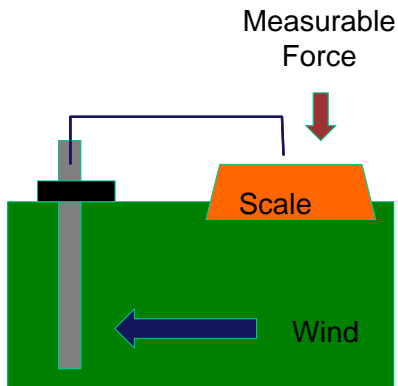
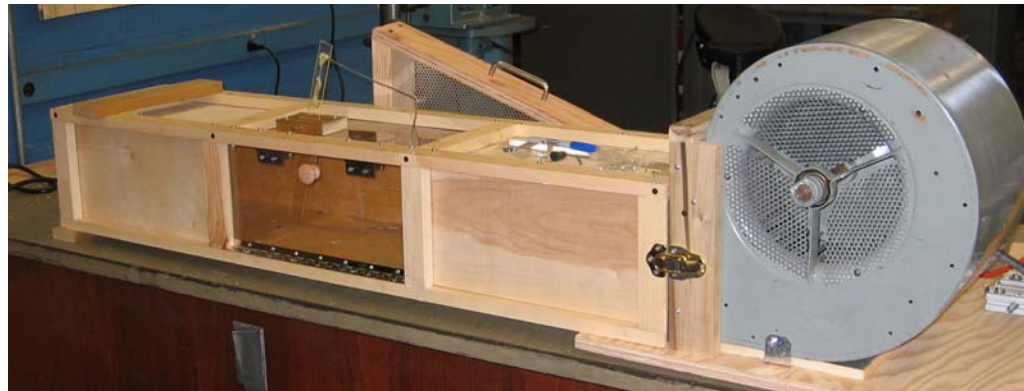


Project Overview:

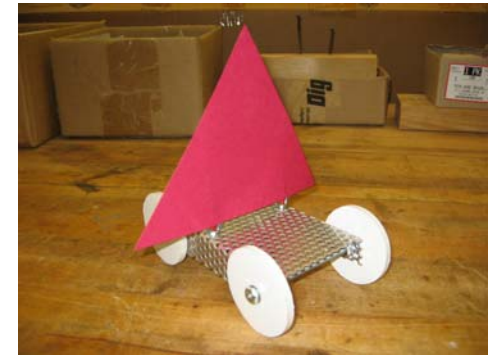
The list of potential curricular connections and activities that can be done with a wind tunnel in middle school is almost endless. This project incorporates simple geometry, weather, lab skills, metric measurement, as well as having the students work through the design process and actually construct and test their creations. The project bridges math and science wonderfully with real world applications that the students can get excited about and really understand. The interactive approach of this project can not help but enhance a student's learning.



Device for Measuring Force



Wind Tunnel



Testing Cart

- Background information is presented and discussed with the students to prepare them for the project. We will review area formulas and do some practice problems to get the students fully engaged.
- The students will then be divided up into small groups and given the instructions for creating their shape signs (or sails).
The instructor will be there to supervise and support them through the entire process. Accurate calculations, precise measurements, teamwork and patients will be needed to accomplish the task successfully.
- Students will attach the signs to the testing cart, then we will run them through the wind tunnel at moderate wind speeds, collecting data for each sign. Lastly, students will exchange data, do some calculations, graph the results, and develop conclusions as to the outcomes.
- The wind tunnel will also be used to demo hurricane force winds, and test the aerodynamics of student designed solar cars.