Progression in skills Science

THE DEAN TRUST
Park View Academy

Working Scientifically

Ref	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Testing	Perform simple tests.	Perform simple comparative and fair.	Set up simple practical enquiries, comparative and fair tests.	Set up simple practical enquiries, comparative and fair tests.	Set up an investigation when it is appropriate. Set up a fair test when needed. Set up an enquiry-based investigation. Know what variables are in a given enquiry and can isolate each one when investigating.	Know which type of investigation is needed to suit a particular scientific enquiry. . Set up a fair test when needed.

Ref	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Scientific questioning	Ask simple questions and recognise that they can be answered in different ways.	Ask simple questions and recognise that they can be answered in different ways including use of scientific language from the national curriculum.	Ask relevant questions and use different types of scientific enquiries to answer them.	Ask relevant questions and use different types of scientific enquiries to answer them.	Plan different types of scientific enquires to answer given questions.	Plan different types of scientific enquiries to answer their own or others' questions.
Measuring	Use simple equipment to observe closely.	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)

Ref	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Gathering and recording	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.
Communicating Findings	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.

Ref	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Classifying	Identify and classify e.g., Mammals and birds.	Identify, group and classify according to a given criteria e.g., Deciduous and coniferous trees.	Group information according to common factors e.g., plants that grow in woodlands/plants that grow in gardens.	Group information according to common factors e.g., materials that make good conductors or insulators.	Group and classify things and recognise patterns using appropriate ways of presenting e.g., classification keys.	Group and classify things and recognise patterns using appropriate ways of presenting e.g., classification keys.
Scientific research			Use research to find out a range of things.	Use research to find out a range of things.	Find things out using a wide range of secondary sources of information.	Find things out using a wide range of secondary sources of information.
Concluding and questioning		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.

Ref	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Using scientific evidence			Use straightforward scientific evidence to answer questions or to support his/her findings.	Use straight forward scientific evidence to answer questions or to support his/her findings.	Identify scientific evidence that has been used to support or refute ideas or arguments.	Identify scientific evidence that has been used to support or refute ideas or arguments.