

Film Rockets - Date:

Name(s):

1 Materials

- 1 bottle of water
- 1 film canister
- 2 alka seltzer tablets
- 1 or more brain(s)

2 Objective

Maximize the distance of the film rocket's flight.

3 Directions

- Fill film canister with desired volume of water
- Place desired fraction of alka seltzer tablet into film canister and shut lid
- Quickly place film canister top down on the ground and step away

4 Questions

- (a) What variables effect the film rocket's flight?
- (b) Which of the above variables can you change, with the given materials?
- (c) What is the cause of the force that is launching the film rocket? And, what force is resisting the rocket's flight?
- (d) What is your hypothesis for maximizing the film rocket's flight?
- (e) What materials are needed to make this experiment more precise?

5 Bonus Questions

- (a) What are Newton's three famous laws of motion, and how do each of them relate to this experiment?

- (b) If we graphed the rocket's height as a function of time, what would the graph look like? Is there a name for this type of graph?

6 Reflection

- (a) What did you learn from this activity?

- (b) What further questions has this activity raised in your group?