

Physics & Engineering Design Names _____ # _____
Fan Cart Activity #1 Names _____ # _____
 Names _____ # _____
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 Period _____ Date _____

Safety: Be careful while you are cutting and gluing materials

Pre-Construction

- 1) Combine two lab groups
- 2) Use graph paper and come up with at least three sketches. Save your sketches. If you get stuck try <http://hop.concord.org/imu/imu.core.html>
- 3) Review design w/ your teacher. He will give you the materials and you can complete a full size scale drawing on graph paper. Save your drawing.

Specifications

Design and build a Air Cart that conforms to the following specifications:

- 1) Must stay within 1 tile width for at least 2 meters.
- 2) Must accelerate
- 3) Must have a fan guard
- 4) Must have a wire harness with an on/off switch. Wire must be soldered to the harness.
- 5) It must look good (i.e. painted or decorated in some way)
- 6) When the device is complete you must take at least one digital picture of the side of the device.
- 7) You will need to run a string from the back of the cart to a smart pulley. Remember the fan spins!

Materials

1 electric motor
3 or 4 wheels
3 or 4 5/32 " diameter pop rivets (axles)
1 propeller
1 piece of wire for the harness
Cardboard
Straws
1 Battery ** (you will need to replace it when it goes dead) **