**Elevator Rubric**

**Group name:**

**Students in group:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Points** | **Elevator Box Structure** | **Elevator Box Function** | **Calibration Graph** |
| 4BEST | Securely holds all passengers/weights in the elevator box | Elevator has a closable door so passengers can move in and out | Calibration is linear and all floor data points are filled |
| 3 | Passengers are safe but slide around in the box | Elevator is a closed box with no doors | One data point for the graph is missing |
| 2 | One passenger fell out of the elevator box | Elevator has a crumbled structure, but is enclosed | At least one data point is collected from the elevator |
| 1WORST | More than one passenger fell out of the box | Elevator has openings where passengers can fall out | No work is done |
| **Total Points =** |  |

**To complete the job successfully, the elevator must meet the following requirements:**

* The elevator box must safely carry 4 passengers: Washington, Roosevelt, Jefferson and Lincoln.
* The elevator box must be securely attached to the elevator cable. Safety is paramount.
* The cable must be connected to a servo motor.
* The elevator must be able to travel up to at least five different floors. Each floor is six inches high.
* Each floor must be calibrated using the rotary encoder.
* When in use with the servo motor, the top floor height accuracy must be within 5% of the total building height.
* The passengers’ safety must be verified when they reach the top.

**Notes and Comments:**