Year 4 Progression of Skills

Biology				
Big Idea	Programmes of study	Working towards expectations	Meeting expectations	Exceeding expectations
Living things can be classified according to observable features	Recognise that living things can be grouped in a variety of ways.	The child can suggest a way of grouping living things, e.g. sort shells by colour.	The child can suggest different ways of sorting the same group of living things, e.g. grouping birds according to where they live, what they eat and size of adults.	The child can suggest why some ways of grouping living things may be more useful than others, e.g. why grouping by number of legs is an easy aid to identification.
	Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment.	The child can use classification keys to group and identify members from a small group of living things.	The child can use classification keys to group and identify members from a range of familiar and less familiar living things.	The child can devise own classification keys to group living things.
Habitats provide living things with what they need	Recognise that environments can change and that this can sometimes pose dangers to living things.	The child can describe how environments might change.	The child can describe examples of living things that are threatened by changes to environments, e.g. owls and habitat loss.	The child can describe examples of living things adapting to environmental change, e.g. urban foxes, and examples of extinction due to environmental change.
The human body has	Describe the simple functions of the basic parts of the digestive system in humans.	The child can describe the purpose of the digestive system in humans.	The child can identify what each of the principal organs in the digestive system do.	The child can explain why the simple functions of the basic parts of the digestive system in humans are necessary.

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	Identify the different types of teeth in humans and their simple functions .	The child can recognise that humans have different types of teeth.	The child can describe the function of each type of tooth in the humans skull.	The child can explain why humans have different types of teeth.
	Construct and interpret a variety of food chains, identifying producers, predators and prey.	The child can understand the roles of producers, predators and prey.	The child can use a food chain to represent predator-prey relationships.	The child can suggest what might happen in a food chain if the population of one of the organisms changes.

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Chemistry				
Big Idea	Programmes of study	Working towards expectations	Meeting expectations	Exceeding expectations
Materials have physical properties which can be investigated and	Compare and group materials together, according to whether they are solids, liquids or gases.	The child can recognise the state of matter of different materials.	The child can group materials according to their state of matter.	The child can recognise that some materials (e.g. toothpaste) cannot be easily classified as solid. liquid or gas.
Materials can exist in different states and that these states can	Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.	The child can relate the terms 'evaporation' and 'condensation' to water.	The child can describe how evaporation and condensation happen in the water cycle, and how temperature affects evaporation.	The child can apply the relationship between rate of evaporation with temperature to everyday contexts.
	Observe that some materials change state when they are heated or cooled, and measure or research the temperature at which this happens in degrees Celsius (°C).	The child can recognise that materials may change state.	The child can identify changes of state and research values of degrees Celsius (°C) at which changes happen.	The child can suggest patterns in which kinds of materials change state at higher or lower temperatures.

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Physics				
Big Idea	Programmes of study	Working towards expectations	Meeting expectations	Exceeding expectations
Light & sound can be reflected & absorbed and enable us to see and hear	Identify how sounds are made, associating some of them with something vibrating.	The child can identify how an object may vibrate.	The child can explain, with reference to vibrations, how an object makes a sound.	The child can group sound-making objects in terms of how they make sounds.
	Recognise that vibrations from sounds travel through a medium to the ear.	The child can recognise that the ear detects vibrations.	The child can describe the role of a medium in the transmission of sound.	The child can compare the effectiveness of different media in terms of their ability to transmit sound.
	Recognise that sounds get fainter as the distance from the sound source increases.	The child can suggest why some sounds are louder than others.	The child can describe the effect of moving further from the source of a sound.	The child can explain with reference to examples how sounds get fainter as the distance from the source increases.
	Find patterns between the pitch of a sound and features of the object that produced it.	The child can recognise that the pitch of a sound can be varied.	The child can explain with reference to a particular object how the pitch of the sound can be changed.	The child can identify generic features that cause the pitch of a note to be changed.
	Find patterns between the volume of a sound and the strength of the vibrations that produced it.	The child can recognise that the volume of a sound can be varied.	The child can explain with reference to a particular object how the volume of the sound can be changed.	The child can identify generic features that cause the volume of a note to be changed.
Electricity can make circuits work and can be controlled to perform useful	Identify common appliances that run on electricity.	The child can recognise that some appliances run on electricity.	The child can list examples of appliances that run on electricity.	The child can compare and contrast appliances that run on mains electricity with those that run on batteries.
	Construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers.	The child can construct a simple circuit.	The child can construct a simple circuit and name its components.	The child can identify the functions of components within a circuit.
	Recognise some common conductors and insulators, and associate metals with being good conductors.	The child can identify metal as a conductor.	The child can sort materials into conductors and insulators, identifying metals as conductors.	The child can investigate graphite as a conductor and relate to other materials

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	Identify whether or not a lamp will light in a simple series circuit, based on whether or not the lamp is part of a complete loop with a battery.	The child can understand that a complete circuit is needed for a circuit to operate.	The child can predict whether a particular arrangement of components will result in a bulb lighting.	The child can explain why certain arrangements will not result in the bulb lighting.
	Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit.	The child can describe the function of a switch.	The child can predict how the operation of a switch will affect bulbs lighting.	The child can explain how altering the location of a switch affects the operation of the circuit.

