

Basketball - Suspended Air Ball

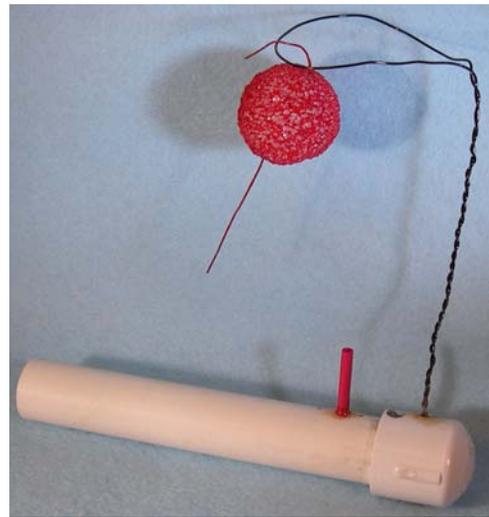
This is an interesting project utilizing a column of air to elevate a styrofoam ball ('basketball') to score a goal.

Materials needed:

1. 6" - 1/2" PVC pipe.
2. 1/2" PVC end cap.
3. PVC solvent and 5 min. epoxy glue.
4. 1" x 1/8" id plastic tube (cf. heat shrink tubing).
5. 12" - 20 gauge galvanized wire.
6. 1" styrofoam ball (cf. Hobby Lobby, Michaels, etc.)
7. 4" fine copper or galvanized wire (to make hook).

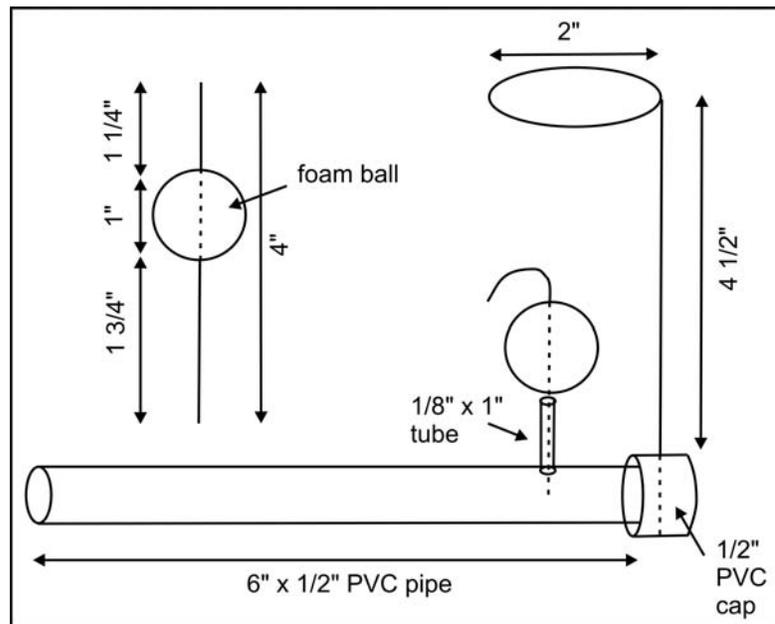
Before the Meeting

1. Cut materials as needed
2. Glue end cap to PVC tube.
3. Drill a 1/8" hole ~ 1 1/2" from capped end (see photo).
4. Drill 1/16-1/8" hole completely through the end cap for 'hoop' wire (see photo).
5. Optional: for younger boys, twist the wire to make the 'hoop'.



Assembly at the Meeting

1. Twist the 12" galvanized wire to form the basketball hoop.
2. Insert base of hoop 'pole' into 1/16-1/8" hole in PVC end cap and glue with 5 min. epoxy.
3. Insert 1" x 1/8" tube into 1/8" hole and glue with 5 min. epoxy.
4. Fashion copper wire to form a hook on the top side of the styrofoam ball. Be careful to have about 1" of wire for the hook, and 2" of wire for the 'tail' on the opposite side of the styrofoam ball. The 'tail' is very important to insert into the 1/8" tube and to keep the ball from spinning when it is elevated by the air stream. Use epoxy to glue the copper wire (with hook) onto both sides of the styrofoam ball (else the ball will just slide off the copper wire).
5. Let dry for 10-15 min.



Making a basket - Stand the ball and copper wire 'tail' up in the 1/8" tube. Blow on the open end of the PVC pipe and the ball will rise up. Blow until it enters the hoop and the hook on the copper wire grabs onto the hoop.