

Name _____ Class Period _____

Marble Machine

VMSS Technology Education Problem Solving

Introduction

Everyday we all use some form of technology. Each piece of technology, whether it is a pen or pencil, a car, or an iPhone, it required some form of designing and manufacturing to get it to the final product we use. Hours upon hours have been spent drawing, documenting, modeling and testing each piece of technology that we use daily. The purpose of this project is for you to use the VMSS collaborative design process to create a working machine. Read this sheet carefully and understand everything that the machine has to do before you begin to utilize your resources.

Design

Design a device that will allow a marble to travel from the start of the machine to the floor in the longest amount of time possible (but at least 10 seconds).

Design Guidelines

1. The device must be easily removed from the table at the end of each class period.
2. The time starts when the marble enters your machine and stops when the marble touches the floor. It must touch the floor to end your time, or it doesn't count.
3. If the marble stops during testing, it counts as 2 points off of total.
4. You get a total of three tries. The best time will be used.
5. The marble cannot be altered in anyway.
6. Must include: 360 degree turn, 3 inch drop, and a jump.

Materials

- 1/2 foam core board, 1 sheet of poster board, cardboard tubes, cardboard, **limited** hot glue, "unlimited" masking tape, popsicle sticks, 1 metal marble, and possibly other items from home (if approved by instructor).