



*Creations*

**Woodshop**

*youngfoundations.org*

## **WOODSHOP RUBBERBAND BOAT**

**AGE: 10-11**

**ESTIMATED LENGTH: 3 HOURS**

### **NEEDED MATERIALS:**

- 1" thick x 6" wide x 12" long board for boat
- Two-1/8" thick x 1 3/16" wide x 3" long wood pieces for each propeller, only 1" wide if using the 2 engine design
- 1/4" Dowel rod
- Thin, small rubber bands or, we used clear hair bands for better elasticity.
- Wood glue. We use Tightbond III
- 3M - 77 spray adhesive
- Finish (we used mineral oil)
- Create and print boat template

### **TOOLS NEEDED:**

- Sander and 80-220 grit sandpaper
- Drill press or drill with 1/4" drill bit
- Jig saw or Band saw
- Table saw

### **INTRO AND CLASS SUMMARY:**

- Read scripture and discuss parable.
- Start class with prayer.
- Play and discuss quote during break.

### **SCRIPTURES: Matthew 8:23**

*And when he was entered into a ship, his disciples followed him.*

### **QUOTE: 57-0623 Believe From The Heart**

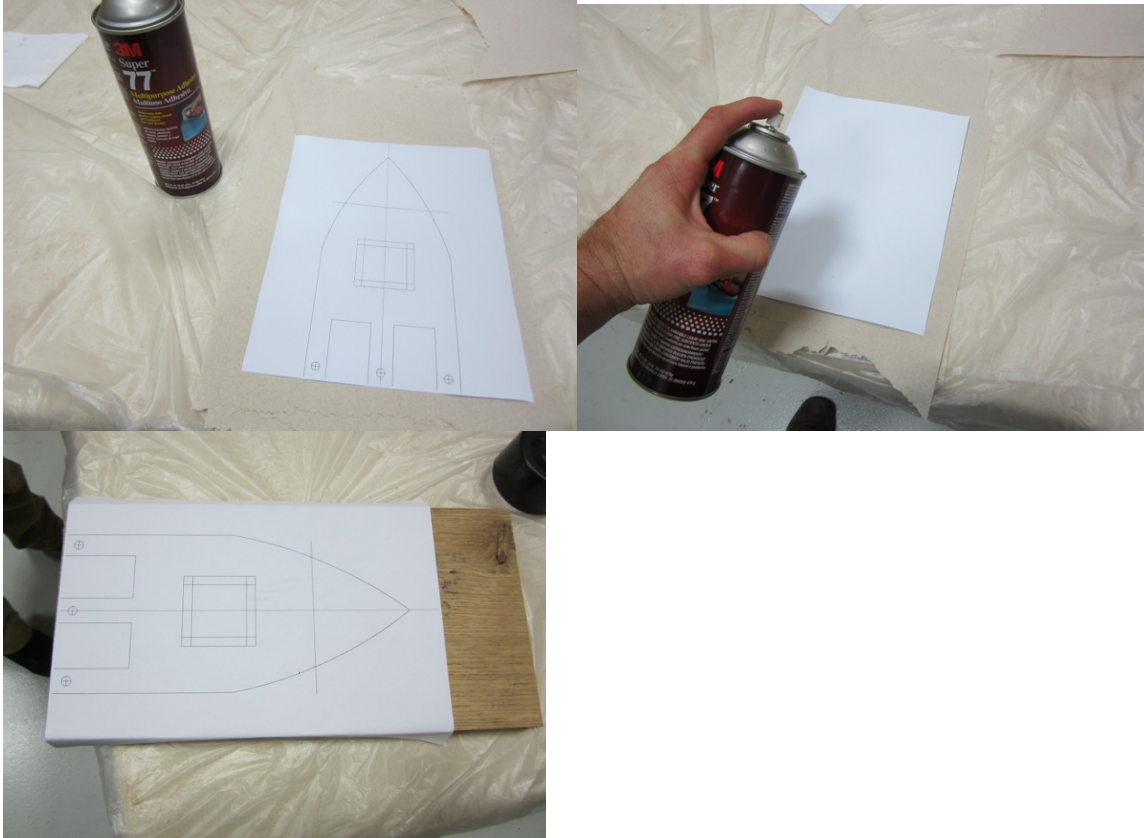
Noah, when he built the ark, he gave witness to the unrighteous world that there was a righteous God. Although it seemed to be crazy while it was being built, but it proved out, that it was the only boat that would float through the storm. And as it was being erected, it was... He condemned the unrighteous world and justified those who believed in it.

