

# District 5280 Beach Party & Cardboard Boat Race

## Cardboard Boat Race Rules & Regulations



**FEE PER BOAT: \$25.00**

**REGISTRATION AND FEE MUST BE RECEIVED BY August 31<sup>st</sup>.**

**THE CARDBOARD BOAT RACE WILL BEGIN PROMPTLY AT 6:15.**

**ALL BOATS MUST CHECK-IN BY 5:45 IN ORDER TO COMPETE!**

BRINGBOATS TO THE BACK GATE OF THE SEASIDE LAGOON (EVERYONE ENTERING THE LAGOON MUST PAY).

**THE GOAL:** BUILD A PERSON-POWERED CARDBOARD BOAT THAT IS CAPABLE OF COMPLETING A 200-YARD COURSE.

**THE TEAM: MUST BE** ROTARIANS, ROTARACT OR INTERACT MEMBERS FROM DISTRICT 5280 CLUBS

1. Only one entry per Rotary Club, one entry per Rotaract Club and one entry per Interact Club. No club may have more than one entry.
2. Rotaract and Interact boats will compete with the Rotary boats.
3. No substitutions of paddlers between heats. Every paddler must be able to complete two heats (200 hundred yard course per heat) in order to advance.

### **Approved Construction Materials:**

- Only **corrugated cardboard** may be used. It can be of any thickness but must not be bonded to any other material such as vinyl. Non-corrugated (solid cardboard) material may not be used, especially the kind of resin or wax-type coating found in packing cases. **No foam, plastic or wood is allowed in building your boat!**
- Tape, water-soluble caulk or silicon sealant, water-based wood glue, and water-soluble, outdoor latex-based, primer paint are permitted.
- You **may not** wrap the hull in tape, plastic, shrink wrap or any other material.
- There are no restrictions placed on decorative materials as long as they do not aid in the flotation or propulsion of the boat and are non-toxic.
- Boats may be subject to a technical inspection before the race. The 4-Way Test will be applied.
- Clubs will provide their own paddles. You may use wooden paddles or use wood to make paddles or oars.

**Have Fun! Be Creative! Plan to get wet!**

If you have any questions, contact Christopher Reyes at [pnoy12@yahoo.com](mailto:pnoy12@yahoo.com) or by phone to 310-483-5447.

## **BUILDING YOUR CARDBOARD BOAT**

Start with a design idea, a vision of what you want your cardboard creation to look like. But consider this first -- it doesn't have to be a boat at all! It can be any design you like or want to try out. There are some pictures of various cardboard boats attached to give you some ideas.

To save time build a model using a manila folder or other heavy paper or lightweight cardboard. That way, you can fold, re-fold, and fold again to your heart's content. Cut it up, glue it together, and try out your design idea in small scale before working on a full-sized creation.

How about a little science? If you want, you can toss in a little physics or other sciences. Maybe you will choose to calculate the displacement of your design idea so that you will have some certainty about the buoyancy of your design. Here's the basic number: a cubic foot of water weighs about 62 pounds. That means that a 180-pound man will float in a boat that is 1 foot by 1 foot by 3 feet -- of course, that could be a bit uncomfortable! But at least you would know just how much boat you will need for you (and your crew) so you don't overdesign it and add unnecessary weight.

How about some art? Perhaps you have a really creative idea, maybe something that nobody has done before. Unless you get your kicks from putting in lots of hours and making discoveries along the way -- hey, sometimes that can be great fun -- you may want to at least try out that unique or innovative idea in model form. If you want to put a palm tree in the middle of your "desert island," be sure you won't make the whole thing top-heavy -- unless, of course, you are trying for the Titanic Award.

Now, go full-scale . . . but first, think about this: make sure your creation will be able to get out the door of wherever you choose to build it. There have been many tales of woe about boats that had to be dismantled -- or even trashed and rebuilt -- just because no one thought about the size of the boat and the size of the door.

### **Where to get cardboard**

You can purchase corrugated cardboard sheets from: PaperMart ([www.papermart.com](http://www.papermart.com) Tel: 1-800-745 8800). They will deliver for a fee or you can pick it up yourself.

You can also get cardboard from appliance stores. The shipping boxes for refrigerators and big freezers can be good possibilities. Maybe you can get boxes from TVs, bedding, bookcases, or other furniture. Of course, you can also use smaller sheets and glue them or fasten them together.

Let's see, other materials . . . you can use glue and tape. You can use paint and water sealant and other stuff. But first, take a look at list of substances that are not to be used. We're not trying to make it tough on you, but we are steering you away from stuff that is toxic, either for you or for the environment.

## **Tips for handling cardboard:**

You can have strength and still keep your boat light if you glue layers of cardboard. In fact, try placing one layer so that the corrugations run in one direction, then placing the second layer so that the corrugations run at a 90-degree angle to the first layer.

To fold cardboard across the corrugations, consider scoring the line of the fold with the butt end of your utility knife or other rounded edge of a tool.

Don't step on your cardboard! If you break the corrugations -- well, think about it.

To keep your cardboard dry seal the edges with caulk or silicone. If water gets into your corrugations, you can have great fun watching it get drawn through the corrugation just like in a drinking straw. That may be okay when you have time to do something about it, but if you see this happen in the middle of a race . . . !!

## **Other helpful suggestions:**

A flat bottom is recommended. A V-shaped bottom is likely to tip over unless the V is very gentle.

The lowest center of gravity is the most stable; kneeling or standing will cause you to tip over.

Longer boats go faster, but they are harder to turn.

Boats shorter than 10 feet are difficult to steer.

For height, allow about 18 inches for you to sit and paddle effectively without the edge of your boat blocking your arms.

For width, figure about 18 inches for a kayak, about 23-24 inches for a canoe. Figure about 30 inches maximum for 1 person, 48 inches for two people.

Paint all the surfaces before gluing, caulk the edges, then glue (carpenter's glue works great).

Avoid oil-based stains, caulk, and glue because the oil soaks into the cardboard, may never dry, and this weakens the cardboard.

Duct tape shrinks when it is painted.

Clear tape melts when it is painted.

Reinforced paper tape works well over caulked edges and seams.

Forget about "glue guns" because that type of glue melts on hot days.