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|  | Reception | Key Stage 1 | Lower Key Stage 2 | Upper Key Stage 2 |
| Y1 | Y2 | Y3 | Y4 | Y5 | Y6 |
|  | PLAN | Planning | -Show curiosity about objects, events and people (Playing and Exploring)-Questions why things happen (Speaking:30-50 months)-Engage in open-ended activitiy (Playing and Exploring)-Take a risk, engage in new experiences and learn by trial and error (Playing and Exploring) | -Ask simple questions and recognise that they can be answered in different ways:- Explore the world around them and raise their own simple questions-Experience different types of science enquiries, including practical activities-Begin to recognise different ways in which they might answer scientific questions | -Ask relevant questions and using different types of scientific enquiries to answer them.- Set up simple practical enquiries, comparative and fair tests | -Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary |
| Key Vocabulary: | question, answer,  | + explore, prediction, equipment, biology, chemistry, physics | + enquiry, comparative, fair tests, relevant questions, scientific enquiry | + plan, variables |
| Plan for focused assessment (PSTT plans): | **Predicting: ‘**Browning Apples’ | ‘Waterproof Materials’ |  | ‘Investigating the human skeleton’‘Shoe grip’‘What is the strongest magnet?’ | ‘Drying Materials’‘Investigating Pitch’ | ‘Dissolving’‘Testing nappy absorbency’‘Paper planes’ | ‘Bulb brightness’‘Raising and sorting light questions’ |
| DO | Observing/ obtaining evidence | -Closely observes what animals, people and vehicles do (The World: 8-20 months)-Use senses to explore the world around them (Playing and Exploring)-Choose the resources they need for their chosen activities (ELG: Self Confidence & Self Awareness)-Handle equipment and tools effectively (ELG: Moving & Handling)- **Change over Time**Materials can be changed in a variety of wayswhich may alter their look or feel (CoT1,2)Managing Information logo for Northern Ireland’s Thinking Skills and Personal Capabilities**Curriculum link: Place**What is in my world? (PL3) | -Observe closely, using simple equipment with help, observe changes over time.-Use simple measurements and equipment to gather data | -Making systematic and careful observations and where appropriate, taking accurate measurements using standard units, using a range of equipment, including data loggers and thermometers | -Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings where appropriate |
| Plan for focused assessment: | ‘Frozen Balloons’ | ‘Plant Structure’ or ‘Leaf Looking | Comparing plant growth in different conditions’ | ‘How much water do plants need?’ | ‘Measuring Temperature’ |
| Performing simple tests | -Find ways to solve problems/ find new ways to do things/ test their ideas (Creating & Thinking Critically) | -Perform simple tests |  |
| Plan for focused assessment: | Incy Spider Shelter Test |  | ‘Floating and Sinking’ or ‘Rocket Mice’ |
| Identifying and classifying | -Develop ideas of grouping, sequences, cause and effect (Creating and Thinking Critically)-Know about similarities and differences in relation to places, objects, materials and living things (ELG: The World) | -Identifying and classifying:Use simple features to compare objects, materials and living things and, with help, decide how to sort them and classify them |
| Plan for focused assessment: | ‘Scavenger Sort’ | ‘Animal Identification’ | ‘Nature Spotters’ |  |  | ‘Growth survey’‘Spinners’ |  |
| Using secondary sources | -Comments and asks questions about aspects of their familiar world such as the place where they live or the natural world (The World: 30-50 months) | -Ask people questions and use simple secondary sources to find answers | -Ask people questions and use simple secondary sources to find answers | -Ask people questions and use simple secondary sources to find answers |
| Scientific Equipment | Magnifying glass, hand lenses, egg timer, Non-fiction books, IPads | As Reception + ruler, tape measure, metre sticks, room thermometer, thermometers | As KS1+ Data loggers | AS LKS2+ Protractors |
| Key Vocabulary: | look closely, sort | observe, observing, identify, classify,group | differences, similarities, changes, careful observation | accuracy, precision, repeat readings |
| Recording | Managing Information logo for Northern Ireland’s Thinking Skills and Personal Capabilities**Curriculum link:** **Change over time (Changes in our world)**How can we make change happen? (CoT3)-Make links and notice patterns in their experience (Creating and Thinking Critically)-Create simple representations of events, people and objects (Being Imaginative: 40-60+months)-Develop their own narratives and explanations by connecting ideas or events (ELG: Speaking)-Builds up vocabulary that reflects the breadth of their experience (Understanding: 30-50 months) | -Gathering and recording data to help in answering questions:With guidance, they should begin to notice patterns and relationships.Record simple dataWith help, they should record and communicate their findings in a range of ways and begin to use scientific language | -Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions-Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables | -Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs |
| Plan for focused assessment: | ‘Making Butter’ | ‘Seasonal Change’‘Bridge Testers’ | ‘Woodlice Habitat’ | ‘Cars down ramps’‘Can everything make a shadow?’ | ‘Local Environment study’ | ‘Sugar cube stacks’‘Craters’ | ‘Investigating shadows’‘Outdoor keys’ |
| Maths progression: | Frequency chart, counting | Continue with all previously taught methods +Venn diagrams, labels, simple tables | Continue with all previously taught methods +Tally charts, picture graphs, pictograms, Carroll diagrams | Continue with all previously taught methods +Introduce bar graphs | Continue with all taught methodsIntroduce time graphs, classificationkeys, line graphs | Choose and explain method usedIntroduce finding percentages, use decimals | Choose and explain method usedUse ‘mean’ as an average and decide when it is appropriate to use.Introduce Scatter graphs, pie charts and ratios. |
| Key Vocabulary: | describe, group, record | evidence, data, patterns, diagram, chart, map, | gather, record, classify, present, systematic, accurate measurements | quantitative measurements,  |
| REVIEW | Concluding | -Answer how and why questions about their experiences (ELG: Understanding)-Make observations of animals and plants and explain why some things occur, and talk about changes (ELG:The World) | -Using their observations and ideas to suggest answers to questions:Talk about what they have found out and how they found it out | -Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions-Identifying differences, similarities or changes related to simple scientific ideas and processes-Using straightforward scientific evidence to answer questions or to support their findings | -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 |
| Key Vocabulary: |  | compare, contrast, describe, prediction | construct, interpret, evidence, conclusion | conclusion, causal relationship, explanations, degree of trust, patterns |
| Plan for focused assessment: |  | ‘Body Parts’ | ‘Comparing Hand Spans’‘Sorting Living and non-living | ‘The function of a plant stem’‘Reporting on rocks’ | ‘Does it conduct electricity?’‘String Telephones’ | ‘Champion Tape’‘Life cycle research’‘Solar system research’ | ‘Egg strength’‘Invertebrate research’ |
| Evaluating |  |  | -Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions | -Use test results to make predictions to set up further comparative and fair tests-Identify scientific evidence that has been used to support or refute ideas or arguments |
| Key Vocabulary: | What have you found out?explain, how, why |  | improve | support, refute, arguments |
|  |  | Plan for focused assessment: | ‘Taste test’ |  | ‘Boat Materials’ |  | ‘Teeth (eggs) in liquids’‘Dunking biscuits’ | ‘Aqua Dynamics’‘Insulation layers’‘Marble run’ | ‘Heart rate head stands’‘Fossil Habitats’ |