Progression in Scientific Skills at Horn's Mill						
Focus	Team 1	Team 2	Team 3	Team 4	Team 5	Team 6
 Asking Questions	Ask simple questions and recognise that they can be answered in different ways e.g. • Why are flowers different colours? • Why do some animals eat meat and others do not?	Ask simple questions and recognise that they can be answered in different ways including use of scientific language from the national curriculum e.g. • Why do some trees lose their leaves in autumn and others do not? • How long are the roots of tall trees? • Why do some animals have underground habitats?	Ask relevant questions and use different types of scientific enquiries to answer them e.g. • Why does the moon appear as different shapes in the night sky? • Why do shadows change during the day? • Where does a fossil come from?	Ask relevant questions and use different types of scientific enquiries to answer them e.g. • Why are steam and ice the same thing? • Why is the liver important in the digestive system?	Plan different types of scientific enquires to answer given questions	Plan different types of scientific enquiries to answer their own or others' questions.
 Testing	Perform simple tests (Year 1 focus) e.g. • Which materials keep things warmest? Know whether the test has been successful and can say what has been learnt.	Perform simple comparative and fair tests (Yr 2 focus) e.g. • Finding out how seeds grow best	Set up simple practical enquiries, comparative and fair tests e.g. • To see which type of soil is most suitable when growing two similar plants? • To see if their right hand is as efficient as their left. Set up a fair test with different variables e.g. the best conditions for a plant to grow. Can explain to a partner why a test is a fair one	Set up simple practical enquiries, comparative and fair tests e.g. • Which of two instruments make the highest or lowest sound and does a glass of ice weigh more than a glass of water. Set up a fair test with more than one variable e.g. using different materials to cut out sound. Can explain to others why a test is fair e.g. discover how fast ice melts in different temps.	Set up an investigation when it is appropriate e.g. finding out which materials dissolve or not. Set up a fair test when needed e.g. • Which surfaces create most friction? Set up an enquiry based investigation e.g. • Find out what adults/ children can do now that they couldn't do when they were a baby. Know what variables are in a given enquiry and can isolate each one	Know which type of investigation is needed to suit a particular scientific enquiry e.g. Looking at the relationship between pulse and exercise. Set up a fair test when needed e.g. Does light travel in straight lines? Know how to set up an enquiry based investigation e.g. What is the relationship between oxygen and blood?

					when investigating. e.g. • Finding out how effective parachutes are when made with different.	
 Observing and Measuring	Use **simple equipment to observe closely** (Y1 focus) e.g. Magnifying glass.	**Use simple equipment** such as **thermometers** and **rain gauges** to observe closely changes over time.	**Make systematic and careful observations** and, where appropriate, **take accurate measurements using standard units, using a range of equipment**, including **thermometers and data loggers.**	**Make systematic and careful observations** and, where appropriate, **take accurate measurements using standard units, using a range of equipment**, including **thermometers and data loggers.**	**Take measurements using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate** (Y5 maths focus including capacity and mass).	**Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate** (Y6 focus including capacity, mass, ratio and proportion).
 Gathering & Recording Data	**Gather and record** data to **help in answering questions.**	**Gather and record data** to help in answering questions **including** from secondary sources of information using **drawings, labelled diagrams, block graphs or tables.**	**Gather, record, classify and present data** in a **variety** of ways to help in answering questions **drawings, labelled diagrams, keys and child constructed bar charts and tables.**	**Gather, record, classify and present data** in a **variety** of ways to help in answering questions **drawings, labelled diagrams, keys and child constructed bar charts and tables.**	**Record data and results of increasing complexity** using **scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs.**	**Record data and results of increasing complexity** using **scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs.**
 Interpreting and Communicating Results	Make **a simple written explanation** about what has been learned from an investigation or what conclusions have been found.	**Communicate his/her Ideas**, what he/she does and what he/she finds out In a variety of ways e.g. simple written reports or write ups.	**Report on findings from enquiries**, including **oral and written explanations**, displays or presentations of results and conclusions.	**Report on findings from enquiries**, including **oral and written explanations**, displays or presentations of results and conclusions.	**Report and present findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results**, in oral and written forms such as displays and other presentations.	**Report and present findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results**, in oral and written forms such as displays and other presentations.

 Evaluating		Use his/her **observations and ideas to suggest answers to questions** noticing similarities, differences and patterns.	**Use results to draw simple conclusions, make predictions** for new values, **suggest improvements** and **raise further questions.**	**Use results to draw simple conclusions, make predictions** for new values, **suggest improvements and raise further questions.**	**Use results to draw conclusions**. Is **evaluative** when explaining findings from scientific enquiries and is **clear about what has happened in recent enquiries and can relate this to other enquiries where appropriate.**	**Use results to draw conclusions. Is evaluative** when explaining findings from scientific enquiries and is **clear about what has happened in recent enquiries and can relate this to other enquiries where appropriate.**