UNIT OVERVIEW CHART

Module number and name	Lesson number and name	National Curriculum links	Working scientifically links	Science enquiry type	Lesson summary
Year 3 Module: Our changing World	1: How do leaves change through the year?	Identify and describe the functions of different parts of flowering plants: roots, stem, leaves and flowers	Record findings using simple scientific language, drawing and labelled diagrams	Observation over time	During this series of lessons the children will revisit the same two trees or shrubs to look at how the leaves change through the year.
	2: What seeds can we find through the year?	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	Record findings using simple scientific language, drawings and labelled diagrams	Observation over time	During this series of lessons the children will look for seeds at different times of the year.
	3: How do flowers change through the year?	Identify and describe the functions of different parts of flowering plants: roots, stem, leaves and flowers	Record findings using simple scientific language, drawings and labelled diagrams	Observation over time	During this series of lessons the children will revisit the same area of flowering plants to look at whether the same flowers are there at different times of the year.
	4: What colour are berries?	Identify and describe the functions of different parts of flowering plants: roots, stem, leaves and flowers	Record findings using simple scientific language, drawings and labelled diagrams	Grouping and classifying things	During this series of lessons the children will look for berries at different times of the year to identify when berries are most likely to be found.
	5: How often do insects visit plants?	Explore the part flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal	Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables	Noticing patterns	During this series of lessons children could potentially visit some of the same flowering plants as they do during Our Changing World Lesson 3. On this occasion, they will observe the variety of flying insects that come to the flowering plants.
	6: What plants grow in the school grounds during the year?	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	Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions	Noticing patterns	During this series of lessons the children will visit the same locations around the school, to make observations of plant life and how it changes across the year.

	7: How do sunflower seeds and plants grow and change over time? – Part 1	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	Setting up simple practical enquiries, comparative and fair tests	Observation over time	In this sequence of lessons children will plant different varieties of sunflower seeds and grow them on, selecting the best seedlings, planting them out and caring for them as they grow into adult flowering plants.
	8: How do different varieties of sunflower plants grow and change over time? – Part 2	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	Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions	Observation over time	In this sequence of lessons children present and interpret data about their growing sunflower plants, using observations, measurements and comparisons they have made of different varieties of sunflower plants over an extended period of time. If possible they should observe the complete sunflower life cycle, finishing with observations of seed heads containing newly ripened sunflower seeds.

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Year 3 Module 1 How does your garden grow?	1: What do we know about plants?	Identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers	Asking relevant questions and using different types of scientific enquiries to answer them	Exploration	In this lesson children will be able to share what they have previously learnt about the parts of flowering plants and their different functions.
	2: What do we know about leaves?	Identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers	Identifying differences, similarities or changes related to simple scientific ideas and processes	Grouping and classifying	In this lesson children will make close observations of a variety of leaves, using manual and digital magnifiers.
	3: What would happen if a plant lost its leaves?	Identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers	Setting up simple practical enquiries, comparative and fair tests (Lesson 3); gathering, recording, classifying and presenting data in a variety of ways to help in answering questions (by end of Lesson 11).	Carrying out comparative and fair tests	In this lesson children will set up a fair test investigation to find out the effect of removing the leaves from a plant. They will make observations over the next few weeks and summarise their findings in Lesson 11.
	4: Are all roots the same?	Identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers	Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables	Grouping and classifying	In this lesson children will make close observations of a variety of roots using manual and digital magnifiers.
	5: Where does the water go?	Investigate the way in which water is transported within plants	Using results to draw simple conclusions and suggest improvements, new questions and predictions for setting up further tests	Observing over time	In this lesson children will observe the transport of coloured water in carnations and celery and will set up an observation over time to investigate this in more detail in Lesson 6.
	6: Why do plants need stems?	Investigate the way in which water is transported within plants; identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers	Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions	Observing over time and using secondary sources of information	In this lesson children will use the results of the observation-over-time investigation that they set up in Lesson 5 and information from a video to produce information texts to explain the function of stems.
	7: Where do new plants come from?	Explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal	Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables	Using secondary sources of information	In this lesson children present the main stages in the life cycle of a flowering plant as a sequenced diagram.
	8: What do flowers have in common?	Identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers; explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal	Identifying differences, similarities or changes related to simple scientific ideas and processes	Grouping and classifying	In this lesson children will dissect a flower in order to make a close observation of the different parts. They will also compare different flowers.

