MOTION AND DESIGN SCORING GUIDE
Revised 3/5/10

MP    NP    BP
19 – 15  14 - 13  12 and below

1. **4 points** - **2 points** for selecting tape measure and timer.
   **2 points** for correct description for how tools are used.

2. **2 points** – **1 point** for selecting A
   **1 point** for correct explanation, e.g. “I picked A because the fewer the turns of the rubber band the shorter the distance traveled.

3. **3 points** – **1 point** for predicting 10 – 15 turns of the rubber band.
   **2 points** for correct explanation, e.g. “Since the distance increases with more turns of the rubber band, and the distance to A is 2, then distance to B is about 4. The distance between B-C is about the same as the distance between Start and B. So C would be about 8 turns. The distance between C – D is greater than that AB so D has to be greater than 10. Or any other scientifically correct response that uses DATA.
   **1 point** for partially correct response.

4. **1 point** - The force is the # of turns of the rubber band.
5A. **2 points** 1 point for describing 1 difference, e.g.# of blocks changes from 2 to 3, or the number of rubber band turns varies from 8 to 12.
   1 point for explaining why the difference changed the race results.
   e.g. In Plan 2 and 3, they use 10 turns but the weight carried is different. More weight would make Plan 3 car move slower.
   In Plan 3 and 4, they have the same weight, but the turns in Plan 4 are more. That would make Plan 4 move farther.
5B. **2 points** – 1 point for describing a second difference.
   1 point for correct explanation
5C. **1 point** – Response states the more turns on the rubber band, the farther the car travels, or any other scientifically correct response.

6. **2 points** – 1 point for stating car B.
   1 point for correct explanation, e.g. The larger the weight the faster the car will go.
7. **2 points** – 1 point for stating car B.
   1 point for correct explanation, e.g. The car carrying the least weight will move faster when using the same falling weight, or any other scientifically correct response.