**Light and Shadow**

**Unit 3.2 Chaning Shadows**

**How can Shadows grow?**

We are going to investigate how the shadows of an object changes as you move the object closer to the source of light



Use the card to make a start that is 2 cm across. Look at the picture to see how to measure the star.

Stick the star onto the end of a wooden stick.



Hold a flashlight 30 cm from a table top pointing down onto the paper.

Now hold the star in the light at a height of 2 cm from the table top.

Predict what will happen to the width of the shadow as you move the star towards the light source

Draw around the shadow on the paper.

Measure and record the width of the shadow.

|  |  |
| --- | --- |
|  | Size of shadow which cast by an object which 2 cm across |
| Height of star above table | **Predicted width of the shadow** | **Width of Shadow** |
| 2 cm | **2 cm**  | **2 cm** |
| 4 cm |  |  |
| 6 cm |  |  |
| 8 cm |  |  |
| 10 cm |  |  |

1. Describe the pattern in your result

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1. Make a conclusion from your result

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1. Finish this sentence

As an object move towards a light source it's shadow gets \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

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| **No.** | **Self-Reflection Criteria**  | **Yes** | **No**  |
| 1 | I can investigate how shadows can change  |  |  |
| 2 | I can make predictions and see if it is right  |  |  |
| 3 | I can record result in a table then interpret the results  |  |  |
| 4 | I can describe simple patterns in result  |  |  |
| 5 | I can make a conclusion from result |  |  |