



Topic: Light	Year 6 Age 10-11	Title: Investigating shadows
Working Scientifically Do: Take accurate measurements and records data on a graph		Concept Context Use the idea that light appears to travel in straight lines to explain why shadows have the same shape as their objects
Assessment Focus <ul style="list-style-type: none"> • Can children make accurate measurements? • Can children plot their results accurately on a line graph? 		
<p>Activity <i>Today we are going to be physicists</i></p> <p>Introduce the investigation by shining a light on an object and asking how the shadow of the object could be changed (e.g. size of object/number of blocks, distance/angle of torch). List potential investigation questions. Ask children to select a question which will result in numerical data and carry out the investigation. As a class, generate clear success criteria for taking precise measurements and drawing accurate line graphs to display results. Focus on recording of results. Children could peer assess graphs against the success criteria, giving each other feedback for improvement.</p> <p style="text-align: right;"></p> <p>Adapting the activity</p> <p>Support: Could use a planning framework to clarify investigation question, variables to be measured, changed and kept the same. Support drawing an appropriate graph e.g. example axes.</p> <p>Extension: Ask children how the angle of the light affects the shadow. Ask children to use their graph to make further predictions and test them.</p> <p>Other ideas: Research use of and limitations of sundials</p> <p>Questions to support discussion</p> <ul style="list-style-type: none"> • What could we change that might change the shadow? • What could we measure about the shadow? • What units of measurement will we use? • How are you making sure that it is a fair test? • What kind of a graph can you draw with that data? • What scale would be the most appropriate to use for each axis? • How will you label each axis? • Is there a pattern or trend in your results? 		
<p>Assessment Indicators</p> <p>Not yet met: Requires support to take accurate measurements and needs help to plot points accurately on a line graph.</p> <p>Meeting: Uses appropriate equipment to measure, e.g. a protractor for angle of light, a ruler to measure length of shadow to nearest mm. Takes precise measurements which are recorded accurately on a line graph.</p> <p>Possible ways of going further: Uses line graph to make further predictions, e.g. <i>if the angle of the light is 60°, the shadow will be 5cm.</i></p>		



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