The Priory Catholic Voluntary Academy Working Scientifically Progression Ladders

	FS2	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Ideas and Evidence	I can explore the natural world. (UW Reception) I can explore the natural world and make observations. (UW ELG)	**Consider Variables and Ideas:** I can join in when we talk about science. (1.1) I can join in when we talk about science and ask simple questions. (1.2) I can join in when we talk about science and ask some scientific questions. (1.3)	**Consider Variables and Ideas:** I can use other people's ideas to help me find out about something. (2.1) I can use information texts to help me find out about scientific ideas. (2.2) **Importance of Collecting Evidence:** I can decide whether I agree or disagree with my friends. (2.3)	**Consider Variables and Ideas:** I can contribute my own ideas about how to find things out. (3.1) I can use information texts to help me find out about and explain scientific ideas. (3.2) **Importance of Collecting Evidence:** I am beginning to see the importance of collecting evidence to prove my ideas. (3.3)	**Consider Variables and Ideas:** I am beginning to understand that scientists' ideas are based on evidence. (4.2) I can identify differences, similarities or changes related to simple scientific ideas and processes. (4.3) **Importance of Collecting Evidence:** I can recognise why I need to collect evidence to prove my ideas are correct. (4.1) I am beginning to explain why it is important to test my ideas using observations or measurements to prove a theory. (4.3+)	**Consider Variables and Ideas:** I can decide which ideas can be investigated scientifically and decide how to find the answers (test or research). (5.1) I know that scientists' ideas are based on evidence. (5.2) **Importance of Collecting Evidence:** I can explain why it is important to test my ideas using observations or measurements to prove a theory. (5.3) I know that some people think they know the answer but they may not always have the proof they need to support their ideas. (5.3)	**Consider Variables and Ideas:** I can find information from a range of sources in order to answer scientific questions (web, text, data etc). (6.1) I know that scientists sometimes use evidence to prove unlikely theories. (6.3+) **Consider Ideas and the Importance of Collecting Evidence:** I can describe and evaluate my own and other people's scientific ideas, including ideas that have changed over time- using evidence from a range of sources. (6.2) I can evaluate scientific ideas

							and I know that some people may arrive at different ideas from the same information. (6.3)
Planning:	I can understand the effect of changing seasons on the natural world around them. (UW Reception) I can understand the processes and changes in the natural world. (UW ELG)	**Raising questions:** I can ask simple questions beginning with Why…? What if…? (1.1) **Approach:** With help I can make suggestions about how to do things when we plan a science activity. (1.2) **Prediction:** I can say what I think will happen. (1.3)	**Raising questions:** I can ask my own questions about our science topic. (2.1) **Approach:** I can use simple equipment provided to carry out a simple comparative test. (2.2) I can share ideas about how to collect data and answer questions. (2.3) **Prediction:** I can say whether or not I was surprised by what happened. (2.2) **Choosing Variables:** With help I can suggest what to change and I am beginning to spot when a test is unfair. (2.2)	**Raising questions:** I can ask relevant scientific questions. (3.1) **Approach:** I can use a range of simple equipment provided to carry out simple tests. (3.2) I can make my own suggestions about how to carry out a simple fair test. (3.3) **Prediction:** I can predict what might happen because I have seen something similar. (3.2) **Choosing Variables:** I can name the variable that changes in a fair test (the independent variable). (3.3+)	**Raising questions:** I can ask relevant scientific questions that will help me find out more about our science topic. (4.1) **Approach:** I can confidently use a range of simple equipment. (4.2) I can make my own suggestions about how to carry out a simple test, identifying equipment needed. (4.3) **Prediction:** I can predict what might happen because I have seen or read about something similar. (4.2) **Choosing Variables:** I can name the (independent)	**Raising questions:** I can think of a relevant question to investigate using my scientific knowledge and understanding. (5.1) **Approach:** I can choose suitable equipment and information from sources provided when planning different types of scientific enquiry. (5.1) I can decide how to organise the steps needed to carry out a science activity when planning different types of scientific enquiry. (5.2) **Prediction:** I can link my prediction to my scientific understanding	**Raising questions:** I can think of a relevant question to investigate using my scientific knowledge and understanding. (6.1) **Approach:** I can select suitable equipment and information from a range of sources provided when planning different types of scientific enquiry. (6.1) I can independently identify the steps needed to carry out a range of different types of scientific enquiry. (6.2) **Prediction:** I can make predictions based upon my scientific knowledge and

					variable that changes in a fair test and (constant) variables that stay the same. (4.3)	because I have seen/read about something similar before. (5.2) **Choosing Variables:** I can plan a fair test and decide which variable to change (independent), which to keep the same (constant) and which to measure (dependent). (5.2)	understanding – using patterns in data to predict further results. (6.2) **Choosing Variables:** I can confidently plan a fair test and decide which variables to change (independent), which to keep the same (constant) and which to measure (dependent). (6.3)
Gathering and Presenting Evidence:	I can describe what I see, hear and feel. (UW Reception) I can draw pictures of animals and plants when observing. (UW ELG) I can talk to help work out problems and organise thinking and activities. (UW Reception) I can talk about how things work and how they	**Observe and Measure:** I can describe what I hear, see, touch, taste or smell. (1.1) I can use my observations to group things. (1.1) **Observe:** I can use simple equipment to make observations. (1.2) **Record:** I can draw and/or use simple pictures to help me record observations. (1.2)	**Observe and Measure:** I can make simple observations and use non-standard and simple standard measurements. (2.1) **Observe:** I can identify, group and classify things, observing similarities and differences. (2.2) I can observe changes over time. (2.3) **Record:**	**Observe and Measure:** I can make accurate observations using simple standard measurements. (3.1) **Observe:** I can use a simple key to help me make observations. (3.3) **Record:** I can record my results in a range of ways including drawings, bar charts, tables and	**Observe and Measure:** I can choose to make relevant observations, systematically and accurately measure using standard units: time, length, weight and temperature. (4.1) I am beginning to use a datalogger to measure and record results. (4.2)	**Observe and Measure:** I can take measurements using a range of scientific equipment, using standard units with accuracy and precision. (5.1) I can observe over a period of time, identifying and predicting further results. (5.1)	**Observe and Measure:** I can use a datalogger to measure and record results. (6.1) I understand how to use a key to classify and identify. (6.1) I can make a series of precise appropriate observations, comparisons or measurements using standard units. (6.2)

