St. Benedict's Primary School
SCIENCE
KNOWLEDGE AND SKILLS BUILDER

Science element from the National Curriculum – Working Scientifically

Phase	Context for learning	Knowledge and Skills for Working Scientifically
KEY STAGE 1	**Y1 Autumn 1** **ILP Enchanted Woodlands** **Programmes of Study** Identify and Classify	**Skills** Observe objects, materials, living things and changes over time, sorting and grouping them based on their features. **Knowledge** Objects, materials and living things can be looked at and compared.
	Use their observations and ideas to suggest answers to questions.	**Skills** Talk about what they have done and say, with help, what they think they have found out **Knowledge** The results are information that has been found out from an investigation. **Skills** Observe the local environment throughout the year and ask and answer questions about living things and seasonal change. **Knowledge** The local environment is a habitat for living things and can change during the seasons. **Skills** Begin to notice patterns and relationships in their data and explain what they have done and found out using simple scientific language **Knowledge** The results are information that has been found out from an investigation and can be used to answer a question.
	Perform simple tests	**Skills** With support, follow instructions to perform simple tests and begin to talk about what they might do or what might happen. **Knowledge** Simple tests can be carried out by following a set of instructions
	Observe closely using simple equipment	**Skills** With support, use simple equipment to measure and make observations. **Knowledge** Simple equipment is used to take measurements and observations. Examples include metre sticks, measuring tapes, egg timers and hand lenses.

	Ask simple questions and recognise that they can be answered in different ways.	**Skills** Ask simple scientific questions. **Knowledge** Question words include what, why, how, when, who and which.
	Y1 Spring 1 **ILP Superheroes** **Programmes of Study** Identify and Classify	**Skills** Observe objects, materials, living things and changes over time, sorting and grouping them based on their features. **Knowledge** Objects, materials and living things can be looked at and compared.
	Use their observations and ideas to suggest answers to questions.	**Skills** Talk about what they have done and say, with help, what they think they have found out **Knowledge** The results are information that has been found out from an investigation.
	Perform simple tests	**Skills** With support, follow instructions to perform simple tests and begin to talk about what they might do or what might happen. **Knowledge** Simple tests can be carried out by following a set of instructions.
	Y1 Spring 2 **ILP Beachcombers** **Programmes of Study** Identify and Classify	**Skills** Observe objects, materials, living things and changes over time, sorting and grouping them based on their features and explaining their reasoning. **Knowledge** Objects, materials and living things can be looked at, compared and grouped according to their features.
	Perform simple tests	**Skills** With support, follow instructions to perform simple tests and begin to talk about what they might do or what might happen. **Knowledge** Simple tests can be carried out by following a set of instructions.
	Observe closely using simple equipment	**Skills** With support, use simple equipment to measure and make observations. **Knowledge**

	Ask simple questions and recognise that they can be answered in different ways. **Y1 Summer 1** **ILP Paws, Claws and Whiskers** **Programmes of Study** Gather and record data to help in answering questions. Identify and Classify Perform simple tests **Y1 Summer 2** **ILP Dinosaur Planet** **Programmes of Study** Observe closely using simple equipment	Simple equipment is used to take measurements and observations. Examples include metre sticks, measuring tapes, egg timers and hand lenses. **Skills** Ask simple scientific questions. **Knowledge** Question words include what, why, how, when, who and which **Skills** With support, gather and record simple data in a range of ways (data tables, diagrams, Venn diagrams) **Knowledge** Data can be recorded and displayed in different ways, including tables, pictograms and drawings. **Skills** Observe objects, materials, living things and changes over time, sorting and grouping them based on their features. **Knowledge** Objects, materials and living things can be looked at and compared. **Skills** With support, follow instructions to perform simple tests and begin to talk about what they might do or what might happen. **Knowledge** Simple tests can be carried out by following a set of instructions. **Skills** With support, use simple equipment to measure and make observations. **Knowledge** Simple equipment is used to take measurements and observations. Examples include metre sticks, measuring tapes, egg timers and hand lenses.
	Y2 Autumn 1 **ILP Street Detectives** **Programmes of Study** Observe closely using simple equipment **Y2 Spring 1** **ILP Muck, Mess and Mixtures** **Programmes of Study**	**Skills** Use simple equipment to measure and make observations. **Knowledge** Simple equipment is used to take measurements and observations. Examples include timers, hand lenses, metre sticks and trundle wheels. **Skills** Begin to notice patterns and relationships in their data and explain what they have done and found out using simple scientific language.

