

Of Marshmallows and Catapults

A Collaborative Project-based ESP Activity for Scientific Vocabulary and Abstract Writing

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Rationale

My graduate and undergraduate Engineering students (4 skills) were finding abstract writing tedious and were losing motivation. I needed something that would:

- 1) *Get them interested again*
- 2) *Reinforce concepts*
- 3) *Build motivation*
- 4) *Apply knowledge*
- 5) *Expand into writing*

I needed a fun way to introduce the students to the concept of abstracts, get them thinking, and be creative in during the class.

Student Make-up

Graduate Students

80% Japanese
20% International

Undergraduate Students

95% Japanese
5% International



Materials Needed

Materials per team

- 12 - Bamboo Skewers
- 8 - Large Marshmallows
- 6 - Rubber Bands
- 5 - Mini Marshmallows
- 1 - Plastic Spoon

Pre In-Class Activity

Introduce Abstract Parts and Applications

5 parts / Flow / Differences (paper/presentation)

Mixed-up Abstract

Based on the marshmallow catapult project.

Collaborative In-Class Activity

Students enter to find materials from practice abstract on tables.

Students are instructed to build a catapult to launch a mini marshmallow as far as possible.

They have 50 minutes to discuss, plan, build, and test their design.

After completing their catapult, students compete in a contest of mini marshmallow flinging.

Distances are recorded in Jh (or some other measurement of distance) and posted to the board.

The winning team keeps the extra marshmallows.



Team	Unassisted	Assisted	Measurement Unit
A	15Jh	8Jh	
B	105Jh	17Jh	
C	195Jh	15Jh	
D	75Jh	75Jh	
E	13Jh	117Jh	

Post Activity Expansion

Students are asked to photograph their catapult to help in recall of the design process for a short writing due next class.

Students are asked to write a 150 (max) word abstract about their catapult including the following parts of an abstract:

The Introduction

The Methodology (How they designed it with rationale)

The Results (The data collected after construction phase)

A Summary (Why they feel it was a good or bad design)

A Conclusion (What they might do differently next time)

