

Topic: Light	Year 6 Age 10-11	Title: Investigating shadows
Working Scientifically Do: Take accurate measurements and record data on a graph	Conceptual Knowledge 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 choose the appropriate type of graph to present their results? 		
Activity Introduce the investigation by shining a light on an object and asking how the shadow of the object could be changed. List potential investigation questions. Ask children to select a question and carry out the investigation. Focus on recording of results. Adapting the activity Support: Provide support to as needed in the planning process (could use planning framework) to clarify what question should be investigated, what will be measured, changed and kept the same. Support drawing an appropriate graph (line graph). 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. Other ideas: Research use of and limitations of sundials Key Questions <ul style="list-style-type: none"> • What could we change that might change the shadow? • What could we measure about the shadow? • How are you making sure that it is a fair test? • What kind of a graph can you draw with that data? • It there a pattern or trend in your results? 		
Assessment Indicators Not yet met: Carries out a fair test with some support and may need help to draw a line graph. Meeting: Uses appropriate equipment to measure, e.g. a protractor for angle of light, a ruler to measure length of shadow to nearest mm. Records data and draws a line graph. Exceeding: Identifies why a line graph is preferred and uses the graph to make further predictions, <i>e.g. if the angle of the light is 60°, the shadow will be 5cm.</i>		

