**Pop Stick Bridge Investigation.**

Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Total = \_\_\_\_\_\_\_\_\_\_\_\_\_

**Aim:** To investigate the forces of compression and tension on bridges and how the bridges construction withstands these forces.

Type of bridge constructed:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Hypothesis of the mass bridge will withstand before failure:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ grams

**Procedure:**

Design on paper and construct a bridge that spans a 60cm gap between two desks.

\* Design must be completed with 100 pop sticks or less.

\* Use only the pop stick provided

\* You can only use the glue provided

\* You cannot coat the pop sticks in glue.

Test your bridge to destruction.

During construction and testing you will be marked on:

\* Teamwork (2)

\* Behaviour (2)

\* Efficient use of time (2)

Research Notes : Types of Bridges

|  |  |  |
| --- | --- | --- |
| Type of Bridges | Picture | Useful features |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

(5)

Features your bridge has: (eg arch post and beam) (2)

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**Bridge Design** (with annotation of expected areas of compression and tension) (5)

Where did your bridge fail? Why did it fail at this point? Use a diagram showing the forces. (3)

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Compare your bridge to the one in the class that was the most successful. How could you have made your bridge better? (3)

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