	Use their observations and ideas to suggest answers to questions**.** Observe closely using simple equipment **Y2 Spring 2** **ILP Towers, Tunnels and Turrets** **Programmes of Study** Gather and record data to help in answering questions. Perform simple tests Observe closely using simple equipment Y2 Summer 1 ILP Scented Garden **Programmes of Study** Identify and Classify Use their observations and ideas to suggest answers to questions.	**Knowledge** The results are information that has been found out from an investigation and can be used to answer a question. **Skills** Use simple equipment to measure and make observations. **Knowledge** Simple equipment is used to take measurements and observations. Examples include timers, hand lenses, metre sticks and trundle wheels. **Skills** Use a range of methods (tables, charts, diagrams and Venn diagrams) to gather and record simple data with some accuracy. **Knowledge** Data can be recorded and displayed in different ways, including tables, charts, pictograms and drawings. **Skills** Follow a set of instructions to perform a range of simple tests, making simple predictions for what might happen and suggesting ways to answer their questions. **Knowledge** Tests can be carried out by following a set of instructions. A prediction is a guess at what might happen in an investigation. **Skills** Use simple equipment to measure and make observations. **Knowledge** Simple equipment is used to take measurements and observations. Examples include timers, hand lenses, metre sticks and trundle wheels. **Skills** Observe objects, materials, living things and changes over time, sorting and grouping them based on their features and explaining their reasoning. **Knowledge** Objects, materials and living things can be looked at, compared and grouped according to their features. **Skills** Begin to notice patterns and relationships in their data and explain what they have done and found out using simple scientific language. **Knowledge**

		The results are information that has been found out from an investigation and can be used to answer a question.
	Ask simple questions and recognise that they can be answered in different ways.	**Skills** Ask and answer scientific questions about the world around them. **Knowledge** Questions can help us find out about the world
	Y2 Summer 2 **ILP Wriggle and Crawl** **Programmes of Study** Gather and record data to help in answering questions.	**Skills** Use a range of methods (tables, charts, diagrams and Venn diagrams) to gather and record simple data with some accuracy. **Knowledge** Data can be recorded and displayed in different ways, including tables, charts, pictograms and drawings
	Use their observations and ideas to suggest answers to questions.	**Skills** Begin to notice patterns and relationships in their data and explain what they have done and found out using simple scientific language. **Knowledge** The results are information that has been found out from an investigation and can be used to answer a question.
	Perform simple tests	**Skills** Follow a set of instructions to perform a range of simple tests, making simple predictions for what might happen and suggesting ways to answer their questions. **Knowledge** Tests can be carried out by following a set of instructions. A prediction is a guess at what might happen in an investigation.
	Observe closely using simple equipment	**Skills** Use simple equipment to measure and make observations. **Knowledge** Simple equipment is used to take measurements and observations. Examples include timers, hand lenses, metre sticks and trundle wheels.

LOWER KS2	**Y3 Autumn 2** **ILP Predator** **Programmes of Study** Identify differences, similarities or changes related to simple scientific ideas and processes	**Skills** Make increasingly careful observations, identifying similarities, differences and changes and making simple connections. Knowledge An observation involves looking closely at objects, materials and living things, which can be compared and grouped according to their features
	Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables	**Skills** Gather and record findings in a variety of ways (diagrams, tables, charts and graphs) with increasing accuracy. Knowledge Data can be recorded and displayed in different ways, including tables, charts, graphs and labelled diagrams. Data can be used to provide evidence to answer questions.
	Gather, record, classify and present data in a variety of ways to help in answering questions.	Skills Gather and record findings in a variety of ways (diagrams, tables, charts and graphs) with increasing accuracy. Knowledge Data can be recorded and displayed in different ways, including tables, charts, graphs and labelled diagrams. Data can be used to provide evidence to answer questions.
	Make systematic and careful observations and, where appropriate, take accurate measurements using standard units, using a range of equipment, including thermometers and data loggers.	**Skills** Take measurements in standard units, using a range of simple equipment. **Knowledge** Equipment is used to take measurements in standard units. Examples include data loggers plus sensors, timers (seconds, minutes and hours), thermometers (°C) and metre sticks (millimetres, centimetres and metres). Taking repeat readings can increase the accuracy of the measurement.
	Y3 Spring 1 **ILP Tremor** **Programmes of Study** Identify differences, similarities or changes related to simple scientific ideas and processes	**Skills** Make increasingly careful observations, identifying similarities, differences and changes and making simple connections. Knowledge An observation involves looking closely at objects, materials and living things, which can be compared and grouped according to their features.
	Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables	**Skills** Gather and record findings in a variety of ways (diagrams, tables, charts and graphs) with increasing accuracy.

