

## Cardboard Boat Race Building Rules



1. 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 material may not be used, especially the kind of resin or wax-type coating found in packing cases. No solid cardboard and no carpet roll tubes may be used.
2. Wood, metal, Styrofoam, or other materials that would aid in flotation or make the hull rigid are prohibited. This restriction applies to the keel, transom, ribs, hull, etc.
3. No material such as Styrofoam or rubber inflation devices may be used to provide “buoyancy” or maintain flotation. No sandbags or similar materials may be used for ballast.
4. Hulls may be painted with any “one-part water based” paint. No epoxy glues, fiberglass resins or “multi-part” varnishes or paints may be used. Hulls may not be “wrapped” in plastic, duct tape or anything else. Tar based substances like roof coatings are not permitted.
5. Joints and seams may be glued and/or taped. Duct tape, contact cement, rubber cement, liquid nail, and a water sealer like Thompson's may be used. No nails or metal or wood fasteners or staples may be used in the construction of the boat (small amounts may be used for removable decoration only)
6. Vessels are subject to inspection and may be disqualified for violations of the above general rules.
7. Each boat must have a designated Captain plus 1 crew members for a total of 2 participants per boat.
8. Each crew member MUST wear a lifejacket. Each crew is allowed 2 paddles (provided). No other method of propulsion can be used.

### Award Categories

High Seas Award= Most-spirited team

The Admirals Pride Award = Most creative design

Torpedo Award = Fastest time across finish line successfully and afloat

## **Building a cardboard boat is all about trying to meet "The Challenge":**

**First** things first .. start with some objective in mind. Maybe you want to build the fastest boat at the Race. Perhaps you are more interested in the Admirals pride award for creativity or just maybe you want to take home the Titanic Award for the most spectacular sinking.

**Next** ..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. Perhaps you have a really creative idea, maybe something that nobody has done before. -- 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.

**Try** this 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. You can cut it up, glue it together, and try out your design idea in small scale before working on a full-sized creation. Or you can throw out an idea that sounded great, but just won't work, then try something else before you have wasted any heavy cardboard.

**How** about a **little science**? 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. **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.

**Hmmm, where to get cardboard?** You might get cardboard from an appliance store, Furniture store, Lowes. The shipping boxes for refrigerators and big freezers can be good possibilities. Maybe you can get boxes for TVs, bedding, bookcases, or other furniture. Of course, you can also use smaller sheets and glue them or fasten them together.

**Handling cardboard** -- you will find it easier and more fun if you keep in mind a few tips. You can have strength and still keep your boat, 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.

**Hey**, maybe you are more the "**wing it**" type -- okay, get some cardboard, fold it a little, cut out any excess here and there, add a little glue or duct tape, maybe some paint or water sealant, and presto-change-o, you have a boat for the Race.