might happen. (UW Reception) I can offer explanations of why things might happen. (C&L ELG)	**Present:** I can talk about what happened and what I saw using some scientific language. (1.3)	I can record my results in a range of ways including grids and charts. (2.3) **Present:** I can share what I have found out by talking, drawing and/or writing – using simple scientific vocabulary. (2.2)	labelled drawings. (3.2) **Present:** I can use evidence I have collected to share what I have found out by talking, drawing and/or writing – using simple scientific vocabulary. (3.3)	**Observe:** I can use a simple key to help me make observations, sort and classify. (4.3) **Record:** I can record my results in a range of ways including drawings, bar charts, tables and labelled drawings and with support line graphs. (4.2) **Present:** I can use evidence I have collected to support a presentation to my peers about what I have found out. (4.3)	**Observe:** I am beginning to recognise the importance of repeat readings. (5.2) **Record:** I can record my results independently, in a variety of ways: simple keys, labelled diagrams, tables, bar charts, Venn diagrams and I'm beginning to use line graphs. (5.1) I can record my results in a wide variety of ways: simple keys, labelled diagrams, tables, bar charts, Venn diagrams and I'm beginning to use line graphs. (5.3) I can suggest an appropriate way to record my results. (5.2) **Present:** Using evidence I have collected, I can make a presentation of	**Observe:** I recognise the importance of repeat readings. (6.3) **Record:** I can record my results in a wide variety of ways: simple keys, labelled diagrams, tables, bar charts, Venn diagrams, scatter graphs, line graphs etc. (6.1) I can record my observations and measurements in an organised, systematic way that helps me see patterns. (6.2) **Present:** I can plot data as a line graph and with help can draw a line of best fit. (6.1) I can present my results independently and accurately in a variety of ways: simple keys, labelled diagrams,

						what I have found out (using written explanations, drawings, data and ICT to support the presentation). (5.2) I can arrange my results in an order that helps me to identify a pattern. (5.2) I can use appropriate scientific vocabulary to share my results and findings. (5.3)	bar charts, Venn diagrams etc. (6.2) I can communicate my findings through displays and formal presentations. (6.3)
Thinking About Evidence and Evaluating:	I can use new vocabulary in different contexts. (C&L Reception) I can use recently introduced vocabulary. (C&L ELG)	**Conclude and Explain:** I can say what I think happened in a simple test. (1.1) I notice some similarities and differences. (1.2) I am beginning to use simple data to answer questions. (1.3)	**Conclude and Explain:** I can make simple comparisons beginning to use science words. (2.1) I can explain what information in a bar chart or table shows. (2.2) With help I can begin to see a pattern in results. (2.2) I can notice and explain some patterns in results. (2.3)	**Conclude and Explain:** I can explain my observations using scientific vocabulary. (3.1) I can begin to explain a simple pattern in my results. (3.2) **Evaluation:** I can talk about possible improvements to my investigations. (3.3) **Validity:**	**Conclude and Explain:** I can use straightforward scientific evidence to answer questions and support findings. (4.1) I can draw simple conclusions, make predictions for new values. (4.2) I can identify and explain simple patterns in my results. (4.2)	**Conclude and Explain:** I can link my conclusions to any patterns in my results and I am beginning to make links using my scientific knowledge and understanding. (5.1) I can explain my findings, report conclusions and causal relationships in oral and written forms such as	**Conclude and Explain:** Using data in tables and bar charts I can explain some patterns in results and I can interpret a line graph. (6.1) Using evidence from a science activity I can link my conclusions to my scientific knowledge and understanding. (6.1)

			Evaluation: I know when things have gone wrong. (2.2) I can say if I was surprised or not by what happened. (2.2)	I am beginning to spot an unusual result. (3.3+)	**Evaluation:** I can talk about and begin to give reasons for possible improvements to my investigations – and raise further questions. (4.3) **Validity:** I can identify and begin to explain an unusual result. (4.3+)	displays and other presentations. (5.1) Using data in tables and bar charts I can explain some patterns in results and I am beginning to interpret a line graph. (5.3) I use appropriate scientific language to communicate my findings. (5.3) **Evaluation:** I can explain how and why I need to improve an investigation. (5.2) I can raise further questions that could be investigated based on data and observations. (5.2) **Validity:** I can spot an unusual result, giving a reason why I think it might have happened. (5.2)	I can explain causal relationships and patterns in my results. (6.2) I try to explain when I get one very different result. (6.2) **Explain and Evaluate:** I can use test results to make predictions, to raise questions and set up further comparative tests. (6.2) **Evaluation:** I can say how and why I could improve the way I carried out an investigation, and I know the value of repeat testing. (6.3) **Validity:** I can take repeat measurements that help me check the accuracy of my results. (6.3) I can explain the degree of trust in results. (6.3+)