

## Visual of Progression in Science

### Scientific attitudes

5-7 year olds	
7-9 year olds	
9-11 year olds	<ol style="list-style-type: none"> <li>1. Take repeat readings, with increasing accuracy and precision and consider degree of trust in results</li> <li>2. Identify that scientific evidence may support or refute earlier ideas</li> </ol>
11-14 year olds	<ol style="list-style-type: none"> <li>1. Show concern for accuracy, precision, repeatability and reproducibility</li> <li>2. Understand that scientific ideas develop over time with new evidence and ideas</li> <li>3. Evaluate risks</li> </ol>

### Measurement

5-7 year olds	
7-9 year olds	<ol style="list-style-type: none"> <li>1. Use standard units when taking measurements</li> </ol>
9-11 year olds	
11-14 year olds	<ol style="list-style-type: none"> <li>1. Understand and use SI units and IUPAC chemical nomenclature</li> <li>2. Use and derive simple equations to carry out equations</li> <li>3. Data analysis</li> </ol>

### Experimental skills and investigation

5-7 year olds	<ol style="list-style-type: none"> <li>2. Ask questions</li> <li>3. Make observations using simple equipment</li> <li>4. Recording data</li> </ol>
7-9 year olds	<ol style="list-style-type: none"> <li>1. Use results to make predictions for new values</li> <li>2. Ask relevant questions</li> <li>3. Carry out simple investigations</li> <li>4. Take measurements using a range of equipment</li> <li>4. Record data in a variety of ways</li> </ol>
9-11 year olds	<ol style="list-style-type: none"> <li>1. Use test results to make predictions to set up further tests</li> <li>2. Plan investigations to answer questions</li> <li>3. Take repeated measurements using a range of equipment, considering accuracy and precision</li> <li>4. Record data in ways of increasing complexity</li> </ol>
11-14 year olds	<ol style="list-style-type: none"> <li>1. Make predictions</li> <li>2. Plan investigations to answer questions considering safety</li> <li>3. Take reliable results using a range of equipment, considering reliability of method and suggesting possible improvement</li> <li>4. Record data gathered using more than one techniques</li> </ol>

### Analysis and evaluation

5-7 year olds	<ol style="list-style-type: none"> <li>1. Identify and classify</li> <li>2. Use observations to answer questions</li> </ol>
7-9 year olds	<ol style="list-style-type: none"> <li>1. Present data in a variety of ways</li> <li>2. Answer questions giving explanations</li> <li>3. Make simple predictions based on results</li> <li>4. Suggest simple improvements</li> </ol>
9-11 year olds	<ol style="list-style-type: none"> <li>1. Present data in ways of increasing complexity</li> <li>2. Use data to give a scientific conclusion</li> <li>3. Use results to set up further investigations</li> <li>4. Suggest improvements to increase degree of trust in results</li> </ol>
11-14 year olds	<ol style="list-style-type: none"> <li>1. Present data choosing appropriate method</li> <li>2. Draw conclusions based on data giving reasoned explanations in relation to prediction</li> <li>3. Identify further questions arising from their results</li> <li>4. Evaluate data taking into account potential sources of error</li> <li>5. Apply mathematical concepts and calculate results</li> </ol>