	9: What do the bees do?	Explore the part bees play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal	Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions	Using secondary sources	In this lesson children model the process of insect pollination.
	10: How are seeds dispersed?	Explore the part flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal	Identifying differences, similarities or changes related to simple scientific ideas and processes	Using secondary sources	In this lesson children use their observations of seeds to make model seeds suited to different methods of dispersal.
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Year 3 Module 1 How does your garden grow?	11: Can plants survive without leaves?	Identify and describe the functions of different parts of flowering plants: roots, stem, leaves and flowers	Using results to draw simple conclusions and suggest improvements, new questions and predictions for setting up further tests	Carrying out comparative and fair tests	In this lesson children will use their ongoing observations from the investigation started in Lesson 3 to draw conclusions.
	12: Am I the perfect plant?	Identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers	Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions	n/a	In this lesson children will design flowering plants, labelling and annotating their drawings.
	Enrichment Lesson 1: How amazing are some plants?	Identify and describe the functions of different parts of flowering plants: roots, stem, leaves and flowers	Reporting on findings from enquiries, including oral and written explanations	Using secondary sources of information	In this lesson children will research some more unusual plants.
	Enrichment Lesson 2: Why are some flowers brightly coloured?	Explore the part that flowers play in the life cycle of flowering plants, including pollination	Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions	Pattern seeking and grouping and classifying	In this lesson children will explore why some flowers are brightly coloured and others are not.
	Enrichment Lesson 3: How can we save bees?	Explore the part that flowers play in the life cycle of flowering plants, including pollination	Reporting on findings from enquiries, including oral and written explanations	Using secondary sources of information	In this lesson children will explore why bees are important and how we can help to protect them.
Year 3 Module 2 Rock detectives	1: What different types of rock are there?	Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties	Record findings using simple scientific language and drawings	Grouping and classifying	In this lesson children will explore first-hand a variety of rocks and identify some of their observable properties.
	2: Which rock is which?	Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties	Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions; asking relevant	Grouping and classifying	In this lesson children continue to identify and sort rocks according to their properties.

			questions and using different types of scientific enquiries to answer them		
	3: How are rocks used around our school?	Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties	Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions	Grouping and classifying	In this lesson children will identify where and how rocks are used in their local environment.
	4: Are all rocks as hard as one another?	Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties	Using straightforward scientific evidence to answer questions, or to support their findings	Carrying out comparative and fair tests	In this lesson children will test the hardness of a variety of rocks and make comparisons between them.
	5: Are all rocks waterproof?	Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties	Using straightforward scientific evidence to answer questions, or to support their findings; setting up simple practical enquiries, comparative and fair tests	Carrying out simple and comparative fair tests	In this lesson children will test whether a variety of rocks absorb water or not.

