

BOAT BUILDING CONTEST, MIDDLE SCHOOL

(any middle school team may choose to compete as a high school team)

1. Goal:

- a. Propel a boat across the pool then bring a stranded passenger back.

2. Rules:

a. Building the boat:

- i. Only supplies provided or approved by the organizers can be used to build the boats. Sticks (3-standard 8 foot lengths of 1x2 fir), 4 feet of duct tape, will be provided for each team. Teams must bring the needed bottles (20) and any decorative items they may need.
- ii. The teams will be allowed **only 20 minutes** to complete construction. No pre-built materials other than decorations will be used. All cutting of wood will take place outside. Teams are required to bring their own saws and scissors.
- iii. Common sense safety rules apply to the use of scissors, tape, saws, and sticks.
- iv. Teams are limited to a minimum of 4 persons and a maximum of 8 persons.

b. Racing the boat:

- i. All persons in the water must be competent swimmers.
- ii. The boat can be propelled by any number of swimmers (see rule A.4). All swimmers must participate on both legs of the trip. Walking/wading is not allowed. Wading or walking will add 20 seconds to the time recorded.
- iii. A “victim” must be picked up and carried by the swim team on the far end of the pool and returned to the starting end. The victim’s body must be out of the water (no more than one limb – arm or leg – in the water).
- iv. Total times will be recorded. Time will be added for violations of Rule B.3 (20 seconds).

- c. Cleanup: all trash must be cleaned up before teams depart the pool area and the field. A dumpster will be provided for scrap wood and a recycle bin for jugs.

3. Judging:

- a. Engineering Originality
- b. Creativity
- c. Least amount of time for one lap

If you have any questions, please call Mr. Kitzman at FMS (254-6570). Special Note – please do not use decorations that can come off in the water (like feather boas). Thanks!

Theme for the October 2nd, 2018 event is Gilligan's Island (Google it)

BOAT BUILDING CONTEST, HIGH SCHOOL

1. Goal:

- a. Students will work as an engineering design team with the goal of building a cardboard boat that travels the length of a standard pool to rescue an additional teammate. Teams are aiming to have the fastest lap time.

2. Rules:

- a. Building the boat:
 - i. Only the following materials are permissible:
 1. ANY TYPE of cardboard
 2. Cardboard tubes are allowed
 3. Water-based polyurethane (provided by your advisor)
 4. Any kind of tape
 5. Oars and Paddles will be provided on test site
 - ii. Tape may only be used to cover joint areas in any direction. Any amount may be used however, tape cannot fully cover any surface area on the boat.
 - iii. Duct tape, masking tape, or other tape adhesives CAN be used to connect cardboard to cardboard and CAN be used to reinforce all seams and stress points. It CANNOT be used to waterproof your boats. All shipping labels, decals or adhered materials must be removed from any recycled cardboard.
 - iv. MAX boat size is 6ft wide, 8ft long and 1ft deep. Rafts are NOT allowed and will be disqualified.
 - v. Boats submitted the day of competition must be competition ready. Boats must be fully dry and no taping will be allowed following registration of your boat.
 - vi. Teams may use as many coats of polyurethane as deemed appropriate. This will be provided by your MESA Adviser.
 - vii. Boats that appear to be wet due to recent polyurethane application coatings or flimsy with loose parts will not be allowed to compete. NOTE: It takes about 3 days for polyurethane to dry so apply in time
 - viii. Boats may not be painted or marked with anything that can pollute the pool. Painted or marked boats will be disqualified. Cardboard that is already printed on is acceptable. Teams must consist of 3-5 students.
- b. Racing the boat:
 - i. 2 people must be on board at initial launch of the boat and they must then "rescue" a third teammate from the other end of the pool.
 - ii. Up to 2 teammates may enter the pool to help stabilize the boat while the 2 initial teammates enter the boat.

- iii. Team members will board the boat at the start of the race. Up to 2 members may enter the pool to stabilize the boat while these members enter the boat.
 - iv. Teams will have 1 minute to load their boat in the pool, load their teammates and stabilize their boats.
 - v. Once the team members have entered their boats, or the time elapses, the race will begin. Teams will then race to the other end of the pool and “rescue” and additional teammate. They will then need to return to the first end of the pool. The time will stop when the rescued team member is out of the water.
- c. Judging:
- i. Each boat will have one opportunity to race.
 - ii. Teams are competing to have the fastest rescue time.
 - iii. Teams that capsize, sink or fail to travel the entire length of the pool will not have a recorded time.
- d. Awards:
- i. 1st place – Fastest lap time
 - ii. 2nd place – Second fastest lap time
 - iii. Titanic Award – Judges Choice most epic sink

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