



SCIENCE OLYMPIAD
— AT THE —
UNIVERSITY OF FLORIDA

Northern Regional: January 19th, 2019

Experimental Design B

Name(s): _____

Team Name: _____

School Name: _____

Team Number: _____

Rank: _____

Score: _____

EXPERIMENTAL DESIGN, DIVISION B

Construct a boat (or boats) to explore properties of **Physics**, like **buoyancy**. Graph out a factor, like mass, shape, size, or volume, to show the how it will affect **how much weight** a boat can hold. Don't make the boat too big otherwise you will not be able to sink it with only 100 pennies.

MATERIALS

- Scissors
- Digital Scale
- Ruler
- Aluminum Foil
- Pennies
- Tub of Water

REMINDERS

- Clean up your workspace before your 50 minutes are up or else points will be deducted.
- Label every page with your team number and page number.
- Write legibly. If it cannot be read, it cannot be graded.
- Use the towel to keep your workspace and the digital scale dry.
- Write your experiment on the provided paper, more paper is available at the front if needed.
- More aluminum foil is available at the front if needed.

Names: _____

Team #: _____

Team Name: _____

School: _____

2019 Experimental Design Checklist

- A. Hypothesis (6 Points)
- B. Variables (16 Points)
 - a. Independent Variable (6 Points)
 - b. Dependent Variable (4 Points)
 - c. Controlled Variables (6 Points)
- C. Experimental Control (Standard of Comparison) (4 Points)
- D. Materials (6 Points)
- E. Procedure with Diagrams (12 Points)
- F. Qualitative Observations (8 Points)
- G. Quantitative Data – Data Table (10 Points)
- H. Graphs (10 Points)
- I. Statistics (6 Points)
- J. Analysis and Interpretation of Data (10 Points)
- K. Possible Experimental Errors (6 Points)
- L. Conclusion (8 Points)
- M. Applications and Recommendations for Further Use (8 Points)