	Year 1	BAND 2	BAND 3	BAND 4	BAND 5	BAND 6
Questioning	To know that we can **ask simple questions** and know that they can be answered in **different ways** e.g. What materials are hard or soft? To know we ask people questions and use simple secondary sources to find answers.	To know that we can **ask simple questions** and recognise that they can be answered in **different ways** using **scientific language** e.g. How would you classify these materials, why? To know we can ask people questions and use simple secondary sources to find an answer answers.	To know that we can **raise our own relevant questions** and **use the 5 different types of enquiries to answer them** e.g. Are all rocks as hard as each other? To know **when and how secondary sources might help** them to answer questions that cannot be answered through practical investigations	To know that we can **raise** our own **relevant questions** and more confidently **use the 5 different types of enquiries to answer them** e.g. what material would make the best ear muffs? To know **when and how secondary sources might help** them to answer questions that cannot be answered through practical investigations	To know that we can use our scientific experiences to think **deeper** about the world around us. Recognise **which** secondary sources will be most useful to research their ideas and **begin** to **separate opinion from fact**	To know that we can use our scientific experiences to think **deeper** about the world around us. Recognise **which** secondary sources will be most useful to research their ideas and **begin** to **separate opinion from fact**
Testing	To know that a **simple test** can answer questions e.g. What materials are hard or soft? To know the different enquiry types and that they can be used to answer different questions.	To know that a **simple comparative test** can answer questions e.g. Do plants need light and water to stay healthy? To know the different enquiry types and that they can be used to answer different questions.	To know how to, **more independently,** set up **comparative and fair tests** to answer a question e.g. What materials work best to connect across a gap in a circuit? To know how to make and test a **prediction**. To know in a fair test the **independent variable** is changed and this affects the **dependent variable** whilst everything else stays the same.	To know how to, **more independently,** set up **comparative and fair tests** to answer a question e.g. What materials work best to connect across a gap in a circuit? To know how to make and test a **prediction with more confidence**. To know in a fair test the **independent variable** is changed and this affects the **dependent variable** whilst everything else stays the same.	To know how **to plan different types of fair tests** to answer questions, **including recognising and controlling variables where necessary** e.g. Does the surface area of a windmill affect the speed that it turns? To know how to **select an appropriate variable** to test a hypothesis. To know how to select and plan the **most appropriate** types of enquiry to answer a question.	To know how to **confidently plan different types of fair tests** to answer questions, **including recognising and controlling variables where necessary** e.g. Which colour of worm is best adapted to our chosen environment, the field? To know how to **select an appropriate variable** to test a hypothesis. To know how to select and plan the **most appropriate** types of enquiry to answer a question.
Identifying and Classifying	To know that objects can be **identified and sorted** into groups based on their features or properties e.g. Group animals based on what they eat.	To know that we can **identify, group and classify** objects based on their features or properties e.g. Are they are living, dead or were they never alive?	To know that we can **identify, group and classify** objects using **simple classification keys.** To know that different **criteria** can be discussed and used to identify, group and classify.	To know that we can **identify, group and classify** objects using **simple classification keys and generate their own classification keys.** To know that different **criteria** can be discussed and used to identify, group and classify.	To know how to use and **develop** classification keys and other information records to identify, classify and describe living things The classification of invertebrates into: insects, spiders, snails and worms and vertebrates into: birds, mammals, amphibians, reptiles and fish. To know how to identify patterns that might be found in the natural environment.	To know how to use and **develop** classification keys and other information records to identify, classify and describe living things The classification of invertebrates into: insects, spiders, snails and worms and vertebrates into: birds, mammals, amphibians, reptiles and fish. To know how to identify patterns that might be found in the natural environment.
Observing	To know that we can **observe closely** (over time) using our **eyes and a hand lens** e.g. a tree over the seasons To know that **with help, we might spot patterns.**	To know that we can **observe closely** (over time) using **our eyes, egg timers, rulers and magnifying glasses** e.g. measure a plant growing using hand lens and rulers. To know how to **spot patterns.**	To know how to **begin** to make **systematic and careful observations** (over time) using a range of equipment to take **accurate measurements.** To know how to look for patterns and decide how to **collect data to show them.**	To know how to make **systematic and careful observations** (over time) using a range of equipment to take **accurate measurements.** To know how to look for patterns and decide how to **collect data to show them.**	To know we can **make decisions about what observations to make,** what measurements to use and how long to make them for.	To know we can make decisions about what observations to make, what measurements to use and how long to make them for.
Gathering and recording data	To know that we can **draw pictures or write down** what we notice when we try to answer questions e.g. drawing a diagram showing the parts of a plant.	To know that we can **collect and record data in different ways** to help in answering questions e.g. keep a bean diary to show the length of a plant over time.	To know how to **gather, record and classify data** using a **variety of equipment** e.g. data loggers and thermometres accurately, to help in answering questions. To know how to record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and 2-way tables .	To know how to **gather, record and classify data** using a **variety of equipment** e.g. data loggers and thermometres accurately, to help in answering questions. To know how to record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and 2-way tables .	To know how to choose the **most appropriate equipment** (digital and analogue scales), with increasing accuracy and precision, taking repeat readings when appropriate and finding an average result (make require removal of an outlier. To know how to record data and results of **increasing complexity** using scientific diagrams and labels, classification keys, tables, **scatter graphs,** bar and **line graphs.**	To know how to choose the **most appropriate equipment** (digital and analogue scales), with increasing accuracy and precision, taking repeat readings when appropriate and finding an average result (make require removal of an outlier. To know how to record data and results of **increasing complexity** using scientific diagrams and labels, classification keys, tables, **scatter graphs,** bar and **line graphs.**
Reporting presenting and communicating findings	To know we can use what we notice (observe) and our ideas to **suggest answers** to questions .	To know we can use our observations and our ideas to **suggest answers** to questions noticing similarities, differences and patterns .	To know that we can **identify differences, similarities or changes in data** to make **simple** conclusions and answer questions. To know how **with help** to write up an experiment (introduction, equipment list, method, results and conclusions) To know how to report findings from enquiries **orally,** as written explanations, displays or as presentations of results and conclusions e.g. make a collage, a mobile or any imaginative way to present findings. To know how to use **straightforward** scientific evidence from secondary sources and other scientists to answer questions or to support enquiry findings. To **start to** know that conclusions can lead to further questions about their results and observations. To **begin** to know a hypothesis is an idea that requires testing and a theory is an idea based on some evidence.	To know that we can **identify differences, similarities or changes in data** to make conclusions and answer questions. To know how to write up an experiment (introduction, equipment list, method, results and conclusions) To know how to report findings from enquiries **orally,** as written explanations, displays or as presentations of results and conclusions e.g. make a collage, a mobile or any imaginative way to present findings. To know how to use **straightforward** scientific evidence from secondary sources and other scientists to answer questions or to support enquiry findings. To know that conclusions can lead to further questions about their results and observations. To know a hypothesis is an idea that requires testing and a theory is an idea based on some evidence.	To know how to explain results from enquiries by finding **causal relationships** and making conclusions using appropriate scientific language. To know how to report results in a clearly planned and oral presentation and written forms such as a full structured write up using appropriate scientific language. To know how to describe and evaluate results and other people's scientific ideas (including ideas that have changed over time), using evidence from a range of sources. To be able to identify and describe what might have gone wrong during an investigation and explain why. To know how to think of new questions about their results and observations and to further test them. To know how a **range** of secondary sources of information can support or refute ideas or arguments.	To know how to explain results from enquiries by finding **causal relationships** and making conclusions using appropriate scientific language. To know how to report results in a clearly planned and oral presentation and written forms such as a full structured write up using appropriate scientific language. To know how to describe and evaluate results and other people's scientific ideas (including ideas that have changed over time), using evidence from a range of sources. To be able to identify and describe what might have gone wrong during an investigation and explain why. To know how to think of new questions about their results and observations and to further test them. To know how a **wide range** of secondary sources of information can support or refute ideas or arguments.