

BARGE BUILDING

Description: The purpose of this event is to construct a barge using aluminum foil that can support a cargo of the largest number of objects without getting them wet.

Number of Participants: 2

Approximate Time: 20 minutes

The Competition:

1. Each team of two persons will be given a **22.9 x 27.3 cm (9 x 10.75 in and given as foil sheets, available at many warehouse clubs)** piece of aluminum foil by the event supervisor. Each team will then be given 10 minutes to construct their barges and turn them in to the supervisor. No other materials may be used in building the barge. Each team must bring a permanent marker so that they can label their barge with their team number and prediction prior to turning into the event supervisor.
2. The event supervisor will inform each team of the average mass of each cargo piece before they begin their construction. The cargo will be **glass beads**.
3. The student barge captain and his partner must predict the number of pieces of cargo that the barge will hold. They will use their permanent marker to write their prediction on the barge prior to loading any cargo. Teams must draw a line under their prediction so that the number can not be flipped upside down and miscategorized as a different number. The barge must then be loaded until it sinks. The piece that caused the barge to sink will not count in the total cargo. Sinking occurs when water enters the barge.
4. Each team will then be given 5 minutes to load their barges while a judge observes the loading process.
5. The event supervisor will provide the barge captain with the cargo to be loaded. Each piece must be loaded one at a time while the barge is floating in a pan of water.

Scoring:

The winner will be the team with the highest score. The score will be determined by the following formula:

Amount of cargo held x 10 - the difference between predicted amount and actual amount.

For example: If the team predicts their barge will hold 70 pieces and it sinks at 57, their score will be 57 x 10 minus the difference between 70 & 57 which is (570-13 = 557) points. Ties will be broken by accuracy of the prediction. **(Teams with closer predictions will receive a more favorable rank.)** If the judges determine that a contestant intentionally sinks his boat at or near the predicted number that team will be disqualified and receive participation points only.

