Strandbeest Lesson Plan

Amount of time Demo takes: 1-2 min
Don’t try this at home!

Materials
- Can of multi-purpose duster with extension tube
- Super glue
- Strandbeest with 5 plastic wings
- Tape or other adhesive

Set up instructions
1. Ensure that all parts of strandbeest are assembled correctly and that there are no noticeably broken or missing pieces. Check that each of the wings are attached.
2. Insert extension tube into duster can nozzle.

SAFETY!
Be sure to point the duster can nozzle away from yourself and others, and away from any potential ignition sources like fire or hot surfaces. Also be sure to hold the can upright when spraying air.

Lesson’s big idea
The presence of “wind” turns the wings, spinning the shaft and connecting gears of the beast, creating kinetic energy and moving it across a surface.

Background information
In 1990, Dutch artist Theo Jansen began creating large mechanisms that are able to move on their own. The Strandbeest is able to store air pressure and use it to drive them in the absence of wind. In Dutch, strandbeest translates to beach-beast. Jansen is quoted as saying “The walls between art and engineering exist only in our minds”.

Instructional Procedure
1. Hold the duster can up to 3 feet away and direct the nozzle at the wing assembly.
2. Hold down the can’s trigger and watch!
Assessment/sample questions you can ask

- How does it work?!
- Talk about wind and air pressure in relation to energy. What are some other ways that we can use the power of wind in our daily lives? (example: technology like wind turbines can convert mechanical energy into electrical energy for other applications)

Clean Up
Carefully put the strandbeest back in the container along with the duster can and remaining materials. If anything is broken or needs to be replaced, please let someone know.

References
http://www.strandbeest.com

Next Generation Science Standards
K-4 Content Standard B: Physical sciences, energy
5-8 Content Standard B: Physical sciences, energy, engineering design
9-12 Content Standard B: Physical sciences, energy, engineering design