

Name: \_\_\_\_\_

## Projectile Motion: The Spoon Catapult SPH4C

Materials: plastic spoon  
popsicle sticks  
rubber bands  
hot glue sticks + glue gun  
marshmallows (for launching)

Your Task: Construct a free-standing catapult of your own design using the materials provided. Note that you will probably want to rebuild, repair, and/or modify your design before it is complete.



Evaluation: (Construction) You will receive full marks for a catapult that can launch a marshmallow a minimum distance of 1 metre (100 cm = 100%). Marks will be deducted if any part of the catapult (other than the spoon) needs to be held during launch. A 10% bonus will be awarded to the catapult that can launch a marshmallow the furthest.

Evaluation: (Questions) Answer each of the following questions. Point form is acceptable.

1. What is a projectile?
2. Explain why the projectiles, to travel further, must be launched slightly upward (above the horizontal).
3. Identify at least two decisions you made during your construction (either the initial build or rebuild) that made your catapult more effective.