

## Catamarans

This is a great special event activity. Have the boys bring their families and cheer them on! Give trophies or ribbons to the winners. Be sure to allow for spilling some water on the floor, so do the event outside or on a concrete floor.

### Materials:

1. 2 - white pine or spruce (7 3/4" x 3/4" x 1") pieces for use as the catamaran pontoons. Shape as desired.
2. 1 - plywood platform for mast (3 1/2" x 3 1/2") with predrilled 3/16" hole for mast.
3. 4 - 1" x 17" nails used to secure plywood platform to the pontoons.
4. 1 round mast (3/16" dowel x 4 1/2" long).
5. 1 cardboard sail (3" x 4") (you can get card stock cut to 3 x 4 at stationery stores).



### Before the meeting

1. Cut pontoons and plywood platform.
2. Drill 3/16" hole in center of platform.
3. Cut 3/16" dowel to 4 1/2".
4. Sand parts on belt sander.

### Assembly at the meeting:

1. Glue and nail (4) plywood platform to pontoons.
  2. Glue mast (3/16" dowel) into plywood platform.
  3. Use a hole puncher to punch 2 holes in the cardboard sail.
  4. Decorate the sail as desired (in meeting or at home). The boys should decorate/draw/color their sails with markers, but you need to **spray the sail with a clear plastic sealer**, so the colors won't run (if the sail gets wet). **Glue the sail onto the mast so it will not pivot! (Bring instant glue to the activity to make on-the-spot repairs!).**
- Provide each boy with: Sand paper, steel wool, spackling, etc. Boys will provide their own paint or shoe wax polish, extra parts, etc. to finish their catamaran at home.

### Catamaran Racing

Build racing troughs and place one trough on each side of an 8' table. Have the boys blow on their boats and time them with stop watches for each trough. Record their times and use their best time over three (or more if time permits) races. If a boy touches his boat while racing, that is a foul and his race time does not count.

**Racing Troughs:**

Materials needed for one trough: 2 - 1"x4"x8' white pine or spruce (i.e., straight, few small knots) 1- 6"x 1/4" x 7' 7 1/2" plywood (for bottom). Make trough using two 7'6" sides and 6" end pieces. Attach bottom by nailing and glue. Use **paintable silicone** or plywood glue. Paint with oil-based paint (not latex!, latex is not water proof!).

**Catamaran specifications**

A. Width - maximum 3 1/2" inches wide for boat body, max. of 4" wide for the sail.

B. Length - minimum of 6 inches long, max. of 10" long.

C. Height - no limits (but tall masts need a keel on the boat!).

D. Depth - max. of 1 1/2" below the waterline.

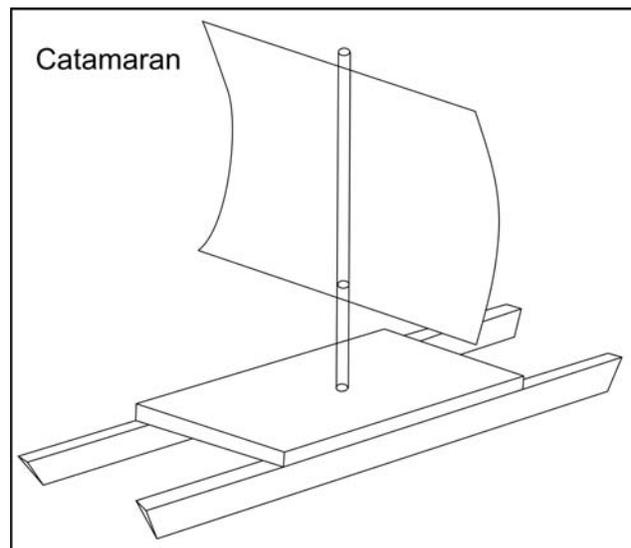
E. Sail area - maximum of 12 sq. in. (3" x 4" or equiv.) This can be cut into multiple sails if desired, or cut into different shapes as desired. Another kind of material may be used for sails, if desired, as long as the total surface area does not exceed 12 sq. in.

F. Sail may extend wider than 3 1/2" but must be less than 4" wide and they must clear the water-line (or boat deck) by 1/2" in order to clear the vertical sides of the racing trough.

G. Details - additional wood, plastic, string, etc. may be added for decorating as long as the above limits are not violated.

H. Attachments - no device may be added that will offer additional propulsion (ex. propellers).

I. Inspection - all boats will be inspected before the race and those boats not meeting the specifications above will not be allowed to participate until the boat is brought into compliance.



**Awards:** Trophies for speed (1st, 2nd, 3rd in each division. Plus, trophies for Best Catamaran Models) (use same judging criteria as for the Pinewood Derby) and a Catamaran Patch (see Special Events Patches section).

**NOTE:** We have been using racing troughs made from 1x4s (see diagram) and we found that the pontoons often get stuck to the walls (surface tension). If you put 2 **thumb tacks** on the outside of each of the pontoons, this will provide a little space and that solves this problem.