		Knowledge Data can be recorded and displayed in different ways, including tables, charts, graphs and labelled diagrams. Data can be used to provide evidence to answer questions.
	Gather, record, classify and present data in a variety of ways to help in answering questions	Skills Gather and record findings in a variety of ways (diagrams, tables, charts and graphs) with increasing accuracy. Knowledge Data can be recorded and displayed in different ways, including tables, charts, graphs and labelled diagrams. Data can be used to provide evidence to answer questions.
	Set up simple practical enquiries, comparative and fair tests	**Skills** Set up and carry out some simple, comparative and fair tests, making predictions for what might happen. Knowledge Tests can be set up and carried out by following or planning a set of instructions. A prediction is a best guess for what might happen in an investigation based on some prior knowledge
	Make systematic and careful observations and, where appropriate, take accurate measurements using standard units, using a range of equipment, including thermometers and data loggers.	**Skills** Take measurements in standard units, using a range of simple equipment. **Knowledge** Equipment is used to take measurements in standard units. Examples include data loggers plus sensors, timers (seconds, minutes and hours), thermometers (°C) and metre sticks (millimetres, centimetres and metres). Taking repeat readings can increase the accuracy of the measurement.
	Y3 Spring 2 **ILP Mighty Metals** **Programmes of Study** Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.	**Skill** Use suitable vocabulary to talk or write about what they have done, what the purpose was and, with help, draw a simple conclusion based on evidence collected, beginning to identify next steps or improvements. **Knowledge** Results are information that has been discovered as part of an investigation. A conclusion is the answer to a question that uses the evidence collected.
	Use straightforward scientific evidence to answer questions or to support their findings.	**Skills** Use suitable vocabulary to talk or write about what they have done, what the purpose was and, with help, draw a simple conclusion based on evidence collected, beginning to identify next steps or improvements.

		Knowledge Results are information that has been discovered as part of an investigation. A conclusion is the answer to a question that uses the evidence collected.
	Identify differences, similarities or changes related to simple scientific ideas and processes	**Skills** Make increasingly careful observations, identifying similarities, differences and changes and making simple connections. Knowledge An observation involves looking closely at objects, materials and living things, which can be compared and grouped according to their features.
	Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions.	**Skills** Use suitable vocabulary to talk or write about what they have done, what the purpose was and, with help, draw a simple conclusion based on evidence collected, beginning to identify next steps or improvements. Knowledge Results are information that has been discovered as part of an investigation. A conclusion is the answer to a question that uses the evidence collected.
	Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables.	**Skills** Gather and record findings in a variety of ways (diagrams, tables, charts and graphs) with increasing accuracy. Knowledge Data can be recorded and displayed in different ways, including tables, charts, graphs and labelled diagrams. Data can be used to provide evidence to answer questions.
	Gather, record, classify and present data in a variety of ways to help in answering questions.	Skills Gather and record findings in a variety of ways (diagrams, tables, charts and graphs) with increasing accuracy. Knowledge Data can be recorded and displayed in different ways, including tables, charts, graphs and labelled diagrams. Data can be used to provide evidence to answer questions.
	Set up simple practical enquiries, comparative and fair tests.	**Skills** Take measurements in standard units, using a range of simple equipment. **Knowledge**

