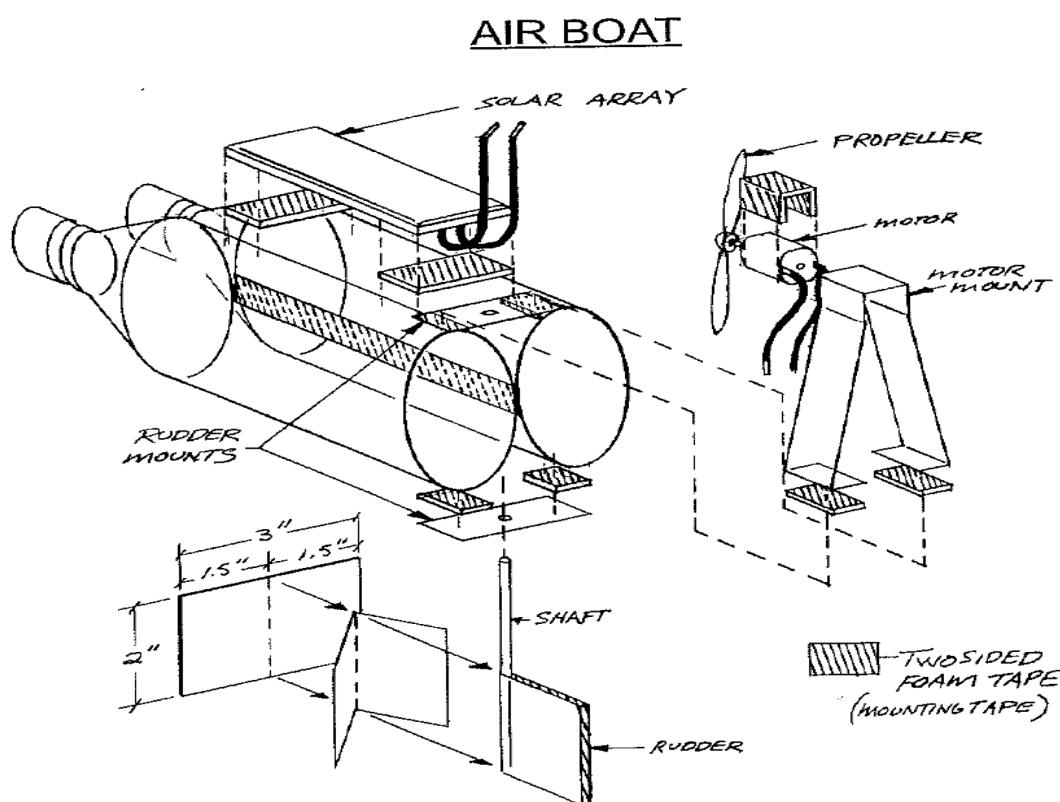


Air Boat Assembly

Material List:

- (2) same size & shape bottles as the pontoons.
- (1) 2-liter bottle for Bottle #3, which will be used for extra material.
(I found the 2-liter bottle had stronger plastic material required to hold the motor and propeller up with the clearance needed. Also, one 10-inch strip is required, easier to cut out of a 2-liter bottle than a 16 or 18 oz bottle)

Assembly Instructions: Refer to diagram



1. Place the 2 similar bottles side by side.
2. Run a piece of mounting tape along the side where these bottles touch.
3. Be sure to keep the caps on the bottles and fasten them securely.

Rudder Mount Assembly:

1. Make 2 rudder mounts by cutting (2) 1" x 4" strips from Bottle #3.
2. Using mounting tape, secure the rudder mounts onto the rear of the bottles along the top and bottom as shown.
3. Punch a hole in the top and bottom mount to accommodate the rudder shaft.

Rudder: Slightly larger than the speed boat rudder

1. Cut a piece of plastic approximately 2" x 3" from Bottle #3.
2. Fold this piece on the 3" side so that the final rudder size is 2" x 1.5"
3. Place a piece of mounting tape onto one side.
4. Make sure that it is placed close to the fold line, but not on the fold line because you will need room for the shaft.
5. Insert the rubber shaft keeping it flush to the bottom of the rudder.

Rudder/Rudder Mount Assembly:

1. Insert the completed rudder assembly into the holes of the rudder mounts.

Motor Mount Assembly:

1. Make the motor mount by using material cut from Bottle #3.
2. Cut a piece of plastic approximately 1" x 10".
3. Place the motor on the center of this strip. (See figure above)
4. Bend and slightly fold the sides up and around the motor. (See figure above)
5. Cut the mounting tape, peel and place around the 3 sides of the motor.
6. Stand the motor upright and fold each side of the mount at approximately 1" from the bottom.
7. These folds will determine how the motor and propeller will be from the tops of the bottles once mounted.
8. It is important to make sure that the propeller will not hit the top side of the bottles.
9. Using mounting tape, secure the motor mount to the top side of the bottles or the top rudder mount.
10. Attach the propeller.
11. Mount the solar array to center of the top side of the bottles using mounting tape as illustrated.
12. Use the 1 gray wire nut to connect the blue wire from the solar array to the red wire of the motor.
13. Next, use the 1 gray wire nut to connect the red wire of the solar array to the blue wire of the motor.

You are now ready for the water!

Reference: www.SolarMade.com Copyright @2003, Solar World: Drawings and much of the directions from Solar World. Directions and material list modified slightly for use in the classroom.