Straw Rocket Launcher

SD Science Content Standards:

4.P.2.1. Students are able to demonstrate how forces act over a distance.

5.P.2.1. Students are able to identify forces in specific situations that require objects to interact, change directions, or stop.

6.P.2.1. Students are able to describe how push/pull forces acting on an object produce motion.

8.N.2.1. Students are able to design a replicable scientific investigation.

9-12.P.2.1. Students are able to apply concepts of distance and time to the quantitative relationships of motion using appropriate mathematical formulas, equations, and units.

9-12.P.2.2. Students are able to predict motion of an object using Newton's Laws.

9-12.P.2.3. Students are able to relate concepts of force, distance, and time to the quantitative relationships of work, energy, and power.

Materials:

Straw Rocket Launcher Kit – ESA 2 Lending Library (2 available)

- Both launcher kits include a launcher, straws, teacher guides (loaded with inquiry-based and content-based activities), and video.

Lesson Plan:

You will need a big area for launching – the gym is ideal but long hallways with tall ceilings work as do lunchrooms and commons. The outdoors is okay as long as there is little wind.

Students build straw rockets using the materials and guidelines teacher provides as appropriate for age/grade/ability level.

Resources:

http://www.glenbrook.k12.il.us/gbssci/phys/Class/vectors/vectoc.html

http://home.mindspring.com/~genefleeman/sitebuildercontent/sitebuilderfiles/sodastrawrocketscience-aerospaceengineeringprojectsforgradesk-12Plus.ppt#870