		Equipment is used to take measurements in standard units. Examples include data loggers plus sensors, timers (seconds, minutes and hours), thermometers (°C) and metre sticks (millimetres, centimetres and metres). Taking repeat readings can increase the accuracy of the measurement.
	Make systematic and careful observations and, where appropriate, take accurate measurements using standard units, using a range of equipment, including thermometers and data loggers.	**Skills** Set up and carry out some simple, comparative and fair tests, making predictions for what might happen. Knowledge Tests can be set up and carried out by following or planning a set of instructions. A prediction is a best guess for what might happen in an investigation based on some prior knowledge.
	Y3 Summer 1 **ILP Scrumdiddlyumptious** **Programmes of Study** Identify differences, similarities or changes related to simple scientific ideas and processes	**Skills** Take measurements in standard units, using a range of simple equipment. **Knowledge** Equipment is used to take measurements in standard units. Examples include data loggers plus sensors, timers (seconds, minutes and hours), thermometers (°C) and metre sticks (millimetres, centimetres and metres). Taking repeat readings can increase the accuracy of the measurement.
	Make systematic and careful observations and, where appropriate, take accurate measurements using standard units, using a range of equipment, including thermometers and data loggers.	**Skills** Make increasingly careful observations, identifying similarities, differences and changes and making simple connections. Knowledge An observation involves looking closely at objects, materials and living things, which can be compared and grouped according to their features
	Y3 Summer 2 **ILP Tribal Tales** **Programmes of Study** Identify differences, similarities or changes related to simple scientific ideas and processes	**Skills** Make increasingly careful observations, identifying similarities, differences and changes and making simple connections. Knowledge An observation involves looking closely at objects, materials and living things, which can be compared and grouped according to their features
	Set up simple practical enquiries, comparative and fair tests	**Skills** Set up and carry out some simple, comparative and fair tests, making predictions for what might happen. Knowledge

		Tests can be set up and carried out by following or planning a set of instructions. A prediction is a best guess for what might happen in an investigation based on some prior knowledge.
	Make systematic and careful observations and, where appropriate, take accurate measurements using standard units, using a range of equipment, including thermometers and data loggers.	**Skills** Take measurements in standard units, using a range of simple equipment. **Knowledge** Equipment is used to take measurements in standard units. Examples include data loggers plus sensors, timers (seconds, minutes and hours), thermometers (°C) and metre sticks (millimetres, centimetres and metres). Taking repeat readings can increase the accuracy of the measurement.
	Y4 Autumn 2 **ILP Potions** **Programmes of Study** Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.	**Skill** Use scientific vocabulary to report and answer questions about their findings based on evidence collected, draw simple conclusions and identify next steps, improvements and further questions **Knowledge** Results are information, such as data or observations that have been found out from an investigation. A conclusion is the answer to a question that uses the evidence collected.
	Use straightforward scientific evidence to answer questions or to support their findings.	**Skills** Use scientific vocabulary to report and answer questions about their findings based on evidence collected, draw simple conclusions and identify next steps, improvements and further questions **Knowledge** Results are information, such as data or observations that have been found out from an investigation. A conclusion is the answer to a question that uses the evidence collected.
	Identify differences, similarities or changes related to simple scientific ideas and processes	**Skills** Begin to choose which observations to make and for how long and make systematic, careful observations and comparisons, identifying changes and connections. Knowledge An observation involves looking closely at objects, materials and living things. Observations can be made regularly to identify changes over time.
	Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions	**Skills** Use scientific vocabulary to report and answer questions about their findings based on evidence collected, draw simple conclusions and identify next steps, improvements and further questions. Knowledge Results are information, such as data or observations that have been found out from an investigation. A conclusion is the answer to a question that uses the evidence collected.

	Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables	**Skill** Use scientific vocabulary to report and answer questions about their findings based on evidence collected, draw simple conclusions and identify next steps, improvements and further questions **Knowledge** Results are information, such as data or observations that have been found out from an investigation. A conclusion is the answer to a question that uses the evidence collected.
	Gather, record, classify and present data in a variety of ways to help in answering questions.	Skills Gather, record, classify and present observations and measurements in a variety of ways (pictorial representations, timelines, diagrams, keys, tables, charts and graphs). Knowledge Data can be recorded and displayed in different ways, including tables, charts, graphs, keys and labelled diagrams
	Ask relevant questions and using different types of scientific enquiries to answer them.	**Skills** Ask relevant scientific questions, independently, about the world around them and begin to identify how they can answer them. Knowledge Questions can help us find out about the world and can be answered using scientific enquiry.
	Set up simple practical enquiries, comparative and fair tests	Skills Begin to independently plan, set up and carry out a range of comparative and fair tests, making predictions and following a method accurately. **Knowledge** Scientific enquiries can be set up and carried out by following or planning a method. A prediction is a statement about what might happen in an investigation, based on some prior knowledge or understanding. A fair test is one in which only one variable is changed and all others remain constant.
	Make systematic and careful observations and, where appropriate, take accurate measurements using standard units, using a range of equipment, including thermometers and data loggers.	**Skill** Begin to choose which observations to make and for how long and make systematic, careful observations and comparisons, identifying changes and connections. **Knowledge** An observation involves looking closely at objects, materials and living things. Observations can be made regularly to identify changes over time.
	Y4 Spring 2 **ILP Burps, Bottoms and Bile** **Programmes of Study**	**Skill** Use scientific vocabulary to report and answer questions about their findings based on evidence collected, draw simple conclusions and identify next steps, improvements and further questions

	Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.	**Knowledge** Results are information, such as data or observations that have been found out from an investigation. A conclusion is the answer to a question that uses the evidence collected.
	Use straightforward scientific evidence to answer questions or to support their findings.	**Skills** Use scientific vocabulary to report and answer questions about their findings based on evidence collected, draw simple conclusions and identify next steps, improvements and further questions **Knowledge** Results are information, such as data or observations that have been found out from an investigation. A conclusion is the answer to a question that uses the evidence collected.
	Identify differences, similarities or changes related to simple scientific ideas and processes	**Skills** Begin to choose which observations to make and for how long and make systematic, careful observations and comparisons, identifying changes and connections. Knowledge An observation involves looking closely at objects, materials and living things. Observations can be made regularly to identify changes over time.
	Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions	**Skills** Use scientific vocabulary to report and answer questions about their findings based on evidence collected, draw simple conclusions and identify next steps, improvements and further questions. Knowledge Results are information, such as data or observations that have been found out from an investigation. A conclusion is the answer to a question that uses the evidence collected
	Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables	**Skills** Gather, record, classify and present observations and measurements in a variety of ways (pictorial representations, timelines, diagrams, keys, tables, charts and graphs). Knowledge Data can be recorded and displayed in different ways, including tables, charts, graphs, keys and labelled diagrams.
	Gather, record, classify and present data in a variety of ways to help in answering questions.	Gather, record, classify and present observations and measurements in a variety of ways (pictorial representations, timelines, diagrams, keys, tables, charts and graphs).

	Year 4 Summer 1 ILP Misty Mountain Sierra Programmes of Study Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables	**Skills** Gather, record, classify and present observations and measurements in a variety of ways (pictorial representations, timelines, diagrams, keys, tables, charts and graphs). Knowledge Data can be recorded and displayed in different ways, including tables, charts, graphs, keys and labelled diagrams
	Gather, record, classify and present data in a variety of ways to help in answering questions.	Gather, record, classify and present observations and measurements in a variety of ways (pictorial representations, timelines, diagrams, keys, tables, charts and graphs). Knowledge Data can be recorded and displayed in different ways, including tables, charts, graphs, keys and labelled diagrams
	Make systematic and careful observations and, where appropriate, take accurate measurements using standard units, using a range of equipment, including thermometers and data loggers	**Skills** Begin to choose which observations to make and for how long and make systematic, careful observations and comparisons, identifying changes and connections. Knowledge An observation involves looking closely at objects, materials and living things. Observations can be made regularly to identify changes over time.
	Y4 Summer 2 **ILP Blue Abyss** **Programmes of Study** Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.	**Skill** Use scientific vocabulary to report and answer questions about their findings based on evidence collected, draw simple conclusions and identify next steps, improvements and further questions **Knowledge** Results are information, such as data or observations that have been found out from an investigation. A conclusion is the answer to a question that uses the evidence collected.
	Use straightforward scientific evidence to answer questions or to support their findings.	**Skills** Use scientific vocabulary to report and answer questions about their findings based on evidence collected, draw simple conclusions and identify next steps, improvements and further questions **Knowledge** Results are information, such as data or observations that have been found out from an investigation. A conclusion is the answer to a question that uses the evidence collected.
	Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions	**Skills** Use scientific vocabulary to report and answer questions about their findings based on evidence collected, draw simple conclusions and identify next steps, improvements and further questions.

