George Street Science Curriculum

Intent

We follow a practice of a partnership between knowledge and skills.

1. Working Scientifically Skills

We aim to engage and value children's innate curiosity and to foster a strong enjoyment of discovery through the systematic and purposeful teaching of Working Scientifically skills, in order that they develop a naturally inquisitive approach to learning and life, questioning and 'tinkering' in order to expand their understanding and open mindset.

We aim for all children to leave their year group at the level expected for their age, and where they have not, they are making accelerated progress in order to close the gap.

2. Investigations Types

Our children will have a wide experience of types of investigation, and as they progress through the school, they will begin to be able to choose which is the most appropriate in order to answer a question, or test an idea.

3. Topic Knowledge

Our intention is that all children continuously build the knowledge that they learn through our Science Curriculum in a memorable way, making links between concepts, so that they can apply it explicitly and implicitly in their lessons, their future education and their lives within the wider world.

Implementation

Teachers plan to include children's own ideas and questions, which not only enables them to have a motivational element of control over their learning journey, but also assists teachers to pick up on misconceptions and plan using Assessment for Learning.

All types of investigation are covered across each year group, in multiple, relevant ways, to embed the skills and allow for children to select investigation methods more independently. These include: **Fair Test, Pattern Spotting, Observation over Time, Comparing, organising and sorting, Asking and Answering Our Own Questions and Research.** Some of these will be more appropriate for different topics, for example the Space topic may involve more research, and Changes of Materials may involve more fair testing, although other investigations types can and should be covered.

A variety of approaches to learning are used within each unit, in order to engage all children and solidify knowledge. These may include: written work in different genres (diary, descriptive, report, instructions); diagrams, drawings and models; presentations, group-work and posters.

An annual Science Week is used to its full potential to engross all children, ensuring a deeper and thorough understanding and an excitement in the subject.

Visitors and trips within Science Week and across the year are similarly used to enrich our science teaching and learning, in meaningful and memorable ways.

Our school is well resourced and all children have access to the practical tools that they need to gain the crucial hands-on experience.

Impact

The impact of the science learning at George Street will be evident in the recording in books, displays and pupil voice. Children will articulate their current and past learning clearly, using correct vocabulary and with enthusiasm. They will show curiosity about a new topic and ask relevant questions, linking new learning to existing knowledge. They will have a scientific approach to investigating, suggesting their own ideas to find solutions and to record findings.

Early Years Curriculum. Red Lettering shows where knowledge fits into Ks1 and 2 topics.

Three and four year olds	Communication and language	Understand 'why' questions, like: "Why do you think the caterpillar got so fat?" WORKING SCIENTIFICALLY
	Personal, Social and Emotional Development	Make healthy choices about food, drink, activity and toothbrushing. ANIMALS INCLUDING HUMANS
	Understanding the World	Use all their senses in hands-on exploration of natural materials. MATERIALS • Explore collections of materials with similar and/or different properties. MATERIALS • Talk about what they see, using a wide vocabulary. WORKING SCIENTIFICALLY • Begin to make sense of their own life-story and family's history. ANIMALS INCLUDING HUMANS

		• Explore how things work. WORKING SCIENTIFICALLY • Plant seeds and care for growing plants. PLANTS • Understand the key features of the life cycle of a plant and an animal. ANIMALS INCLUDING HUMANS • Begin to understand the need to respect and care for the natural environment and all living things. LIVING THINGS AND THEIR HABITATS • Explore and talk about different forces they can feel. FORCES • Talk about the differences between materials and changes they notice. MATERIALS
Reception	Communication and language	WORKING SCIENTIFICALLY Learn new vocabulary. Ask questions to find out more and to check what has been said to them. Articulate their ideas and thoughts in well-formed sentences. Describe events in some detail. Use talk to help work out problems and organise thinking and activities, and to explain how things work and why they might happen. Use new vocabulary in different contexts.
	Personal, Social and Emotional Development	Know and talk about the different factors that support their overall health and wellbeing: - regular physical activity - healthy eating - toothbrushing - sensible amounts of 'screen time' - having a good sleep routine - being a safe pedestrian ANIMALS INCLUDING HUMANS
	Understanding the World	Explore the natural world around them. LIVING THINGS AND THEIR HABITATS

