

## VCAL Numeracy - Spaghetti Bridge Competition - Judging

- Principal to judge the aesthetic award
- Take a clear photo of you with your completed bridge
- Measure your bridge to make sure that it complies with the specifications set out on the activity sheet

Mass of bridge (g)	
Height of Bridge (mm)	
Width of bridge at narrowest point (mm)	
Span of Bridge (mm)	
Overall length (mm)	

- Set your bridge so that it spans over a gap of 15cm, e.g. over the distance between 2 tables
- Place the wooden supports across your bridge and suspend the plastic container from them
- Add the 50g brass weights slowly, counting them, until the bridge collapses. How many weights were used? Calculate the total weight the bridge supported before collapsing.  $50g \times \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$  This is the payload.

- Calculate the structural efficiency of your bridge:  
 $E = P/M$   
 where E = Efficiency, P = Payload (g), M = Mass of bridge (g)

$E = P/M$ $=$ $=$
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- Write a brief reflection on the success (or not) of your bridge design. Include words such as: bigger, smaller, the same as, thicker, heavier, lighter, longer, shorter, straight, curved.

- Did your bridge meet the design specifications?

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- What worked well?

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- What would you change next time?

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- How did your bridge design compare to others?

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