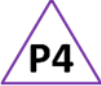



Topic: Space (or Forces)	Year 5 Age 9-10	Title: Craters
Working Scientifically Do: Gather and record data using tables and graphs.	Concept Context Explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object.	
Assessment Focus <ul style="list-style-type: none"> • Can children design simple tables to record results? • Can children present results as a bar chart or line graph? 		
<p>Activity <i>Today we are going to be geologists.</i></p> <p>Investigate the formation of ‘craters’ by dropping meteors (e.g. marbles or balls) into a tray of sand and observing the craters produced. Introduce by looking at photos/websites of impact craters. As a class drop a variety of different spherical objects into the sand and measure the diameter of the craters, creating a class graph. As a class, consider what could be changed and measured (could use a sticky note planning board) and allocate different variables to different groups of children (height of drop, size of meteor, type of sand).</p> <p>Discuss how they can make their results more reliable (repeating each drop and finding an average) and suitable units of measurement to use. Together, generate success criteria for drawing tables and graphs for children to peer assess against together at the end of the activity. Ask each group to make measurements and record them in a table and graph of their own design.</p> <div style="text-align: right;">  </div> <p>Adapting the activity</p> <p>Support: categorical variable, e.g. tennis ball/Ping-Pong ball/rubber ball, support with making measurements of crater to nearest cm, use pre-prepared table and graph.</p> <p>Extension: Choose own variables, measure to nearest mm, talk about accuracy of results.</p> <p>Questions to support discussion</p> <ul style="list-style-type: none"> • Where on the table will you write down the things you have changed/measured? • How many repeat readings will you record? • Which units of measurement will go in your table headings? • Will you use a bar chart or a line graph? Why? • Where on the bar chart / line graph will you show what you changed / your measurements? • What is a suitable scale to use for your bar chart / line graph? • Does your / your peer’s table / graph meet the success criteria? <div style="text-align: right;">  </div>		
<p>Assessment Indicators</p> <p>Not yet met: Records measurements in a simple table / graph but needs adult support to record measurements and plot values.</p> <p>Meeting: Can make decisions about what to record and where to put information in a simple table and graph. Can calculate/plot mean or median if repeat measurements have been taken.</p> <p>Possible ways of going further: Notice and discuss anomalous results or discount them from the data, suggesting possible explanations for them linked to their investigation.</p>		



Pupil box 4 - assess peers. See TAPS pyramid for more examples.