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Working Scientifically					
Process	Sub- process	Programmes of study	Working towards expectations	Meeting expectations	Exceeding expectations
Planning investigations	Children can ask questions	Ask relevant questions.	The child can, with support, develop relevant, testable questions.	The child can develop relevant, testable questions, e.g. based on observations of animals.	The child can develop a range of relevant testable questions.
	Children can plan an enquiry	Plan different types of scientific enquiries to answer questions.	The child can plan enquiries, such as a comparative or fair test.	The child can plan investigations using different types of scientific enquiry, e.g. exploring various materials by observing change over time, running comparative tests and conducting surveys.	The child can, with support, answer questions using evidence gathered from different types of scientific enquiry.
	Children can identify and manage variables	Set up simple and practical enquiries, comparative and fair tests.	The child can set up a comparative test.	The child can set up comparative and fair tests, e.g. finding patterns in the sounds made by elastic bands of different thicknesses.	The child can, with prompting, identify and manage variables.
Conducting experiments	Children can use equipment to take measures	Make systematic and careful observations using a range of equipment, including thermometers and data loggers.	The child can use various equipment, as instructed, e.g. a thermometer.	The child can use various equipment, as instructed, repeatedly and with care, e.g. thermometers.	The child can select and use various equipment repeatedly and with care, e.g. measuring jug to measure volume, and discuss alternatives.

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	Children explore how to improve the quality of data	Take accurate measurements using standard units, where appropriate.	The child can use standard measurements when taking measurements.	The child can recognise the importance of using standard units and measures accurately, e.g. measuring temperature when investigating its effect on washing drying.	The child can take measurements that are precise as well as accurate.
Record evidence	Children record work with diagrams and label them.	Record findings using simple scientific language, drawings and labelled diagrams.	The child can, with prompting, draw and label diagrams.	The child can use words and diagrams to record findings, e.g. how habitats change during the year.	The child can start to use labelled diagrams to show more complex outcomes.
	Children can display data using labelled diagrams, keys, tables and bar charts	Record findings using keys, bar charts, and tables.	The child can, with prompting, use tables to record evidence.	The child can use various ways to record evidence, e.g. comparing the teeth of herbivores and carnivores.	The child can, with prompting, use various ways to record complex evidence.
	Children can display data using line graphs	Gather, record, classify and present data in a variety of ways to help to answer questions.	The child can, with prompting, gather and display evidence in various way.	The child can use various ways to record, group and display evidence, e.g. grouping and classifying various materials.	The child can use line graph to record basic data.
Report findings	Children process findings to develop conclusions and identify casual relationships.	Report on findings from enquiries, including oral and written explanations, of results and conclusions.	The child can, with prompting, write a conclusion based on evidence.	The child can write a conclusion based on evidence, e.g. effect on brightness of bulbs if more cells are added.	The child can, with prompting, write a conclusion using evidence and identifying causal links.

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	Children use displays and presentations to report on findings.	Report on findings from enquiries using displays or presentations.	The child can indicate findings from an enquiry that could be reported.	The child can present findings either in writing or orally, e.g. relating to investigating which materials are conductors.	The child can, with support, display and present key findings from enquiries orally and in writing.
Conclusions and predictions	Children can analyse data.	Identify differences, similarities or changes related to simple scientific ideas and processes.	The child can, with prompting, recognise patterns that relate to scientific ideas.	The child can recognise patterns that relate to scientific ideas, e.g. finding out which materials make better earmuffs.	The child can arrange data to make clear key characteristics.
	Children can draw conclusions.	Use straightforward scientific evidence to answer questions or to support their findings.	The child can, with support, use evidence to produce a simple conclusion.	The child can use evidence to produce a simple conclusion, e.g. the effect of temperature on various substances.	The child can show how evidence supports a conclusion.
	Children can develop investigation further	Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions.	The child can suggest how an investigation could be extended.	The child can use evidence to suggest further relevant investigations, e.g. making own instruments, using ideas about pitch and volume.	The child can suggest further relevant comparative or fair tests.