when preparing for a fair test</li> </ul>                                                 |
| <b>Recording</b>               | <ul style="list-style-type: none"> <li>Identifying the method of recording the results</li> <li>Developing their own classification keys</li> <li>Deciding which units of measurements they need to use</li> <li>Taking repeat measurements, where appropriate and explaining why a measurement needs to be repeated</li> </ul> | <ul style="list-style-type: none"> <li>Recording using scatter graphs</li> <li>Creating their own tables and graphs to record data and explain why this has been chosen</li> </ul>                                                                 |
| <b>Concluding</b>              | <ul style="list-style-type: none"> <li>Linking what they have found out to other Science knowledge</li> <li>Identify whether their results support or refute their predictions and ideas</li> <li>Explaining (in simple terms) a scientific idea and what evidence supports/refutes it</li> </ul>                               | <ul style="list-style-type: none"> <li>Finding a pattern from their data and use scientific reasoning as to why this is</li> <li>Discuss the degree of trust of results</li> <li>Explain qualitative and quantitative data</li> </ul>              |
| <b>Evaluating</b>              | <ul style="list-style-type: none"> <li>Using test results to make further predictions</li> </ul>                                                                                                                                                                                                                                | <ul style="list-style-type: none"> <li>Using test results to set up further comparative tests</li> </ul>                                                                                                                                           |