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| LKS2 Working Scientifically – Y4 | | |
| Questions | Test | Observe |
| **Asking relevant questions and using different types of scientific enquiries to answer them.**  Choose/select a relevant question that can be answered [by research or experiment/test]. | **Setting up simple practice enquiries, comparative and fair tests.**  Investigate the effect of something on something else.  Start to make their own decisions about the most appropriate type of science enquiry they might use to answer scientific questions [is a fair test the best way to investigate their question].  Recognise when a test is necessary.  Carry out simple fair tests [with increasing confidence and make some of the planning decisions about what to change and measure/observe].  Understand precautions for working safely. | **Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers.**  Suggest their own ideas on a concept and compare these with what they observe / find out.  Develop simple descriptions from their observations use relevant scientific language to discuss their ideas.  Observe and record relationships between structure and function (Y3/4).  Observe and record changes /stages over time (Y3/4).  Explore / observe things in the local environment / real contexts and record observations (Y3/4). |
| Data | Record | Report |
| **Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions.**  Begin to identify where patterns might be found and use this to begin to identify what data to collect.  Make more of the decisions about what observations to make, how long to make them for and the type of equipment that might be used.  Learn how to use new equipment, such as data loggers & measure temperature in degrees Celsius (°C) using a thermometer.  Collect and record data from their own observations and measurements, using notes/simple tables/standard units, to help to make decisions.  Make accurate measurements using standard units [and more complex units and parts of units] using a range of equipment. | **Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables.**  Record findings using simple scientific language and vocabulary, including discussions, oral and written explanations, notes, drawings (annotated), pictorial representations, labelled diagrams, tables and bar charts [where intervals and ranges agreed through discussion], displays or presentations.  Begin to select the most useful ways to record, classify and present data from a range of choices.  Make decisions on how best to] communicate their findings in ways that are appropriate for different audiences. (Y3/4) | **Report on findings from enquiries, including oral and written explanations, displays or presentations of result and conclusions.**  Begin to develop their ideas about relationships and interactions.  Reporting on findings from enquiries [beginning to identify the scientific facts in their data].  Use relevant scientific language to discuss, communicate, report their findings. |
| Conclude & Predict | Similarities & Differences | Evidence |
| **Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions.**  Use results to suggest improvements, new questions and predictions for setting up further tests. | **Identifying differences, similarities or changes related to simple scientific ideas and processes.**  Make a simple guide to local living things.  Use guides or simple keys to classify / identify [local small invertebrates].  Use their observations] to identify and classify.  Record similarities, differences or changes related to simple scientific ideas or processes or more complex groups of objects/living things/events and begin to give reasons for these.  With help, pupils should look for similarities and differences in their data [between different groups of results]. | **Using straightforward scientific evidence to answer questions or to support their findings.**  Ask/raise their own relevant questions with increasing confidence and independence about what they observe and about the world around them. |
| Research |
| Recognise when and how secondary sources might help them to answer questions that cannot be answered through practical investigations.  Create/invent/ design something based on what they have found out applying both research and/or practical experiences. (Y3/4).  Find out about the work of famous scientists (historical & modern day) (Y3/4). |