		Knowledge Results are information, such as data or observations that have been found out from an investigation. A conclusion is the answer to a question that uses the evidence collected.
	Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables	**Skills** Gather, record, classify and present observations and measurements in a variety of ways (pictorial representations, timelines, diagrams, keys, tables, charts and graphs). Knowledge Data can be recorded and displayed in different ways, including tables, charts, graphs, keys and labelled diagrams.
	Gather, record, classify and present data in a variety of ways to help in answering questions	Gather, record, classify and present observations and measurements in a variety of ways (pictorial representations, timelines, diagrams, keys, tables, charts and graphs). Knowledge Data can be recorded and displayed in different ways, including tables, charts, graphs, keys and labelled diagrams
	Ask relevant questions and using different types of scientific enquiries to answer them	**Skills** Ask relevant scientific questions, independently, about the world around them and begin to identify how they can answer them. Knowledge Questions can help us find out about the world and can be answered using scientific enquiry.
	Year 5 Autumn 1 **ILP Stargazers** **Programmes of Study** Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary.	**Skills** Plan and carry out a range of enquiries, including writing methods, identifying variables and making predictions based on prior knowledge and understanding. **Knowledge** A method is a set of clear instructions for how to carry out a scientific investigation. A prediction is a statement about what might happen in an investigation based on some prior knowledge or understanding. Skills Ask a wide range of relevant scientific questions that broaden their understanding of the world around them and identify how they can answer them Knowledge Questions can help us find out about the world and can be answered using a range of scientific enquiries.

	Identify scientific evidence that has been used to support or refute ideas or arguments.	Skills Use relevant scientific vocabulary to report on their findings, answer questions and justify their conclusions based on evidence collected, identify improvements, further questions and predictions. Knowledge The results are information, such as measurements or observations, that have been collected during an investigation. A conclusion is an explanation of what has been discovered using evidence collected.
	Use test results to make predictions to set up further comparative and fair tests.	Skills Use relevant scientific vocabulary to report on their findings, answer questions and justify their conclusions based on evidence collected, identify improvements, further questions and predictions. Knowledge The results are information, such as measurements or observations, that have been collected during an investigation. A conclusion is an explanation of what has been discovered using evidence collected
	Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs.	Skill Gather and record data and results of increasing complexity, selecting from a range of methods (scientific diagrams, labels, classification keys, tables, graphs and models). Knowledge Data can be recorded and displayed in different ways, including tables, bar and line charts, classification keys and labelled diagrams
	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	Skill Use relevant scientific vocabulary to report on their findings, answer questions and justify their conclusions based on evidence collected, identify improvements, further questions and predictions. Knowledge The results are information, such as measurements or observations, that have been collected during an investigation. A conclusion is an explanation of what has been discovered using evidence collected.

	Year 5 Spring 1 **ILP Alchemy Island** **Programmes of Study** Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary	**Skills** Plan and carry out a range of enquiries, including writing methods, identifying variables and making predictions based on prior knowledge and understanding. **Knowledge** A method is a set of clear instructions for how to carry out a scientific investigation. A prediction is a statement about what might happen in an investigation based on some prior knowledge or understanding. Skills Ask a wide range of relevant scientific questions that broaden their understanding of the world around them and identify how they can answer them Knowledge Questions can help us find out about the world and can be answered using a range of scientific enquiries.
	Identify scientific evidence that has been used to support or refute ideas or arguments.	Skills Use relevant scientific vocabulary to report on their findings, answer questions and justify their conclusions based on evidence collected, identify improvements, further questions and predictions. Knowledge The results are information, such as measurements or observations, that have been collected during an investigation. A conclusion is an explanation of what has been discovered using evidence collected.
	Use test results to make predictions to set up further comparative and fair tests.	Skills Use relevant scientific vocabulary to report on their findings, answer questions and justify their conclusions based on evidence collected, identify improvements, further questions and predictions. Knowledge The results are information, such as measurements or observations that have been collected during an investigation. A conclusion is an explanation of what has been discovered using evidence collected
	Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate.	Skills Take increasingly accurate measurements in standard units, using a range of chosen equipment. Knowledge Specialised equipment is used to take measurements in standard units. Examples include data loggers plus sensors, such as light (lux), sound (dB) and temperature (°C); timers (seconds, minutes and hours); thermometers (°C), and measuring tapes (millimetres, centimetres, metres).

