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| **End of Enquiry Learning:**  **Knowledge** |
| * I know what gravity is and the impact it has on falling objects. * I know the effects of air resistance, water resistance and friction. * I know how forces effect the movement of the earth and smaller planets relative to the sun in the solar system. * I can name the planets in the solar system and identify them in order of orbit around the sun. * I know how to describe the shape and movement of the sun, earth, and moon. * I know how to explain day and night and the apparent movement of the sun across the sky. * I know that the Earth tilts on its axis - link to summer and winter in northern hemisphere and southern hemisphere.   **Skills**   * I can plan an investigation that demonstrates how I have considered how the variables need to be controlled for the test to be fair. * I can say 4 reasons why my test is fair. * I can use data that I have analysed to find trends and outliers. * I can explain how I have used prior knowledge to help me form my hypothesis. * I can demonstrate how the constant evaluation of my investigation has helped ensure fair and accurate results. * Where there are anomalies, I can evaluate the test and results and say why these might be. * I can compare my results against other similar results in order to help evaluate accuracy. |

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| Friction |
| Air resistance |
| Water resistance |
| Particles |
| Surface area |
| Gravity |
| Force |
| Data |
| Hypothesis |
| Observation |
| Fair test |
| Research |
| Space |
| Orbit |
| Solar system |
| Spherical |
| Phases |
| Reliability/ valitidity |
| Scatter graph |

A poster with different types of objects

Description automatically generated with medium confidenceA magnifying glass with a person in it

Description automatically generatedA diagram of different types of symbols

Description automatically generated with medium confidence

**What effects do forces have on us, the Earth and our Solar System?**

**Year 5 Science Learning Organiser**

A diagram of the solar system

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| A black arrow pointing to a white rectangular object  Description automatically generatedFriction |
| A box with a parachute  Description automatically generatedAir resistance |
| A red object in water  Description automatically generated with medium confidenceWater resistance |
| A group of black and grey objects  Description automatically generatedParticles |
| A red cube with black arrows  Description automatically generatedSurface area |
| A hand reaching for a red ball  Description automatically generatedA stick figure pushing a box  Description automatically generatedGravity |
| Force |
| A black and white clipboard with black lines  Description automatically generatedData |
| A cartoon of a person's face with a light bulb above his head  Description automatically generatedHypothesis |
| A black and blue eyes and arrows pointing to a white surface  Description automatically generatedObservation |
| A magnifying glass and a question mark  Description automatically generatedFair test |
| A close-up of hands and a question mark  Description automatically generatedResearch |
| A cartoon of planets and stars  Description automatically generatedSpace |
| A blue planet with a black arrow  Description automatically generatedOrbit |
| Solar system |
| A blue and red volleyball ball  Description automatically generatedA diagram of planets in a circle  Description automatically generatedSpherical |
| A moon in a blue background  Description automatically generatedPhases |
| A green check marks on a white background  Description automatically generatedA graph with x marks  Description automatically generated with medium confidenceReliability |
| Scatter graph |

A poster with different types of objects

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Description automatically generated with medium confidenceA magnifying glass with a person in it

Description automatically generated

**Year 5 Science Learning Organiser**

**What effects do forces have on us, the Earth and our Solar System?**

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| **End of Enquiry Learning:**  **Knowledge** |
| * I know what gravity is and the impact it has on falling objects. * I know the effects of air resistance, water resistance and friction. * I know how forces effect the movement of the earth and smaller planets relative to the sun in the solar system. * I can name the planets in the solar system and identify them in order of orbit around the sun. * I know how to describe the shape and movement of the sun, earth, and moon. * I know how to explain day and night and the apparent movement of the sun across the sky. * I know that the Earth tilts on its axis - link to summer and winter in northern hemisphere and southern hemisphere.   **Skills**   * I can say 2 reasons why my test is fair. * I can plan an investigation that demonstrates how I have considered the need for the test to fair and unbiased. * I can collect a range of measurements and data to make comparison and check for anomalies. * I can explain which measurements I am taking and the reliability of these. * I can design a table or chart that enables me to display my data collected in the most informative way. * I can explain how the conclusion of my investigation relates to my hypothesis. * I can explain how I have used prior knowledge to help me form my hypothesis. * Where there are anomalies, I can evaluate the test and results and say why these might be. * I can evaluate the results of my Investigation and explain why they are not biased. * I can use my results to prove or disprove the hypothesis using a balanced argument. |

A diagram of the solar system

Description automatically generated

A collection of icons with text

Description automatically generated