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Year 3 Module 2 Rock detectives	6: How do rocks change over time?	Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties; recognise that soils are made from rocks and organic matter	Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions	Observing change over time	In this lesson children will observe how rocks change over time, visiting a site or sites to experience firsthar the changes that take place. You can also link this back to Lesson 3, particularly if there are examples o worn rock surfaces.
	7: How is soil made?	Recognise that soils are made from rocks and organic material	Using straightforward scientific evidence to answer questions, or to support their findings	Grouping and classifying	In this lesson children will explore a variety of soils, making the link between soils and the rocks they are made from. This builds on work carried out in lesson which looked at how rocks change over time.
	8: Why do some soils hold water?	Recognise that soils are made from rocks and organic material	Using straightforward scientific evidence to answer questions, or to support their findings	Carrying out comparative and fair tests	In this lesson children will revisit the problem introduced at the end of Lesson 7 and, in order to solve it, they will test soils to discover whether they al let water through at the same rate.
	9: What is a fossil anyway?	Describe in simple terms how fossils are formed when things that have lived are trapped within rock.	Identifying differences, similarities, or changes related to simple scientific ideas and processes	Grouping and classifying	In this lesson children will explore a collection of fossi first-hand and begin to find out about the variety of fossils that have been found or can be found.
	10: How are fossils formed?	Describe in simple terms how fossils are formed when things that have lived are trapped within rock	Identifying differences, similarities or changes related to simple scientific ideas and processes	Using secondary sources	In this lesson, which builds on from Lesson 9, childre will examine in more detail how fossils are formed an create storyboards to tell the story.
	11: Where and how are fossils found?	Describe in simple terms how fossils are formed when things that have lived are trapped within rock	Using straightforward scientific evidence to answer questions or to support their findings	Finding things out using secondary sources of information	In this lesson children will learn about where and how fossils are collected.
	Enrichment Lesson 1: Who was Mary Anning and how did she become a famous fossil hunter?	Describe in simple terms how fossils are formed when things that have lived are trapped within rock	Report on findings from enquiries, including oral and written explanations, displays or presentations of results	Finding things outs using secondary sources of information	In this lesson children will learn about the life and wor of Mary Anning, the famous Victorian fossil hunter, ar communicate what they have discovered as they sit i the 'hot-seat' in role as 'Mary'. This lesson builds on Lessons 9, 10 and 11, linking particularly to lesson 11 where children find out about a present day fossil hunter and expert, Steve Etches.
Year 3 Module 3 Can you see me?	1: What do we need to see?	To recognise that they need light in order to see things and that dark is the absence of light	Setting up simple practical enquiries	Grouping and classifying things	In this lesson children will begin to understand that light is needed for us to see things and that some objects are easier to see than others.
	2: Which is the shiniest?	Notice that light is reflected from surfaces	Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions	Grouping and classifying	In this lesson children will develop their understandin of how light is reflected from surfaces and investigate how different surfaces reflect different amounts of ligh
	3: How can we make it easier to be	Recognise that we need light in order to see things and that dark is the absence of light; notice that	Reporting on findings from enquiries, including oral and written explanations, displays or	Grouping and classifying	In this lesson children will make reflective strips and explore ways to make it easier to make things

	seen at night?	light is reflected from surfaces	presentations of results and conclusions		(including themselves) seen in the dark.
	4: What do mirrors do?	Notice that light is reflected from surfaces	Using results to draw simple conclusions, make predictions for new values	Looking for pattern	In this lesson children will carry out a number of different activities to investigate how light reflects off a mirror.