	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	Skill Use relevant scientific vocabulary to report on their findings, answer questions and justify their conclusions based on evidence collected, identify improvements, further questions and predictions. Knowledge The results are information, such as measurements or observations, that have been collected during an investigation. A conclusion is an explanation of what has been discovered using evidence collected.
	Year 5 Spring 2 **ILP Beast Creator** **Programmes of Study** Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary Identify scientific evidence that has been used to support or refute ideas or arguments Use test results to make predictions to set up further comparative and fair tests. Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs.	**Skills** Plan and carry out a range of enquiries, including writing methods, identifying variables and making predictions based on prior knowledge and understanding. **Knowledge** A method is a set of clear instructions for how to carry out a scientific investigation. A prediction is a statement about what might happen in an investigation based on some prior knowledge or understanding. Skills Ask a wide range of relevant scientific questions that broaden their understanding of the world around them and identify how they can answer them Knowledge Questions can help us find out about the world and can be answered using a range of scientific enquiries. Skills Use relevant scientific vocabulary to report on their findings, answer questions and justify their conclusions based on evidence collected, identify improvements, further questions and predictions. Knowledge The results are information, such as measurements or observations that have been collected during an investigation. A conclusion is an explanation of what has been discovered using evidence collected. Skill Gather and record data and results of increasing complexity, selecting from a range of methods (scientific diagrams, labels, classification keys, tables, graphs and models). Knowledge Data can be recorded and displayed in different ways, including tables, bar and line charts, classification keys and labelled diagrams

	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	Skill Use relevant scientific vocabulary to report on their findings, answer questions and justify their conclusions based on evidence collected, identify improvements, further questions and predictions. Knowledge The results are information, such as measurements or observations, that have been collected during an investigation. A conclusion is an explanation of what has been discovered using evidence collected.
	Year 5 Summer 2 **ILP Allotment** **Programme of Study** Use test results to make predictions to set up further comparative and fair tests.	**Skills** Use relevant scientific vocabulary to report on their findings, answer questions and justify their conclusions based on evidence collected, identify improvements, further questions and predictions. Knowledge The results are information, such as measurements or observations that have been collected during an investigation. A conclusion is an explanation of what has been discovered using evidence collected.
	Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs.	Skill Gather and record data and results of increasing complexity, selecting from a range of methods (scientific diagrams, labels, classification keys, tables, graphs and models). Knowledge Data can be recorded and displayed in different ways, including tables, bar and line charts, classification keys and labelled diagrams.
	Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate.	Skills Take increasingly accurate measurements in standard units, using a range of chosen equipment. Knowledge Specialised equipment is used to take measurements in standard units. Examples include data loggers plus sensors, such as light (lux), sound (dB) and temperature (°C); timers (seconds, minutes and hours); thermometers (°C), and measuring tapes (millimetres, centimetres, metres).
	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.	**Skill** Use relevant scientific vocabulary to report on their findings, answer questions and justify their conclusions based on evidence collected, identify improvements, further questions and predictions. Knowledge The results are information, such as measurements or observations, that have been collected during an investigation. A conclusion is an explanation of what has been discovered using evidence collected.

	Year 6 Spring 2 ILP Darwin's Delights Programme of Study 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.	**Skills** Report on and validate their findings, answer questions and justify their methods, opinions and conclusions, and use their results to suggest improvements to their methodology, separate facts from opinions, pose further questions and make predictions for what they might observe. Knowledge The results are information, such as measurements or observations that have been collected during an investigation. A conclusion is an explanation of what has been discovered, using correct, precise terminology and collected evidence.