



# Spaghetti Strength Experiment



**Question** How does the length of a piece of spaghetti affect its strength?

**Aim** What do I want to find out?

**Hypothesis** What do I think will happen?

**Independent Variable** What am I changing and how?

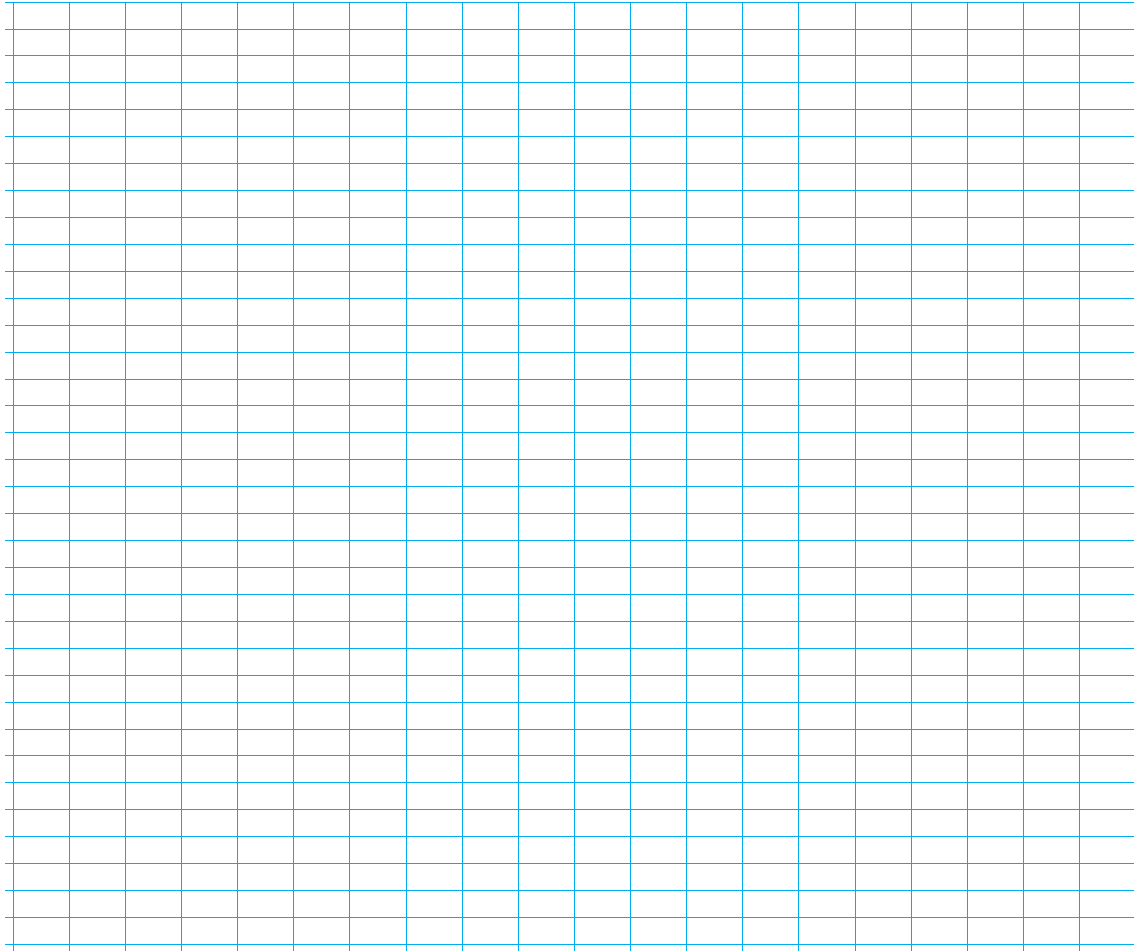
**Dependent Variable** What am I measuring and how?

**Equipment** What do I need to carry out the experiment?

<b>Method</b>	What does my experiment look like?	What do I need to do?
		<ol style="list-style-type: none"> <li>1. Collect all equipment.</li> <li>2. Cut spaghetti to the following lengths: 20 cm, 15 cm, 10 cm, 5 cm. Cut 3 pieces of each length.</li> <li>3. Place the retort stands at 20 cm apart and adjust a clamp on each to the same height. Take the 20 cm piece of spaghetti and rest it on the clamp arms. Use a piece of sticky tape to keep it in place.</li> <li>4. Take a 20 g mass, hang it off the centre of the spaghetti and record if it breaks or not. Repeat this but add 20 g of extra mass each time until it snaps. Write the mass at which it snapped in your results table. Repeat this for each of the three 20 cm pieces.</li> <li>5. Repeat step 3 and 4 for the other lengths of spaghetti.</li> </ol>

<b>Results</b>	What did I observe happening?	What data did I collect?																													
		<table border="1" style="width: 100%; text-align: center;"> <thead> <tr style="background-color: #cccccc;"> <th rowspan="2">Length of Spaghetti</th> <th colspan="4">Weight Spaghetti Snapped At (g)</th> </tr> <tr style="background-color: #cccccc;"> <th>Trial 1</th> <th>Trial 2</th> <th>Trial 3</th> <th>Average</th> </tr> </thead> <tbody> <tr> <td>20 cm</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>15 cm</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>10 cm</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>5 cm</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	Length of Spaghetti	Weight Spaghetti Snapped At (g)				Trial 1	Trial 2	Trial 3	Average	20 cm					15 cm					10 cm					5 cm				
Length of Spaghetti	Weight Spaghetti Snapped At (g)																														
	Trial 1	Trial 2	Trial 3	Average																											
20 cm																															
15 cm																															
10 cm																															
5 cm																															

Results  
Graph



Conclusion

What have I found out from this experiment?