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Year 3 Module 3 Can you see me?	5: How can I make a shadow?	Recognise that shadows are formed when the light from a light source is blocked by a solid (opaque) object	Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions	Noticing patterns	In this lesson children will explore shadows for the first time.
	6: Can you change the shape of a shadow?	Recognise that shadows are formed when the light from a light source is blocked by a solid (opaque) object	Recording findings in a variety of ways to help in answering questions	imple investigations; Noticing patterns	In this lesson children build on work from the previous lesson. They make real shadows of themselves and other objects, draw the shadows and look for patterns between the object making the shadow and the shadow.
	7: Can you change the size of a shadow?	Find patterns in the way that the size of shadows change	Identifying differences, similarities or changes related to simple scientific ideas and processes	Noticing patterns	In this lesson children will develop their understanding of shadows and shape further, building on lesson 6.
	8: What makes the best sunglasses?	Recognise that shadows are formed when the light from a light source is blocked by a solid (opaque) object	Setting up simple practical enquiries, comparative and fair tests; making accurate measurements using standard units, using a range of equipment, for example thermometers and data loggers	Setting up simple comparative and fair tests	In this lesson and in Lesson 9, children will plan, test, make and promote a pair of sunglasses. This lesson will focus on planning an investigation to test suitable materials for the lenses of sunglasses, followed by the testing of those materials.
	9: Making sunglasses	Recognise that light from the sun can be dangerous and that there are ways to protect their eyes	Reporting on findings from enquiries, including real and written explanations, displays or presentations of results and conclusions	n/a	This lesson builds on the activities in Lesson 8, during which children tested materials for the lenses for sunglasses. In this lesson they will focus on making a pair of the sunglasses using their chosen material for the lenses. They will also design a poster advertising them.
	Enrichment Lesson 1: Are you safe in the sun?	Recognise that light from the sun can be dangerous and that there are ways to protect their eyes	Using straightforward scientific evidence to answer questions or to support their findings	Using secondary sources of information	In this lesson children will learn about the dangers associated with significant exposure to sunlight. At the end of the lesson they will be able to describe these dangers and the ways in which we can reduce or eliminate potential harm. This lesson will be best placed following the sunglasses lessons (Lessons 8 and 9).
	Enrichment Lesson 2: How can we keep the gerbils in the dark?	Recognise that they need light in order to see things and that dark is the absence of light	Setting up simple practical enquiries, comparative and fair tests, making accurate measurements using standard units, using a range of equipment, for example thermometers and data loggers	Setting up simple comparative and fair tests	In this lesson children will plan and carry out a fair test to find out the best material to cover a gerbil's cage during the day.
Year 3 Module 4 The power of forces	1: How can you make it start to move?	Notice that some forces need contact between two objects, but magnetic forces can act at a distance	Identifying differences, similarities or changes related to simple scientific ideas and processes	n/a	In this lesson children will begin to learn about forces by looking at the different ways objects can be made to start moving.
	2: What's making it move?	Notice that some forces need contact between two objects but magnetic forces can act at a distance	Setting up simple practical enquiries, comparative and fair tests	Comparative and fair tests	In this lesson children will explore how air can be used to make a windmill move.

	3: How well can an object slide on different materials?	Compare how things move on different surfaces	Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions	Comparative and fair tests	In this lesson the children will develop their understanding of how objects move on different surfaces.

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Year 3 Module 4 The power of forces	4: Which materials are magnetic?	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.	Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions	Grouping and classifying	In this lesson children will explore a range of materials to identify which are magnetic and which are not. This builds on work in KS1 around the properties of materials.
	5: What can magnets do?	Notice that some forces need contact between two objects, but magnetic forces can act at a distance	Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables	Comparative and fair tests	In this lesson children will use a magnet in a variety of activities to see how it attracts certain materials. They will investigate how strong their magnet is. They will use what they observe in this lesson to help them in Lesson 6.
	6: How strong are the magnets?	Observe how magnets attract or repel each other and attract some materials and not others	Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions	Comparative and fair tests	In this lesson children will build on their work in Lesson 5 and will test different magnets to compare their strength in order to test a number of given statements.
	7: How do magnets affect each other?	Observe how magnets attract or repel each other and attract some materials and not others; describe magnets as having two poles; predict whether two magnets will attract or repel each other, depending on which poles are facing	Making systematic and careful observations	Exploration	In this lesson children will look at magnets in more detail, focusing on the fact that they have two poles, and will investigate the effect of holding two magnets together.
	Enrichment Lesson 1: Why do things slow down?	Compare how things move on different surfaces	Using straightforward scientific evidence to answer questions or to support their findings	Comparative tests	During this lesson the children will build on the work in Lesson 1 on forces and Lesson 3, where they explored moving objects on different surfaces.
	Enrichment Lesson 2: How fast can you complete a lap?	Notice that some forces need contact between two objects, but magnetic forces can act at a distance	Taking accurate measurements using standard units, using a range of equipment	Comparative and fair tests	In this lesson children will explore how magnets can be used to move objects. They will compare how fast different objects can move with a magnetic force.
Year 3 Module 5 Amazing bodies	1: What would you need to survive?	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	Asking relevant questions	Exploration	In this lesson children will consider what humans need in order to survive. This will continue work started in KS1 on the basic needs of animals for survival, as well as the importance of exercise and nutrition.
	2: What do we need to eat to stay healthy?	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	Identifying differences, similarities or changes related to simple scientific ideas and processes	Grouping and classifying	In this lesson children will explore different types of food, sorting them into different categories and planning meals.
	3: How does an adventurer stay	Identify that animals, including humans, need the right types and amount of nutrition, and that they	Gathering, recording, classifying and presenting data in a variety of ways to help answer questions	Grouping and classifying	In this lesson children will use what they have learnt about nutrition in a different context by

