

# 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 15 x 15 cm piece of aluminum foil by the event supervisor. Each team will then be given 10 minutes to construct their barges and turn them into the supervisor. No other materials may be used in building the barge.
2. Each team will then be given 5 minutes to load their barges.
3. The event supervisor will inform each team of the average mass of each cargo piece before they begin their construction. The cargo may be pennies, washers, paper clips, marbles, or other similar objects. The cargo will not be known until the time of competition.
4. The student barge captain and his partner must predict the number of pieces of cargo that the barge will hold. 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.
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  $57 \times 10$  minus the difference between 70 & 57 which is  $(570 - 13 = 557)$  points. Ties will be broken by accuracy of the prediction. 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.

