

The objective is to build a device which will travel the greatest distance along a smooth level floor, using only the energy stored in two #12 rubber bands.

RULES:

1. The transporter must be in contact with the ground at all times, and must be self-guided after its release at the starting line (no pushing allowed!). If it does not move in a straight line, the component of its motion in the designated direction will be measured as the official distance covered.
2. The energy to run the transporter is to be stored in two #12 rubber bands in 1 minute or less before the beginning of the contestant's run. Energy storage may be accomplished by stretching or twisting the rubber bands. All forces on the rubber bands must be internal to the transporter. (No sling-shot type devices are allowed.) The rubber bands may be cut.
3. All parts of the transporter, including the rubber bands, must move with the transporter. If any part of the transporter falls off during the run, that part which covers the least distance will be used for official measurement of distance.
4. The transporter must be built "from scratch"; i.e., a toy vehicle that is retrofitted with rubber bands is not allowed.
5. The contest will take place on the floor tiles in the 100s hallway. You may want to take the nature of the surface into account when designing your transporter.
6. This is an *individual* event. Every student must build her or his own device.

GRADING:

This is a *required* lab which will be graded on a pass/fail basis. All students completing the assignment will pass with a score of 50, regardless of their transporter's performance. Any students who do not participate will receive a zero. (This lab will add 50 new points to the semester lab point total.)

Bonus lab points may be earned as follows:

- 5 points for each whole meter of travel (e.g., a distance of 4.95 m earns 20 bonus pts.)
- 10 points for breaking the school record (23.4 m, Stacy Sanchez, 2008)