

# DES Cardboard Boat Regatta Information Sheet

## Boat Regatta VOLUNTEER COORDINATORS

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## CARDBOARD BOAT BUILDING GOALS

- Use the scientific method as students learn how to ask questions and find solutions to their boat-building problems by designing, testing, and refining their boat designs.
- Learn about buoyancy, displacement and density.
- Construct a boat that will carry two people across the pool safely.
- Communicate and work with a partner.
- Be safe in all aspects of the unit.
- Have fun!
- Involve the family in science activities.

## MODEL BOAT EXPERIMENTS

The students have been experimenting with model boats as they learn through trial and error what will best suit their needs and creative ideas. On the graph paper, **one square equals six square inches**. The students will use two sheets of graph paper and tape to build the final model boat for their cardboard boat. Your child is encouraged to make many paper models and test them at home. You are welcome to copy the graph paper or use plain paper for trial paper boats. Two graph paper models are to be returned to school as possible choices for THE FINAL BOAT. When drawing model boats on paper please use solid lines as cutting lines and dotted lines as fold lines. This will aid the students as they transfer their designs for the blueprints for parents to use while cutting the cardboard for the students. Each boat may use 2 sheets of 5' x 8' cardboard.

## For the FINAL BOAT DESIGN, please consider:

- Height of the sides – High enough to keep water out and short enough to reach over.
- Shape of the boat – Cardboard is harder to fold than paper. A simple design is best.
- Width – Wide enough not to flip and narrow enough to row.
- Length – Maximum length is 6 ½ feet.
- Safety – No part of the boat may cover the student's head or shoulders.
- Propelling – Paddles will be provided by the PE department.
- Materials – 2 sheets of cardboard, some clear packaging tape, & paint will be provided.
- Sturdy – Triangle/rectangle bars reaching across the boat provide strength.
- Layers – use two layers of cardboard throughout the boat for extra support.
- Key – Solid lines represent cut lines and dotted lines represent fold lines.

Partners will choose the final boat design from the boats made from grid paper. The boat will be untapped and traced on new grid paper for a blueprint. (Do not use too much tape.) Using the lines in the model constructions helps when students transfer the designs, when parents cut the cardboard, and when students assemble the boats.

## THEME

- Each team is to create a theme for their boat. The students will wear a modest swimsuit under their top and shorts (costume). Examples include: dragon, patriotic, military, shipwreck, pirate, tugboat, fishing boat, cruise ship, sports, etc.
- Bring a towel, shoes and a change of clothing in a marked plastic bag to the pool.

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## **DECORATING THE BOAT**

- Computer printed designs are great to decorate the boat.
- Dye-cut letters make a very attractive boat.
- You can use foil or wrapping paper or even colored tape to decorate the boat instead of painting it.
- Cut-out designs can be made ahead of time and taped onto the boat.
- Your name and classroom teacher's name will be printed on a card and taped to the boat.
- You are welcome to bring your own acrylic paint to decorate your boat. (Basic colors will be provided.)
- No sharp objects are to be attached to the boat.

## **TIPS FOR HANDLING CARDBOARD**

- Stepping, kneeling, or leaning on cardboard will weaken it.
- Adults are the only ones who are allowed to hold or use cardboard cutters.
- Measure and mark the spot twice.
- Score with the blunt end of a sharpie against a ruler.
- Fold with the ruler holding the fold spot.

## **TEAM SPIRIT**

- Smile. Everything will work out. Enjoy the process.
- Support your classmates. Give them a hand when they need it.
- Cheer for your classmates.
- The race tests your boat building abilities as well as your rowing and cooperation.
- All teams are winners! Do your personal best.

## **WATER SAFETY**

- All boat occupants must wear life jackets.
- Follow pool safety rules.
- Walk – the pool area will be wet and slippery.
- Let your classroom teacher know where you are at all times.
- Take extra caution on the stairs and landings.
- Keep walkways open for boaters to get through.
- Remain in the stands unless it is your time to participate.

## **SNACKS**

Parents will volunteer to provide healthy snacks and bottled water for the morning.

More Cardboard Boat Regatta information will be sent home as needed.

Thank you for all of your support. You make it all happen!  
Debra Heath, DES Science Lab Teacher