



*Exploring the World of Science*

University of Michigan Science Olympiad  
2021 Invitational Tournament

# Experimental Design C

**Test length: 50 Minutes**

**Team name:** \_\_\_\_\_ **Team number:** \_\_\_\_\_

**Student names:** \_\_\_\_\_

*Any team not addressing the assigned topic/question will have their final score  
**multiplied by 0.75.***

*Any team not completing a lab will have their final score  
**multiplied by 0.25.***

## UMSO 2021 Experimental Design DIV C Event Instructions:

- You will need to submit a copy of this document filled out with your responses. Please do so by going to File → Make a copy→ and then rename your document so it says "Team#\_UMSO Experimental Design DIV B Test"
- You will need a phone camera/scanning app (can be done through notes app on iPhones) to attach necessary attachments. Must make sure images are readable after uploading into document. All images must be inserted into google doc before submission.
  - If you are having any technical issues in attaching images into this document, please save them separately with clear labels such as "Team#4Diagram1", and upload them to this [google form](#).
- No other external resources will be allowed
- We recommend the use of Zoom to communicate with teammates during exams. Teammates can work on different parts of the test at the same time.
- At the end of the exam please upload your document link into [this google form](#). When you copy the link, make sure everyone with that link is an EDITOR and not a VIEWER or COMMENTER. This is important as we will need to verify your edit history to confirm that the document was typed during the time parameters given.

### ***YOUR TOPIC FOR TODAY IS: AERODYNAMICS***

You must use the provided materials to design an experiment around the topic of aerodynamics (you must use at least two of the materials listed below)

#### **Required Materials:**

- 8.5 x 11 in sheets of paper (6)
- Stopwatch (1)
- Ruler (1)
- Paper Clips or Coins (5)
- Tape

**GOOD LUCK!**

Hypothesis:

Variables:

Independent:

Dependent:

Controlled:

Experimental Control:

Materials:

Procedure:

Quantitative Data:

Qualitative Observations:

Statistics:

Analysis of Claim/Evidence/Reason:

Possible Experimental Errors:

Conclusion:

Applications and Recommendations for Further Use:

Abstract: