## Cardboard boat

- Because 2026 is a special year for America as we celebrate the 250<sup>th</sup> birthday of our country, we are asking all contestants to decorate their boat in some form of historical theme.
- Design your boat to be up to 4 feet wide and approximately 18 in tall. Make your boat long enough to fit the 2 crew members you'll be sailing with but no longer than 8 feet.
- Suggested that you build your boat with corrugated cardboard to give it a sturdier frame.
- Finish off your boat with <u>latex paint</u> to give it character and it's ready to hit the water. A coat of urethane is also allowed.
- No materials like wood, Styrofoam, plastic sheathing, metal, and fiberglass are allowed.
  Also, no caulking, staples, clamps, and screws are allowed. Basically, your boat can only be made with cardboard, paint, glue and some type of basic adhesive like duct tape.
- A flat bottom boat is suggested for floating and stability purposes. Boats with V-shaped bottoms have a greater chance of capsizing once you're in the water.
- The oars of the boat can only be 4 foot in length and can only be made of cardboard, glue and tape

A suggestion would be to give your boat a pointed bow if you'd like it to go faster. When your boat has a squared-off bow, the water hits the very front of the boat and creates some water resistance. When your boat has a triangular front, you run into far less of that water resistance—this makes you cut faster through the water!

• This isn't to say that there's anything wrong with a simple, squared-off bow! Plenty of people have entered regattas with square boats. Plus, a square-shaped boat works well with certain themes and decorations, like a school bus or fire truck.

**Build a horizontal block across the boat to give it extra support.** Plan on making a "support block" that spans horizontally across your boat.

**Build your boat with big, flat sheets of** <u>corrugated cardboard</u>. Stop by your local pharmacy, recycling center, or big-box store and see if they have any spare cardboard boxes they're tossing away. Grab as many sheets of corrugated cardboard from these places as you can—this type of cardboard is much sturdier and will give your boat much more structure.

**Cut or fold the pieces of cardboard together to shape your boat.** Using a box cutter, carefully <u>slice any smaller pieces or components</u> from a larger sheet of cardboard. To fold the cardboard, just crease it with the blunt bottom of your box cutter (make sure it's retracted first!).

<u>Paint the cardboard</u> with multiple coats of <u>latex paint</u> and let it dry. Pull out your paint color of choice and go over all of the cardboard you'd like to paint. Latex paint takes around 4 hours to completely dry, so make sure your cardboard has enough time to air-dry between coats.

Glue the pieces of cardboard together and clamp them in place. Grab a bottle of carpenter's glue or Liquid Nails—these are pretty heavy-duty and will give your boat a lot of structure. Thoroughly coat 1 of the joints or pieces of cardboard with an even layer of glue and stick it to the adjoining piece. Then, secure the pieces with clamps to make sure that the cardboard doesn't move or come apart. Wait for the glue to dry completely before removing the clamps.

- Check your glue's packaging to see how much time it needs to dry and cure.
- Never use hot glue for this—it could melt in the hot weather when you're outside.

Add an extra layer of cardboard on top of the first layer for reinforcement. Once you've built a basic framework for your boat, feel free to glue an extra layer to the outside of your boat. An extra layer of cardboard will help make your boat's hull extra sturdy. Clamp the pieces of cardboard together to help them dry in the correct shape.

- A suggestion would be to layer the sheets of cardboard so the corrugations in each sheet run in perpendicular directions.
- Feel free to give the bottom of your boat some extra security with 2 extra layers of cardboard.
- Make sure that the painted pieces of cardboard are always facing out.

**Feel free to cover the seams with** <u>reinforced polyurethane tape</u>. Go over both the inside and outside of each seam with several pieces of tape to make sure that they're watertight with no visible cracks or crevices. Duct tape or clear tape can work in a pinch since you've already painted your boat.

• Duct tape shrinks down when you paint over it, and clear tape tends to melt beneath a coat of paint. Don't use either of these tapes if you plan on painting your boat some more.

<u>Feel free to add a coat of varnish</u> to make your boat waterproof. Go over both the inside and outside of your cardboard boat to make sure that it's totally waterproof before the regatta.

Check the varnish label to see how long to dry and cure.

Don't forget to decorate the boat with some kind of historical theme. Have some fun decorating and jazzing your boat up! Just make sure that your additions won't mess with the structural integrity of the boat

• For instance, if you want your boat to look like a pirate ship, add a mast and sail, Jolly Roger flag, cannons, anchors, and a crow's nest.