	healthy?	cannot make their own food; they get nutrition from what they eat			exploring what Sarah Outen, the British adventurer, eats when on expedition to remain healthy. They will learn about the challenges Sarah faces in choosing food that contains all the nutrition she needs without taking up too much room or being too heavy.

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Year 3 Module 5 Amazing bodies	4: Why do we have a skeleton?	Identify that humans and some animals have skeletons and muscles for support, protection and movement	Using straightforward scientific evidence to answer questions, or to support their findings	Grouping and classifying	In this lesson children will research animals that have skeletons inside their bodies (vertebrates) and some will compare them to animals that don't (invertebrates).
	5: Can you design a new vertebrate species?	Identify that humans and some animals have skeletons and muscles for support, protection and movement	Reporting on findings from enquiries, including oral and written explanations, displays or presentation of results and conclusions	Using secondary source of information	In this lesson children will create a new species of animal and draw its skeleton.
	6: How do muscles help us move?	Identify that humans and some animals have skeletons and muscles for support, protection and movement	Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions	Grouping and classifying	In this lesson children will learn about some of the muscles in the body and how these help to move our skeleton.
	7: Do our bodies affect how well we do things?	Identify that humans and some animals have skeletons and muscles for support, protection and movement	Asking relevant questions and using different types of scientific enquiries to answer them; setting up simple practical enquiries, comparative and fair tests	Looking for patterns	In this lesson children will plan an investigation to see whether features of a person's body affect their performance in certain activities. They will plan how to answer some scientific questions of their choice. They will carry out the investigation and analyse the results in Lesson 8.
	8: How good are we at different activities?	Identify that humans and some animals have skeletons and muscles for support, protection and movement	Using results to draw simple conclusions and suggest improvements, new questions and predictions for setting up further results	Looking for patterns	In this lesson, which builds on Lesson 7, children will carry out and analyse the results of an investigation into the correlation between a person's physical characteristics and their performance in a certain activity.

	9: How does an adventurer stay healthy?	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	Gathering, recording, classifying and presenting data in a variety of ways to help answer questions	Grouping and classifying	In this lesson children will use what they have learnt about nutrition in a different context by exploring what Sarah Outen, the British adventurer, eats when on expedition to remain healthy. They will learn about the challenges Sarah faces in choosing food that contains all the nutrition she needs without taking up too much room or being too heavy.
	Enrichment Lesson 1: What food will you need to take to the Arctic?	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	Using results to draw simple conclusions and suggest improvements, new questions and predictions for setting up further results	Using secondary source of information	In this lesson children will apply their knowledge of the different food types and groups to plan a menu to meet the specific requirements of an explorer in the Arctic.
	Enrichment Lesson 2: What lived in the past?	Identify that humans and some animals have skeletons and muscles for support, protection and movement	Using straightforward scientific evidence to answer questions, or to support their findings	Using secondary source of information	In this lesson children will analyse bones and footprints to investigate what animals may have looked like in the past. This should be taught after Lesson 6.