CAPTAIN WEBB PRIMARY SCHOOL
Science Curriculum – Key Knowledge and Skills

Working Scientifically						
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
PLAN						
Asking and answering questions	I can use every day language and begin to use scientific words to ask or answer a question.	I can suggest ideas and ask simple questions and know that they can be answered and investigated in different ways.	I can use ideas to pose questions, independently, about the world around me.	I can ask relevant questions, building on my prior scientific knowledge.	I can raise different types of scientific questions, and hypotheses.	I can select the most appropriate line of enquiry to investigate scientific questions.
Making predictions	I can begin to say what might happen in an investigation.	I can begin to make predictions.	I can make predictions and begin to give a reason.	I can make predictions and give a reason using simple scientific vocabulary.	I can make predictions and give a reason using scientific vocabulary.	I can make predictions and give a reason using scientific vocabulary, basing them on findings from previous investigations.
Setting up tests	I can follow instructions, and make choices, to complete a simple test individually or in a group.	I can do things in the correct order when performing a simple test and begin to recognise when something is unfair.	I can discuss enquiry methods and describe a fair test.	I can make decisions about different enquires, including recognising when a fair test is necessary and beginning to identify variables.	I can plan a range of science enquires, including comparative and fair tests.	I can select and plan the most suitable line of enquiry, explaining which variables need to be controlled and why, in a variety of comparative and fair tests.

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DO						
Making observations	I can observe objects, materials and living things and describe what I see.	I can observe something closely and describe changes over time.	I can make decisions about what to observe during an investigation.	I can make systematic observations.	I can make systematic and careful observations using specific intervals of time.	I can make my own decisions about which observations to make.
Identifying and classifying	I can sort and group objects, materials and living things, with help, according to simple observational features. Can use sorting rings to classify in more than 2 groups answering yes or no questions. Can sort using a simple 2 criteria Venn diagram.	I can decide, with help, how to group materials, living things and objects, noticing changes over time and beginning to see patterns. Can identify and classify. Use simple keys based and yes or no questions. Can sort into 2 groups explaining their reason clearly.	I can talk about a criteria for grouping, sorting and categorising, beginning to see patterns and relationships. Can use simple classification keys and Venn diagram with 2 sorting criteria and 1 intersecting. Begin to use Carroll diagrams. Can give reading for their sorting criteria.	I can identify similarities, differences and changes when talking about scientific processes and can use and begin to create simple keys. Can record using classification keys. Can use Venn and Carroll diagrams for classification, choosing own criteria.	I can use and develop keys to identify, classify and describe living things and materials. Can use and develop classification keys and other information records to identify, classify and describe. Can classify in a number of ways.	I can identify and explain patterns seen in the natural environment. Can use and produce classification keys independently by posing questions.

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Taking measurements	I can use simple, nonstandard equipment and measurements in a practical task.	I can use simple equipment, such as hand lenses or egg timers, to make measurements.	I can take accurate measurements using standard units.	I can take accurate measurements using standard units and a range of equipment, including thermometers and data loggers.	I can take measurements using a range of scientific equipment with increasing accuracy and precision.	I can choose the most appropriate equipment, decide how long to take measurements for and explain how to use it accurately.
Gather and record data	I can begin to record simple data and can talk about my findings, explaining what I have found out. Begin to show accuracy in drawings and simple labels. Use key scientific vocabulary provided by the teacher. Can complete a simple table of results (prepared). Can add marks to a chart to collect data. Can complete a prepared block graph/pictogram.	I can gather data, record and talk about my findings, using simple scientific vocabulary. Record their observations using photos, drawings, labelled diagrams. Record findings using scientific language. Count results using a tally chart. Use prepared tables to record results. Can record using prepared vertical bar charts. Can use results from tally charts.	I can report my findings using scientific language and present in note form, writing frames, diagrams, tables and charts. Record findings using scientific language, drawings and labelled diagrams. Can complete a table (with given template) where they add headings and results. Can produce vertical and horizonal bar charts adding own labels and bars.	I can choose appropriate ways to record and present information, findings and conclusions for different audiences. Record findings using systematic and careful observational drawings and labelled diagrams. Chn supported to present the same data in different ways – with choice over recording. Can create own labels with own headings. Can convert between units of measure.	I can record data and results of increasing complexity using scientific diagrams, labels, classification keys, tables, bar and line graphs and models. Chn decide how to record data from a choice of familiar approaches. Present results in a variety of ways to help answer questions. Can produce own results table indicating cause and effect. Record results systematically.	I can choose the most effective approach to record and report results, linking to mathematical knowledge. Chn present the same data in different ways to help answer questions. Record data and results with increasing complexity. Use scientific diagrams and labels. Chn can calculate the mean of a set of data. Chn use multiple data sets. Can independently collect data and

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				Can use discrete and continuous data, presenting data in a line/scatter graph. Can construct a pictogram/bar chart independently.	Can use line or scatter graphs to calculate range in a set of data. Can produce bar graphs with various increments.	produce scatter and line graphs. Can create bar charts and pie charts to present data.
REVIEW						
Drawing conclusions	I can explain, with help, what I think I have found out.	I can use simple scientific language to explain what I have found out.	I can draw, with help, a simple conclusion based on evidence from an enquiry or observation.	I can use recorded data to explain outcomes, pose new questions and suggest improvements for further enquiries.	I can justify my conclusions on a hypothesis, and can begin to recognise how scientific ideas change over time.	I can identify validity of a conclusion, causal relationships, and explanations of degrees of trusts in results and can discuss how scientific ideas develop over time.
Analyse and evaluate	I can how to discuss if my scientific enquiry was successful.	I can identify simple patterns and relationships using simple comparative language.	I can use results to make predictions for following investigations.	I can use results to make predictions for following investigations, suggest improvements and raise further questions.	I can use test results to make predictions to set up further comparative and fair tests.	I can use results from a scientific enquiry to form a new theory.