### **RUBBERBAND BOAT TUTORIAL:**

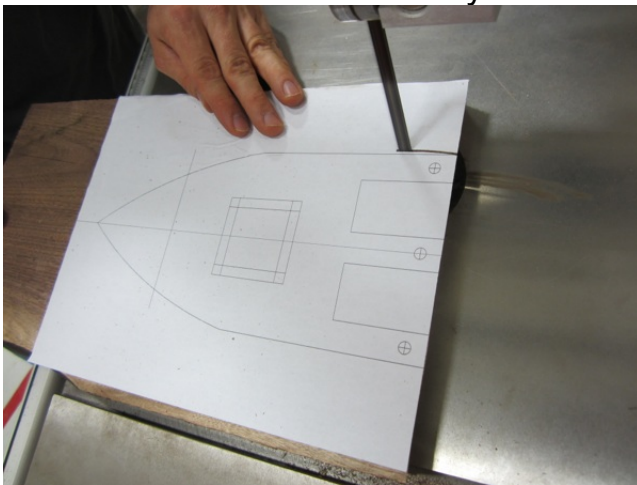
1. Select types of wood to be used. Try to avoid knots.



2. Plane wood to about 1" to  $\frac{3}{4}$ " and pick out which boat template you will be using.
3. Cut wood to approximately 1" larger than the size of the boat
4. Spray 3M-77 adhesive according to directions on the underside of template. Then place it on your piece of wood.



5. Set your jig saw or band saw table to 20°. Start cutting front and sides of boat. Be sure to stay about a 1/16 to 1/32 away from lines.

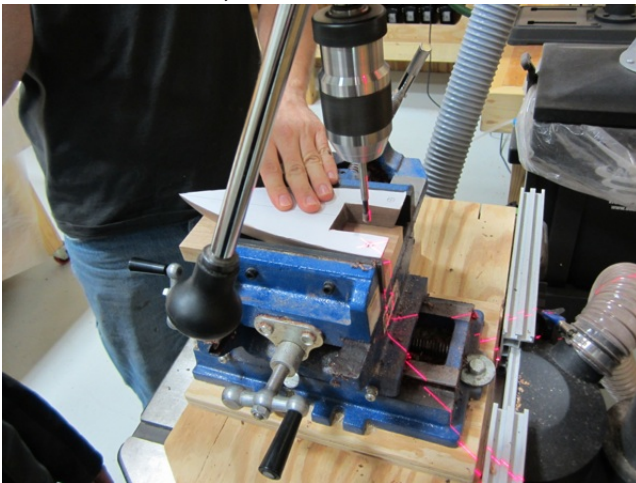


6. Reset jig saw or band saw table to square. Cut the back of boat and the propeller bay.

7. Sand up to line on boat sides and sand off saw blade marks. You can also refine the shape of your boat at this time.



8. Using a  $\frac{1}{4}$ " drill bit, drill holes for dowels. When drilling be sure to drill holes straight and not at an angle. Drill down just enough to hold the dowel secure, about  $\frac{1}{4}$ " to  $\frac{3}{8}$ ".



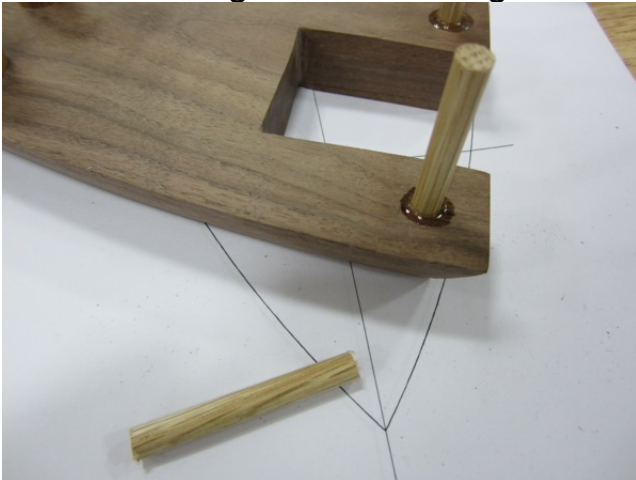
9. Remove paper template and sand top of boat.

10. Optional: Glue and pin nail, cabin, side whalers or windshield of your own design.





11. Insert  $\frac{1}{4}$ " dowels for propeller mount. Be sure to wipe off excess wood glue with wet rag.



12. Cut propellers out.  $\frac{1}{8}$ " thick by 3" long by  $1 \frac{3}{16}$ " wide if using a one propeller boat, and only 1" wide if using a two propeller boat. Cut a  $\frac{1}{8}$ " slot in the middle of each fin going halfway across. Slide two fins together using these slots and glue together. Taper ends of propeller slightly (this makes it less likely to bind). Option- If you drill

a hole in the center of each propeller on both sides going in about ¼” with about a ¼” drill bit, you will be able to twist the rubber band more and the boat will go farther.

13. Finish with a spar varnish or exterior grade polyurethane. Follow manufactures instructions. (We used mineral oil for a quick rub down, but it will need re-applied more often.)



14. Mount propeller to dowels with rubber band. You can also use two rubber bands or clear hair bands.



15. Let dry and it should be ready for the water!

