

Name _____

Period _____

Due Date _____

Grape Crushing Machine

Assignment:

Design and build a "Rube Goldberg" type of compound machine (like the mousetrap game) which will be able to crush a grape.

Instructions:

1. Each student must complete his or her own machine. You may **not** work with a partner on this project.
2. The compound machine must contain at least ***four different types*** of the six types of simple machines. The different types of levers will count as different machines. ***Using a screw to hold the parts of the machine together will not count as one of your simple machines!***
3. You must ask your parents for permission to use any materials or tools which may be required in construction of your grape crushing machine. Your parents may ***help*** you, but the ideas and the majority of the work should be your own.
4. Be original in your ideas and include as many simple machines as you can. Be sure to make a plan ***before*** you begin construction.
5. ***Size Limitations*** - Your grape crushing machine must be able to fit into a box with equal sides of 70 cm.
6. You may "start" your machine, but it must carry out the rest of the actions by itself.
7. ***Use of any machine that you have not made yourself, other than toy cars, is forbidden - no hand me down projects will be accepted!!! Cannot use mousetraps.***

Grade: This project will be worth **100 points**. You will receive 20 points for each of the four different simple machines you use in your grape crusher and 20 points for having your machine run continuously without having to restart it. You will also receive 20 points of extra credit for successfully accomplishing the task of crushing a grape.

Good Luck, and get ready to make some grape juice!

