**Science Medium Term Plan-Year 5**

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| **Module 1: The Circle of Life** |
| **Lesson number and name**  | **National Curriculum** | **Working Scientifically Links** | **Scientific Enquiry Type** |
| **1: What is a life cycle?**  | Explain the differences in the life cycles of a mammal, an amphibian, an insect and a bird  | Reporting and presenting 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  | Using a wide range of secondary sources of information  |
| **2: What do we know about the life cycles of mammals?**  |  Explain the differences in the life cycles of a mammal, an amphibian, an insect and a bird  | Reporting and presenting 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  | Using a wide range of secondary sources of information  |
| **3. What do we know about the life cycles of amphibians?**  | Explain the differences in the life cycles of a mammal, an amphibian, an insect and a bird  | Reporting and presenting 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  | Using a wide range of secondary sources of information  |
| **4: What do we know about the life cycles of insects?**  | Explain the differences in the life cycles of a mammal, an amphibian, an insect and a bird  | Reporting and presenting 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  | Using a wide range of secondary sources of information  |
| **5: What do we know about the life cycles of birds?**  | Explain the differences in the life cycles of a mammal, an amphibian, an insect and a bird  | Reporting and presenting 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  | Using a wide range of secondary sources of information  |
| **6: What makes a successful life cycle?**  | Explain the differences in the life cycles of a mammal, an amphibian, an insect and a bird  | Identifying scientific evidence that has been used to support or refute ideas or arguments  | Finding things out using secondary sources of information  |
| **7: How are humans helping endangered animals to complete their life cycles?**  | Explain the differences in the life cycles of a mammal, an amphibian, an insect and a bird  | Identifying scientific evidence that has been used to support or refute ideas or arguments  | Finding things out using secondary sources of information  |
| **EL1: Why do animals make incredible journeys as part of their life cycles?**  | Explain the differences in the life cycles of a mammal, an amphibian, an insect and a bird  | Identifying scientific evidence that has been used to support or refute ideas or arguments  | Finding things out using a wide range of secondary sources of information  |
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| **Module 2: Reproduction in Plants and Animals** |
| **Lesson number and name**  | **National Curriculum** | **Working Scientifically Links** | **Scientific Enquiry Type** |
| **1: How do flowering plants reproduce?**  | Describe the life process of reproduction in some plants and animals  | Reporting and presenting 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  | Grouping and classifying  |
| **2: Are all flowers on all plants the same?**  | Describe the life process of reproduction in some plants  | Identifying scientific evidence that has been used to support or refute ideas or arguments  | Grouping and classifying  |
| **3: Do all plants reproduce by producing seeds?**  | Describe the life process of reproduction in some plants and animals  | Reporting and presenting 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  | Finding things out using a wide range of secondary sources of information  |
| **4: How do amphibians and insects reproduce?**  | Describe the life process of reproduction in some plants and animals  | Reporting and presenting 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  | Finding things out using a wide range of secondary sources of information  |
| **5: How do mammals and birds reproduce?**  | Describe the life process of reproduction in some plants and animals  | Reporting and presenting 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  | Grouping and classifying  |
| **6: How does the human life cycle compare with that of other mammals?**  | Describe the changes as humans develop to old age  | Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs and bar and line graphs  | Noticing patterns  |
| **7: How do girls become women?**  | Describe the changes as humans develop to old age  | Reporting and presenting 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  | Grouping and classifying  |
| **8: How do boys become men?**  | Describe the changes as humans develop to old age  | Reporting and presenting 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  | Grouping and classifying  |
| **Module 3: Get Sorted!** |
| **Lesson number and name**  | **National Curriculum** | **Working Scientifically Links** | **Scientific Enquiry Type** |
| **1: How can we compare and group materials?**  | Compare and group together everyday materials based on evidence from comparative and fair tests, including hardness, solubility, transparency, conductivity (electrical and thermal) and response to magnets  | Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, and bar and line graphs  | Grouping and classifying  |
| **2: Is a solid always hard?**  | Compare and group together everyday materials based on evidence from comparative and fair tests, including hardness, solubility, transparency, conductivity (electrical and thermal) and response to magnets  | Reporting and presenting 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  | Carrying out comparative and fair tests  |
| **3: Is a liquid always runny?**  | Compare and group together everyday materials based on evidence from comparative and fair tests, including hardness, solubility, transparency, conductivity (electrical and thermal) and response to magnets  | Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary  | Grouping and classifying  |
| **4: Are all metals the same?**  | Compare and group together everyday materials based on evidence from comparative and fair tests, including hardness, solubility, transparency, conductivity (electrical and thermal) and response to magnets  | Identifying scientific evidence that has been used to support or refute ideas  | Grouping and classifying  |
| **5: Are all plastics the same?**  | Compare and group together everyday materials based on evidence from comparative and fair tests, including hardness, solubility, transparency, conductivity (electrical and thermal) and response to magnets  | Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary  | Grouping and classifying  |
| **6: To bounce or not to bounce: Why are sports balls so different?**  | Compare and group together everyday materials based on evidence from comparative and fair tests, including hardness, solubility, transparency, conductivity (electrical and thermal) and response to magnets  | Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary  | Carrying out comparative and fair tests  |

