

# INVESTIGATION

## YEAR 5 and 6: SUMMER 2

### *Does the size of an asteroid affect the size of the crater?*

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| <p><b>COVERAGE: Does the size of an asteroid affect the size of the crater?</b></p> <p><b>Pupils who are secure will be able to:</b></p> <ul style="list-style-type: none"> <li>- Recall key knowledge from previous units.</li> <li>- Apply knowledge in new contexts.</li> </ul> <p><b>When working scientifically, pupils who are secure will be able to:</b></p> <ul style="list-style-type: none"> <li>- Carry out a full scientific enquiry.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <p><b>KEY LANGUAGE AND VOCABULARY:</b></p> <p>air resistance</p> <p>celestial bodies</p> <p>conclusion (LKS2)</p> <p>evaluate</p> <p>fair test</p> <p>gravity</p> <p>predict (KS1)</p> <p>spherical</p> <p>reliable</p> <p>trustworthy (LKS2)</p> <p>variable (LKS2)</p> | <p><b>KNOWLEDGE AND FACT SHEET</b></p> <p><b>KEY QUESTION</b></p> <ol style="list-style-type: none"> <li>1. What can you recall about Earth and Space that would help you explain the problem?</li> <li>2. What are unbalanced forces and how could they help us in this investigation?</li> <li>3. How can separating mixtures help us investigate this topic?</li> </ol> |
| <p><b>KEY SKILLS AND KNOWLEDGE</b></p> <p><u><b>Knowledge</b></u></p> <p><b>This unit revises the following key knowledge from the previous Year 5 units:</b></p> <p><b>Earth and space</b></p> <ul style="list-style-type: none"> <li>- The movement of the Earth, and other planets, relative to the Sun in the solar system.</li> <li>- The Sun, Earth and Moon are approximately spherical bodies.</li> </ul> <p><u><b>Life cycles and reproduction</b></u></p> <ul style="list-style-type: none"> <li>- To know the differences in the life cycles of a mammal, an amphibian, an insect and a bird.</li> </ul> <p><u><b>Properties and changes</b></u></p> <ul style="list-style-type: none"> <li>- To understand how to compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets.</li> </ul> <p><u><b>Unbalanced forces</b></u></p> <ul style="list-style-type: none"> <li>- Unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object.</li> <li>- The effects of air resistance, water resistance and friction, that act between moving surfaces.</li> </ul> <p><u><b>Mixtures and separation</b></u></p> |                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                            |

- To understand how to use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating.

### **Skills**

**This unit revisits the working scientifically skills covered in Year 5, including:**

- Posing questions.
- Planning.
- Predicting.
- Observing.
- Measuring.
- Recording.
- Graphing.
- Analysing and drawing conclusions.
- Evaluating.

### **ENRICHMENT:**

- **The children will conduct an investigation into the question in hand and apply their understanding from the year's scientific knowledge.**

### **Previous Learning:**

**The children have explored the scientific idea of evolution and inheritance.**

### **Future Learning:**

**Children in Year 5 will be able to explore how light and reflection.**

### **School Drivers to Examine**

**Children will look at:**

- [Creativity and Innovation](#) = how can our understanding of scientific knowledge help us solve problems?