			Describe what they see, hear and feel while they are outside. LIVING THINGS AND THEIR HABITATS Recognise some environments that are different to the one in which they live. LIVING THINGS AND THEIR HABITATS Understand the effect of changing seasons on the natural world around them. SEASONSAL CHANGE
ELG	Communication and language	Listening Attention and Understanding	Make comments about what they have heard and ask questions to clarify their understanding. WORKING SCIENTIFICALLY
	Personal, Social and Emotional Development	Managing Self	Manage their own basic hygiene and personal needs, including dressing, going to the toilet and understanding the importance of healthy food choices. NUTRITION / ANIMALS INCLUDING HUMANS
	Understanding the World	The Natural World	Explore the natural world around them, making observations and drawing pictures of animals and plants. ANIMALS INCLUDING HUMANS Know some similarities and differences between the natural world around them and contrasting environments, drawing on their experiences and what has been read in class. LIVING THINGS AND THEIR HABITATS Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter. SEASONSAL CHANGE

Curriculum Map

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 1	Everyday Materials	Animals including Humans: 5 Senses Seasonal Changes: Autumn and Winter	Animals including Humans: Animals Seasonal Changes: Spring		Plants Seasonal Changes: Summer	
Year 2	Materials		Animals including Humans	Plants	Living things and their habitat	
Year 3	Light	Rocks	Forces and Magnets	Plants	Animals including humans	
Year 4	States of Matter	Electricity	Classification, living things and their habitats		Sound & vibrations	Animals including Humans
Year 5	Space	Forces and Mechanisms	Properties and Changes of Materials		Living things and their habitat	Animals including humans
Year 6	Light	Electricity	Living things and their habitat		Evolution and inheritance	Animals including humans

Types of Investigations **A balance of investigation types should be used across each year, used as appropriate across each topic.**





Fair Test **Pattern Spotting** **Observation over Time** **Comparing, organising and sorting** **Asking and Answering Our Own Question** **Research**

Curriculum Overview

Year 1				
topics	**Animals Including Humans**	**Everyday Materials**	**Plants**	**Seasonal Changes**
Substantive Knowledge	identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals identify and name a variety of common animals that are carnivores, herbivores and omnivores describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets) identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense.	distinguish between an object and the material from which it is made identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock describe the simple physical properties of a variety of everyday materials compare and group together a variety of everyday materials on the basis of their simple physical properties.	identify and name a variety of common wild and garden plants, including deciduous and evergreen trees identify and describe the basic structure of a variety of common flowering plants, including trees.	Observe changes across the four seasons. Observe and describe weather associated with the seasons and how day length varies
Working Scientifically **(Disciplinary Knowledge)**	asking simple questions and recognising that they can be answered in different ways identifying and classifying gathering and recording data to help in answering questions.	asking simple questions and recognising that they can be answered in different ways performing simple tests identifying and classifying using their observations and ideas to suggest answers to questions gathering and recording data to help in answering questions.	observing closely, using simple equipment performing simple tests identifying and classifying	observing closely, using simple equipment identifying and classifying
Investigation types	Classifying Pattern Seeking Researching	Classifying Comparative Test Pattern Seeking	Classifying Pattern Seeking Observing over time	Classifying Pattern Seeking Observing over time Researching

Year 2				
topics	**Animals Including Humans**	**Use of Everyday Materials**	**Plants**	**Living Things and Their habitats**
Substantive Knowledge	notice that animals, including humans, have offspring which grow into adults find out about and describe the basic needs of animals, including humans, for survival (water, food and air) describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene.	identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.	observe and describe how seeds and bulbs grow into mature plants find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.	explore and compare the differences between things that are living, dead, and things that have never been alive identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other identify and name a variety of plants and animals in their habitats, including microhabitats describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and name different sources of food.
Working Scientifically **(Disciplinary Knowledge)**	ask their own questions about what they notice gather and record data, using pictograms, tally charts, block diagrams and simple tables observe changes over time notice similarities, differences and patterns group and classifying things communicate their ideas, what they do and what they find out in a variety of ways, including orally, in writing and using diagrams	ask their own questions about what they notice gather and record data, using pictograms, tally charts, block diagrams and simple tables use simple equipment where appropriate notice similarities, differences and patterns group and classifying things carry out simple comparative tests finding things out using secondary sources of information communicate their ideas, what they do and what they find out in a variety of ways, including orally, in writing and using diagrams	ask their own questions about what they notice gather and record data, using pictograms, tally charts, block diagrams and simple tables observe changes over time notice similarities, differences and patterns group and classifying things carry out simple comparative tests [light/dark/water/no water] communicate their ideas, what they do and what they find out in a variety of ways, including orally, in writing and using diagrams	ask their own questions about what they notice gather and record data, using pictograms, tally charts, block diagrams and simple tables observe closely using simple equipment [pooter, magnifying glass] notice similarities, differences and patterns group and classifying things finding things out using secondary sources of information communicate their ideas, what they do and what they find out in a variety of ways, including orally, in writing and using diagrams
Investigation types	Classifying Pattern Seeking	Classifying Pattern Seeking Researching Comparative Test	Classifying Observing over time Comparative Test	Classifying Pattern Seeking Researching

Year 3					
topics	**Animals Including Humans**	**Rocks**	**Plants**	**Light**	**Forces and magnets**
Substantive Knowledge	identify that animals, including humans, need the right types and amount of nutrition, and that they cannot make their own food; they get nutrition from what they eat identify that humans and some other animals have skeletons and muscles for support, protection and movement.	compare and group together different kinds of rocks on the basis of their appearance and simple physical properties describe in simple terms how fossils are formed when things that have lived are trapped within rock recognise that soils are made from rocks and organic matter.	identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers explore the requirements of plants for life and growth (air, light, water, nutrients from soil, and room to grow) and how they vary from plant to plant investigate the way in which water is transported within plants explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal	recognise that they need light in order to see things and that dark is the absence of light notice that light is reflected from surfaces recognise that light from the sun can be dangerous and that there are ways to protect their eyes recognise that shadows are formed when the light from a light source is blocked by an opaque object find patterns in the way that the size of shadows change.	compare how things move on different surfaces notice that some forces need contact between two objects, but magnetic forces can act at a distance observe how magnets attract or repel each other and attract some materials and not others compare and group together a variety of everyday materials on the basis of whether they are attracted to a magnet, and identify some magnetic materials describe magnets as having two poles predict whether two magnets will attract or repel each other, depending on which poles are facing.

Working Scientifically **(Disciplinary Knowledge)**	using different types of scientific enquiries to answer questions, including their own setting up simple practical enquiries, comparative and fair tests, with guidance [longest femur = furthest jump] making careful observations, including measuring length in m, cm, mm, as appropriate gathering, recording and presenting data to help in answering questions recording findings using simple, modelled scientific language, drawings, labelled diagrams, bar charts, and tables reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions with guidance, using results to draw simple conclusions, suggest improvements and raise further questions using the evidence they have collected to answer questions or prove a statement	using different types of scientific enquiries to answer questions, including their own setting up simple practical enquiries, ~~comparative and fair tests,~~ with guidance making careful observations, ~~including measuring length in m, cm, mm, as appropriate~~ recording findings using simple, modelled scientific language, drawings, labelled diagrams, ~~bar charts, and tables~~ reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions with discussion, identifying differences, similarities or changes related to what they have observed or found out [skeletons of different animals]	using different types of scientific enquiries to answer questions, including their own setting up simple practical enquiries, comparative ~~and fair tests,~~ with guidance making careful observations, including measuring length in m, cm, mm, as appropriate gathering, recording and presenting data to help in answering questions recording findings using simple, modelled scientific language, drawings, labelled diagrams, ~~bar charts,~~ and tables reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions with discussion, identifying ~~differences, similarities or~~ changes related to what they have observed or found out	using different types of scientific enquiries to answer questions, including their own setting up simple practical enquiries, comparative and fair tests, with guidance making careful observations, including measuring length in m, cm, mm, as appropriate gathering, recording and presenting data to help in answering questions recording findings using simple, modelled scientific language, drawings, labelled diagrams, ~~bar charts, and tables~~ with guidance, using results to draw simple conclusions, suggest improvements and raise further questions with discussion, identifying differences, similarities or changes related to what they have observed or found out using the evidence they have collected to answer questions or prove a statement	using different types of scientific enquiries to answer questions, including their own setting up simple practical enquiries, comparative and fair tests, with guidance making careful observations, including measuring length in m, cm, mm, as appropriate gathering, recording and presenting data to help in answering questions recording findings using simple, modelled scientific language, drawings, labelled diagrams, bar charts, and tables reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions with guidance, using results to draw simple conclusions, suggest improvements and raise further questions with discussion, identifying differences, similarities or changes related to what they have observed or found out using the evidence they have collected to answer questions or prove a statement
Investigation types	Classifying Pattern Seeking Researching Comparative and Fair Test	Classifying Pattern Seeking Researching	Classifying Pattern Seeking Observing over time	Classifying Pattern Seeking Observing over time	Classifying Pattern Seeking Comparative Test and Fai

Year 4					
topics	**Animals Including Humans**	**States of Matter**	**Living Things and Their Habitats**	**Sound**	**Electricity**
Substantive Knowledge	describe the simple functions of the basic parts of the digestive system in humans identify the different types of teeth in humans and their simple functions construct and interpret a variety of food chains, identifying producers, predators and prey.	compare and group materials together, according to whether they are solids, liquids or gases 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) identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.	recognise that living things can be grouped in a variety of ways explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment recognise that environments can change and that this can sometimes pose dangers to living things.	identify how sounds are made, associating some of them with something vibrating recognise that vibrations from sounds travel through a medium to the ear find patterns between the pitch of a sound and features of the object that produced it find patterns between the volume of a sound and the strength of the vibrations that produced it	identify common appliances that run on electricity construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers 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 recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit

				recognise that sounds get fainter as the distance from the sound source increases.	recognise some common conductors and insulators, and associate metals with being good conductors.
Working Scientifically **(Disciplinary Knowledge)**	asking relevant questions and using different types of scientific enquiries to answer them setting up simple practical enquiries, comparative and fair tests recording findings using appropriate scientific language, drawings, labelled diagrams, ~~keys, bar charts, and tables~~ reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions	asking relevant questions and using different types of scientific enquiries to answer them setting up simple practical enquiries, comparative and ~~fair tests~~ making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers recording findings using appropriate scientific language, drawings, labelled diagrams, ~~keys,~~ bar charts, and tables reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions identifying differences, similarities or changes related to simple scientific ideas and processes using straightforward scientific evidence to answer questions or to support their findings, explaining how the results helped them to find the answer	asking relevant questions and using different types of scientific enquiries to answer them gathering, recording, classifying and presenting data in a variety of ways to help in answering questions recording findings using appropriate scientific language, ~~drawings, labelled diagrams,~~ keys, ~~bar charts, and tables~~ identifying differences, similarities or changes related to simple scientific ideas and processes using straightforward scientific evidence to answer questions or to support their findings, explaining how the results helped them to find the answer	asking relevant questions and using different types of scientific enquiries to answer them setting up simple practical enquiries, comparative ~~and fair tests~~ making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including ~~thermometers and~~ data loggers gathering, recording, classifying and presenting data in a variety of ways to help in answering questions recording findings using appropriate scientific language, drawings, labelled diagrams, keys, bar charts, and tables reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions identifying differences, similarities or changes related to simple scientific ideas and processes using straightforward scientific evidence to answer questions or to support their findings, explaining how the results helped them to find the answer	asking relevant questions and using different types of scientific enquiries to answer them setting up simple practical enquiries, comparative and fair tests gathering, recording, classifying and presenting data in a variety of ways to help in answering questions recording findings using appropriate scientific language, drawings, labelled diagrams, ~~keys, bar charts, and tables~~ reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions using straightforward scientific evidence to answer questions or to support their findings, explaining how the results helped them to find the answer
Investigation types	Observing over time Researching Comparative Test	Classifying Pattern Seeking Comparative Test	Classifying Pattern Seeking Observing over time Researching	Classifying Pattern Seeking Comparative Test	Pattern Seeking Comparative Test

Year 5					
topics	**Animals Including Humans**	**Properties and Changes of Materials**	**Living Things and Their Habitats**	**Forces**	**Earth and Space**
Substantive Knowledge	describe the changes as humans develop to old age. (ALSO puberty, from PSHE curriculum)	compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution	describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird describe the life process of reproduction in some plants and animals	explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object identify the effects of air resistance, water resistance and friction, that act between moving surfaces recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect.	describe the movement of the Earth, and other planets, relative to the Sun in the solar system describe the movement of the Moon relative to the Earth