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| **Module 4: Everyday Materials** |
| **Lesson number and name**  | **National Curriculum** | **Working Scientifically Links** | **Scientific Enquiry Type** |
| **1: Which materials are used in our school buildings, what for and why**?  | Give reasons, based on evidence from comparative and fair tests, for specific uses of everyday materials, including metals, wood and plastic  | Reporting and presenting 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  | Grouping and classifying  |
| **2: Weighty problem: Which is the best carrier bag.** | Give reasons, based on evidence from comparative and fair tests, for specific uses of everyday materials, including metals, wood and plastic  | Planning different types of science enquiries to answer questions, including recognising and controlling variables where necessary  | Carrying out comparative and fair tests  |
| **3: Which is the best type of plate to use?**  | Give reasons, based on evidence from comparative and fair tests, for specific uses of everyday materials, including metals, wood and plastic  | Planning different types of science enquiries to answer questions, including recognising and controlling variables where necessary  | Carrying out comparative and fair tests  |
| **4: Cool box conundrum: Can the same container keep cold things cold and hot things hot?**  | Give reasons, based on evidence from comparative and fair tests, for specific uses of everyday materials, including metals, wood and plastic  | Taking measurements, using a wide range of scientific equipment, with increasing accuracy and precision, and taking repeat readings when appropriate  | Carrying out comparative and fair tests  |
| **5: Mystery material: What will happen if we add water to the material?**  | Give reasons, based on evidence from comparative and fair tests, for specific uses of everyday materials, including metals, wood and plastic  | Taking measurements, using a wide range of scientific equipment, with increasing accuracy and precision, and taking repeat readings when appropriate  | Observing changes over different periods of time  |
| **6: Nappy ending: What’s the best brand of nappy?**  | Give reasons, based on evidence from comparative and fair tests, for specific uses of everyday materials, including metals, wood and plastic  | Identifying evidence that has been used to support of refute ideas or arguments  | Carrying out comparative and fair tests  |
| **EL1: Are all bikes the same?**  | Give reasons, based on evidence from comparative and fair tests, for specific uses of everyday materials, including metals, wood and plastic  | Reporting and presenting 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  | Grouping and classifying  |
| **EL2: Spencer Silver and sticky notes: What’s the stickiest glue?**  | Give reasons, based on evidence from comparative and fair tests, for specific uses of everyday materials, including metals, wood and plastic  | Using test results to make predictions to set up further comparative and fair tests  | Carrying out comparative and fair tests  |
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| **Module 5: Human Impact**  |
| **Lesson number and name**  | **National Curriculum** | **Working Scientifically Links** | **Scientific Enquiry Type** |
| **1: What impact do humans have locally?**  | Recognise that environments can change and that these changes can sometimes pose dangers to living things  | Identifying differences, similarities or changes related to simple scientific ideas and processes  | Grouping and classifying things  |
| **2: How can we find out about litter?**  | Recognise that environments can change and that these changes can sometimes pose dangers to living things  | Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions  | Grouping and classifying things  |
| **3: What types of litter are dropped locally?**  | Recognise that environments can change and that these changes can sometimes pose dangers to living things  | Gathering, recording, classifying and presenting data in a variety of ways to help answer questions  | Looking for patterns  |
| **4: Why does clearing litter matter?**  | Recognise that environments can change and that these changes can sometimes pose dangers to living things  | Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions | Finding things out using secondary sources of information  |
| **5: What happens when a food chain is broken?**  | Recognise that environments can change and that these changes can sometimes pose dangers to living things  | Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions; using straightforward scientific evidence to answer questions to support findings  | Finding things out using secondary sources of information  |
| **6: What is the impact of habitat destruction in other parts of the world?**  | Recognise that environments can change and that these changes can sometimes pose dangers to living things  | Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions; using straightforward scientific evidence to answer questions to support their findings  | Finding things out using secondary sources of information  |
| **Enrichment 1: What do zoos do?**  | Recognise that environments can change and that these changes can sometimes pose dangers to living things  | Recognising statements that do and do not support an argument  | Finding things out using secondary sources of information  |
|  **Enrichment 2: Should we have zoos?**  | Recognise that environments can change and that these changes can sometimes pose dangers to living things  | Using straightforward scientific evidence to answer questions or to support their findings  | Finding things out using secondary sources of information |
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| **Module 5: Who Am I?**  |
| **Lesson number and name**  | **National Curriculum** | **Working Scientifically Links** | **Scientific Enquiry Type** |
| **1: Who are you?**  | Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment  | Making systematic and careful observations. They should choose the challenge based on previous experience of using keys  | Grouping and Classifying |
| **2: Who lives here?**  | Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment  | Making systematic and careful observations and recording findings using diagrams or keys  | Grouping and classifying  |
| **3: How are vertebrates grouped?**  | Recognise that living things can be grouped in a variety of way  | Identifying differences, similarities or changes related to simple scientific ideas and processes  | Grouping and classifying  |
| **4: How are invertebrates grouped**?  | Recognise that living things can be grouped in a variety of ways  | Identifying differences, similarities or changes related to simple scientific ideas and processes  | Grouping and classifying  |
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