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| ***Words to know and spell (Tier 2 Vocabulary)*** | | |
| Similarities | Changes | Fair test |
| Differences | Identify | Measurement |
| Observations | Evidence | Thermometer |
| Keys | Predict | Results |
| Bar chart | Data |  |

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| ***Words to understand and spell (Tier 3 Vocabulary)*** | |
| **Data logger** | An electronic device that records data on temperature, light and noise. |
| **Classify** | Arrange into groups or categories. |
| **Conclusion** | A statement based on measurements and observations. |
| **Hypothesis** | A prediction based on scientific theory. |
| **Dependent variable** | The variable that is being measure or observed. |
| **Independent variable** | A variable that is unchanged. |

** Lions – Science KCV – Working Scientifically**

• Know that we can ask questions and answer them by setting up scientific enquiries

• Know how to make relevant predictions that will be tested in a scientific enquiry

• Know that in a fair test one thing is altered (independent variable) and one thing that may change as a result is measured (dependent variable) while all other conditions are kept the same

• Know how to use a range of equipment to measure accurately, including thermometers, data loggers, rulers and stopwatches

• Know how to draw bar charts; how to label a diagram using lines to connect information to the diagram; how to use a coloured key how to draw a neat table; how to draw a classification key; how to show the relationship between an independent variable in a two-way table; and how to label specific results in a two-way table

• Know – with structured guidance - how to write a simple scientific enquiry write-up including an introduction, a list of equipment, a numbered method, a detailing of results and a conclusion.

• Know how to precis a scientific enquiry write-up into a brief oral discussion of what was found.

• Know that scientific enquiries can suggest relationships, but that they do not prove whether a prediction is true.

• Know that scientific enquiries are limited by the accuracy of the measurements (and measuring equipment).

• Know that the conclusions of scientific enquiries can lead to further questions, where results can be clarified or extended to different contexts

• Know that they can draw conclusions from the findings of other scientists.

• Know that a theory is an explanation of observations that has been tested to some extent and that a hypothesis is an explanation that has not yet been tested, but that can be tested through a scientific enquiry.

***Key skills to do:***

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| What do you predict will happen?  What do your results show?  How could we present these results?  **Opportunities for Investigation:** A child-led project to be developed over the half term, ideally to cover a ‘Research’ line of enquiry.  **Suggestions:**  How have ideas about forces/friction changed over time?  How does a compass work (traditional, electronic, in a mobile phone etc)? |
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***Concept check questions. Test yourself:***

**Year 3 – Science – Autumn 2 – Heyford Park School**

**Year 5 – Science – Autumn 1 – Heyford Park School**