



3, 2, 1...Lift OFF! Create YOUR OWN HOVERCRAFT.

It may not be considered flight, but traveling around on a cushion of air is pretty close, and pretty cool. This is a group project and you'll need an adult to lend you the proper tools and help with the construction. The hovercraft works best on a smooth concrete surface or linoleum floor. But before you start your engine, be sure the runway is clear.

materials:

plywood - 4x4 square 1/2" thick
pvc pipe - 90° elbow
shower curtain
4 - 5/8" round head screws
plastic coffee can lid

duct tape
staple gun
utility knife
metal washers
leaf blower *or* shop vac

instructions:

- 1 Have an adult cut the plywood to a 4 ft round circle.
- 2 Have an adult cut a hole in the plywood large enough to fit your PVC pipe (Figure A). This hole must be placed halfway between the center of the plywood disk and the edge. It's a good idea to trace the pipe in pencil on the wood. It does not have to fit perfectly; later you can seal any leaks with duct tape.
- 3 Lay your plywood disk on the center of your shower curtain. Cut the curtain to a circle several inches wider than the plywood. Fold the edges of the curtain up over the plywood and use the staple gun to staple it to the top of the plywood disk. Put a staple about every 4 inches. The plastic should be tight against the wood, but don't pull it TOO tight or the plastic will tear loose when inflated. Use duct tape to tape the edge of the plastic down to create a tight seal.
- 4 Take the coffee can lid and, using the 5/8" round head screws and metal washers, screw it to the bottom of the plywood (Figure B). This holds the middle of the shower curtain firmly against the plywood.
- 5 Use your utility knife to cut four vent holes in the plastic. The holes should be about 2 inches in diameter. They must be placed within a few inches of the coffee can lid. Space them out so that there is plenty of plastic between each of them.
- 6 Flip your hovercraft over so the plastic sheet is on the bottom. Place it on a smooth floor. Stick the leaf blower or shop vac into the PVC pipe and turn it on. The plastic on the bottom should inflate. The hovercraft will lift up slightly. At this point, have everyone stand clear. Hop on and start gliding around! (Figure C)



Figure A



Figure B



Figure C