**Science Medium Term Plan-Year 3**

|  |
| --- |
| **Our Changing World** |
| **Lesson number and name**  | **National Curriculum** | **Working Scientifically Links** | **Scientific Enquiry Type** |
| **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 |
| **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 |
| **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 |
| **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 |
| **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 |
| **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 |
| **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 | Observing changes over time |
| **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 |
|  |

|  |
| --- |
| **Module 1: How does your Garden Grow?** |
| **Lesson number and name**  | **National Curriculum** | **Working Scientifically Links** | **Scientific Enquiry Type** |
| **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 |
| **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 |
| **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 various ways to help answer questions (by end of Lesson 11). | Carrying out comparative and fair tests |
| **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  |
| **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 |
| **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 |
| **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 |
| **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 |
| **9: What do the bees do?**  | Explore the part bees play in the lifecycle 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 |
| **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 |
| **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 |
| **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 |
| **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 |
| **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 |
| **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 |
|  |  |  |  |

|  |
| --- |
| **Module 2: Rock Detectives** |
| **Lesson number and name**  | **National Curriculum** | **Working Scientifically Links** | **Scientific Enquiry Type** |
| **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 |
| **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 questions and using different types of scientific enquiries to answer them | Grouping and classifying |
| **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 |
| **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 |
| **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 |
| **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 changeover time |
| **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 |
| **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 | Grouping and classifying |
| **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 |
| **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 |
| **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 |
| **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 out using secondary sources of information |
| **EL3: Do plants need water?** Performing simple tests Carrying out simple | Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy | Performing simple tests Carrying out simple | Carrying out simple comparative and fair tests |
| **EL4: Do seeds and plants need soil?** Observe and describe how seeds and bulbs grow into  | Observe and describe how seeds and bulbs grow into mature plants, and find out and describe how plants need water, light and a suitable temperature to grow and stay healthy | Gathering and recording data to help in answering questions | Carrying out simple comparative and fair tests |

|  |
| --- |
| **Module 3: Can You See Me?** |
| **Lesson number and name**  | **National Curriculum** | **Working Scientifically Links** | **Scientific Enquiry Type** |
| **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 |
| **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 |
| **3: How can we make it easier to be seen at night?**  | Recognise that we need light in order to see things and that dark is the absence of light; notice that light is reflected from surfaces | Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions | Grouping and classifying |
| **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 patterns |
| **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 | Looking for patterns |
| **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 and implementing investigations | Noticing patterns |
| **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 | Noticing patterns |
| **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 |
| **9: Making sunglasses**  | Recognise that light from the sun can be dangerous and that there are ways to protect their eyes | Recognise that light from the sun can be dangerous and that there are ways to protect their eyes | n/a |
| **10. 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 support their findings | Using secondary sources of information |
| **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 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 |
|  |  |  |  |

|  |
| --- |
| **Module 4: The Power of Forces** |
| **Lesson number and name**  | **National Curriculum** | **Working Scientifically Links** | **Scientific Enquiry Type** |
| **1: How can I make different shapes?**  | Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching | Using observations and ideas to suggest answers to questions | Grouping and classifying |
| **2: How can I change the shape of an object?**  | Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching | Gathering and recording data to help in answering questions | Grouping and classifying |
| **3: What property allows a material to be changed?**  | Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching | Performing simple tests | Carrying out simple comparative and fair tests |
| **4: Which material should I choose?**  | Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses | Using observations and ideas to suggest answers to questions | Grouping and classifying |
| **5: Which elastic should I choose for my catapult?**  | Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses | Observing closely, using simple equipment | Carrying out simple comparative and fair tests |
| **6: What shall we use to make a catapult?**  | Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses |  | Carrying out simple comparative and fair tests |
| **EL1: What can pushes and pulls make?**  | Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching | Gathering and recording data to help in answering questions | Carrying out simple comparative and fair tests |
|  |  |  |  |

|  |
| --- |
| **Module 5: Amazing Bodies** |
| **Lesson number and name**  | **National Curriculum** | **Working Scientifically Links** | **Scientific Enquiry Type** |
| **1: What would you need to survive?**  | Identify those 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 |
| **2: What do we need to eat to stay healthy?**  | Identify those 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 | Grouping and classifying |
| **3: How does an adventurer stay healthy** | Identify those 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 |
| **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 |
| **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 sources of information |
| **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. | Grouping and classifying |
| **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 |
| **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 |
| **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 |
| **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 |
| **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 |
|  |  |  |  |