*Falling Fish Weight (sinker) Car*



You (or you and a partner) will construct a device powered only by potential energy due to gravity. The maximum dimensions are 30 cm x 30 cm x 30 cm. The only source of energy is the potential energy due to gravity of a falling weight of 2 ounces (56.7 g) or less. No other part of the cart may move in the vertical direction so as to provide additional energy. Neither the weight nor any part of the car other than the wheels may come in contact with any other object. The device must be self-starting with no push or pull. Three scores will be used to determine your final points.

1. The total distance traveled: The distance is measured as a straight line from the starting point (the front wheels of your car will be on the starting line) to the point on the car farthest from the starting point. If the car falls over, the distance is measured from the point on the car nearest the starting point. The competition will take place on the carpet outside of room 313.

Scoring:

Distance (see below) \_\_\_\_\_\_\_\_\_\_

Place (see below): \_\_\_\_\_\_\_\_\_\_

Total: \_\_\_\_\_\_\_\_\_\_

|  |  |  |  |
| --- | --- | --- | --- |
| Distance Traveled | | Furthest Distance | |
| 0.5 m < d < 1 m | 25 points | 1st Place | 5 points |
| 1 m < d < 1.5 m | 30 points | 2nd Place | 4 points |
| 1.5 m < d < 2 m | 35 points | 3rd Place | 3 points |
| 2 m < d < 2.5 m | 40 points | 4th Place | 2 points |
| d > 2.5 m | 45 points | 5th Place | 1 points |

Team Member(s):\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Due date: Nov. 1st 2012 (if you are not able to compete on this date you will compete on the 18th and your score will be decreased by 33%)