Working Scientifically Progression

Statements taken from:
Science programmes of study: National curriculum in England (2013) DFE, key stages 1 and 2.
Statutory framework for the early years foundation stage (2021) DFE.

skills \ stage	EYFS (3-5 years)	KS1 (5-7 years)	Lower KS2 (7-9 years)	Upper KS2 (9-11 years)
PLAN **Ask questions, make predictions, decide on the method and equipment**	➢ listen attentively and respond to what they hear with relevant questions	➢ ask simple questions and recognise that they can be answered in different ways	➢ ask relevant questions and use different types of scientific enquiries to answer them ➢ set up simple practical enquiries, comparative and fair tests	➢ plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary
DO **Carry out an enquiry using equipment**	➢ show an ability to follow instructions involving several ideas or actions ➢ be confident to try new activities… ➢ use a range of small tools… ➢ safely use and explore a variety of materials, tools and techniques	➢ observe closely, using simple equipment ➢ perform simple tests ➢ identify and classify	➢ make systematic and careful observations and, where appropriate, take accurate measurements using standard units, use 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
RECORD **Use drawings, tables or graphs to note observations and measurements**	➢ explore the natural world around them, making observations and drawing pictures of animals and plants	➢ gather and record data to help in answering questions	➢ gather, record, classify and present data in a variety of ways to help in answering questions ➢ record findings using simple scientific language, drawings, labelled diagrams, keys, 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
REVIEW **Interpret, communicate and evaluate results**	➢ participate in discussions, offering their own ideas, using recently introduced vocabulary ➢ offer explanations for why things might happen… ➢ express their ideas and feelings about their experiences ➢ know some similarities and differences… drawing on their experiences	➢ use their observations and ideas to suggest answers to questions	➢ report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions ➢ use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions ➢ identify differences, similarities or changes related to simple scientific ideas and processes ➢ use straightforward scientific evidence to answer questions or to support their findings	➢ use test results to make predictions to set up further comparative and fair tests ➢ 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 ➢ identify scientific evidence that has been used to support or refute ideas or arguments