

**Angry Birds Project**

**Objective:** The objective of this project is to create a working catapult that can be used to measure distance traveled.

You will need to do some research regarding the make-up of your catapult. Your job is to design a catapult that works from house hold materials such as straws, forks, rubber bands, etc… Google catapults or animated catapults and find a design you can model or a helpful website might be:

 <http://www.livebinders.com/play/play_or_edit?id=142880>

 We will be testing these in class and discussing many topics related to the catapult including the scientific method, data tables, graphs, vocabulary and types of energy just to name a few. My expectation is that the student creates a fully working catapult and be able to present it to the class.

Example:

   

Rubric: 5 4 3 2 1

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Creativity |  |  |  |  |  |
| Does it work |  |  |  |  |  |
| Evidence of research |  |  |  |  |  |
| Scientific Method |  |  |  |  |  |
| Design |  |  |  |  |  |
| Data tables |  |  |  |  |  |
| Measurement Graph |  |  |  |  |  |
| Vocabulary |  |  |  |  |  |
| Comparison of catapult |  |  |  |  |  |
| Explanation of how it works |  |  |  |  |  |

**How to get a 5!!!!!**

**Creativity:** Make your catapult original, don’t copy someone else’s. Use different objects, try different things.

**Does it work:** Test it before you bring it to school. Make sure it can catapult objects of different weights. Testing it will allow for any “fixing” that needs to be done.

 **Evidence of research:** Include awritten or typed info sheet on the catapult including what it was used for, when it was used and how it works.

**Scientific Method:** Include an explanation of the scientific method using your catapult as your experiment. (All 6 steps.)

**Design:** Include a drawing or diagram of your design.

**Data Tables:** Include a data table charting all of the data measurements you collected from your trials. Each object should have its own data table. **No less** than two objects of your choice.

Examples:

 Object 1: Marble wt. 15 oz Object 2: Paper clip wt. 7 oz.

|  |  |
| --- | --- |
| Trial | Distance Traveled |
|  1 |  |
|  2 |  |
| 3 |  |
| 4 |  |
| 5 |  |

**Measurement Graphs:** Using your data table include a graph showing each of your catapults trials and its measurements. (Preferably a line graph) Each object should have its own graph.

**Vocabulary:** Define any new vocabulary words you come across in your research or designing of your catapult. Have to have at least 3- 5 definitions.

**Comparison of a catapult**: Write a comparison paragraph by choosing one of your classmates’ catapults and compare it to yours. Ex. Materials, distance traveled, design, etc.

**Explanation of how it works:** Include a typed or hand written explanation of how your catapult works.

All written work should be turned in with a table of contents including:

1. Evidence of research

2. Scientific Method

3. Design

4. Data Tables

5. Measurement Graphs

6. Vocabulary

7. Comparison of a catapult

8. Explanation of how it works

I have included for you:

* A website to assist in your design and to use for your research information.
* Examples of catapults
* A rubric with which you will be graded
* My expectations and how to receive full credit on this project
* An example of the table of contents
* Examples for your data table and line graph