		use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic demonstrate that dissolving, mixing and changes of state are reversible changes explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda.			describe the Sun, Earth and Moon as approximately spherical bodies use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky.
Working Scientifically **(Disciplinary Knowledge)**	taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate recording data and results using scientific diagrams and labels, tables, scatter graphs, bar and line graphs reporting and presenting findings from enquiries, in oral and written forms such as displays and other presentations, including conclusions, causal relationships and any anomalies in results	planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate recording data and results using scientific diagrams and labels, tables, scatter graphs, bar and line graphs using test results to make predictions to set up further comparative and fair tests, with guidance reporting and presenting findings from enquiries, in oral and written forms such as displays and other presentations, including conclusions, causal relationships and any anomalies in results	recording data and results using scientific diagrams and labels, tables, ~~scatter graphs,~~ bar and line graphs using test results to make predictions to set up further comparative and fair tests, with guidance reporting and presenting findings from enquiries, in oral and written forms such as displays and other presentations, including conclusions, causal relationships and any anomalies in results identifying scientific evidence that has been used to support or refute ideas or arguments.	planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate [newtonmeters] recording data and results using scientific diagrams and labels, tables, scatter graphs, bar and line graphs using test results to make predictions to set up further comparative and fair tests, with guidance reporting and presenting findings from enquiries, in oral and written forms such as displays and other presentations, including conclusions, causal relationships and any anomalies in results identifying scientific evidence that has been used to support or refute ideas or arguments.	recording data and results using scientific diagrams and labels, tables, scatter graphs, bar and line graphs reporting and presenting findings from enquiries, in oral and written forms such as displays and other presentations, including conclusions, causal relationships and any anomalies in results identifying scientific evidence that has been used to support or refute ideas or arguments.
Investigation types	Classifying Pattern Seeking Researching	Classifying Pattern Seeking Researching Comparative and Fair Test	Classifying Pattern Seeking Researching	Pattern Seeking Comparative and Fair Test	Pattern Seeking Observing over time Researching

Year 6					
topics	**Animals Including Humans**	**Living Things and Their Habitats**	**Light**	**Electricity**	**Evolution and Inheritance**
Substantive Knowledge	identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood	describe how living things are classified into broad groups according to common observable characteristics and based on similarities and	recognise that light appears to travel in straight lines use the idea that light travels in straight lines to explain that objects	associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit	recognise that living things have changed over time and that fossils provide information about living things that

	recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function describe the ways in which nutrients and water are transported within animals, including humans.	differences, including microorganisms, plants and animals give reasons for classifying plants and animals based on specific characteristics.	are seen because they give out or reflect light into the eye explain that we see things because light travels from light sources to our eyes or from light sources to objects and then to our eyes use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them.	compare and give reasons for variations in how components function, including the brightness of bulbs, the loudness of buzzers and the on/off position of switches use recognised symbols when representing a simple circuit in a diagram.	inhabited the Earth millions of years ago recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution.
Working Scientifically **(Disciplinary Knowledge)**	from the range of enquiry types, select and plan the most appropriate way to answer questions, (including their own questions), recognising and controlling variables where necessary taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate, including using data loggers recording data and results of increasing complexity using scientific diagrams and labels, ~~classification keys,~~ tables, scatter graphs, bar and line graphs using test results to make predictions to set up further comparative and fair tests reporting and presenting findings from enquiries, including conclusions, causal relationships and the degree of trust in results, in oral and written forms such as displays and other presentations identifying scientific evidence that has been used to support or refute ideas or arguments, including ideas that have changed over time.	recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs using test results to make predictions to set up further comparative and fair tests identifying scientific evidence that has been used to support or refute ideas or arguments, including ideas that have changed over time.	from the range of enquiry types, select and plan the most appropriate way to answer questions, (including their own questions), recognising and controlling variables where necessary recording data and results of increasing complexity using scientific diagrams and labels, ~~classification keys, tables, scatter graphs, bar and line graphs~~ using test results to make predictions to set up further comparative and fair tests reporting and presenting findings from enquiries, including conclusions, causal relationships and the degree of trust in results, in oral and written forms such as displays and other presentations	from the range of enquiry types, select and plan the most appropriate way to answer questions, (including their own questions), recognising and controlling variables where necessary taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate, including using data loggers recording data and results of increasing complexity using scientific diagrams and labels, ~~classification keys, tables, scatter graphs,~~ bar and line graphs using test results to make predictions to set up further comparative and fair tests reporting and presenting findings from enquiries, including conclusions, causal relationships and the degree of trust in results, in oral and written forms such as displays and other presentations	recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs reporting and presenting findings from enquiries, including conclusions, causal relationships and the degree of trust in results, in oral and written forms such as displays and other presentations identifying scientific evidence that has been used to support or refute ideas or arguments, including ideas that have changed over time.
Investigation types	Pattern Seeking Researching Comparative Test	Classifying Pattern Seeking Researching Observing over time	Pattern Seeking Observing over time	Pattern Seeking Comparative Test	Classifying Pattern Seeking Researching