Drag Racing

GROUP 13
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Scope

- Demonstrate properties of aerodynamics to young minds (K-12)
- Low maintenance
- Interactive
- Robust and simple as to facilitate many repeated demonstrations

Approach

- Show drag with use of various geometric shapes on carts
- Difference in drag shown through race
- COMSOL visuals for the various shapes

Problems

- Mary Brogan Museum – closed
- Over complicated – simplify current design
- Lift ability for airfoil

Current Status

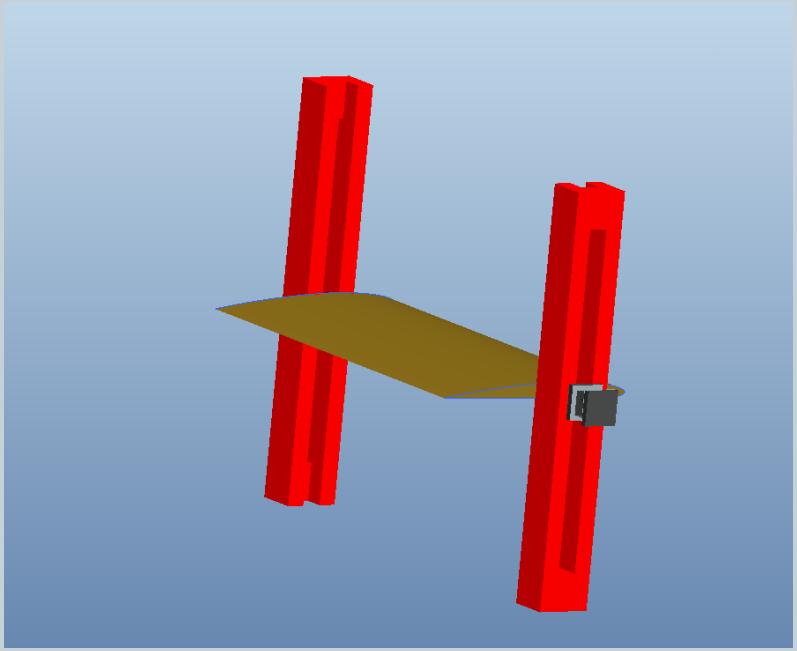
- Update design
  - Change the design of objects on carts
  - Review airfoil idea
  - Design review
  - Ordering parts for fabrication

Carts

- Change design to incorporate a large square and a smaller circle
- Allows for more discrepancy in the forces
- Variety of shapes

Airfoil

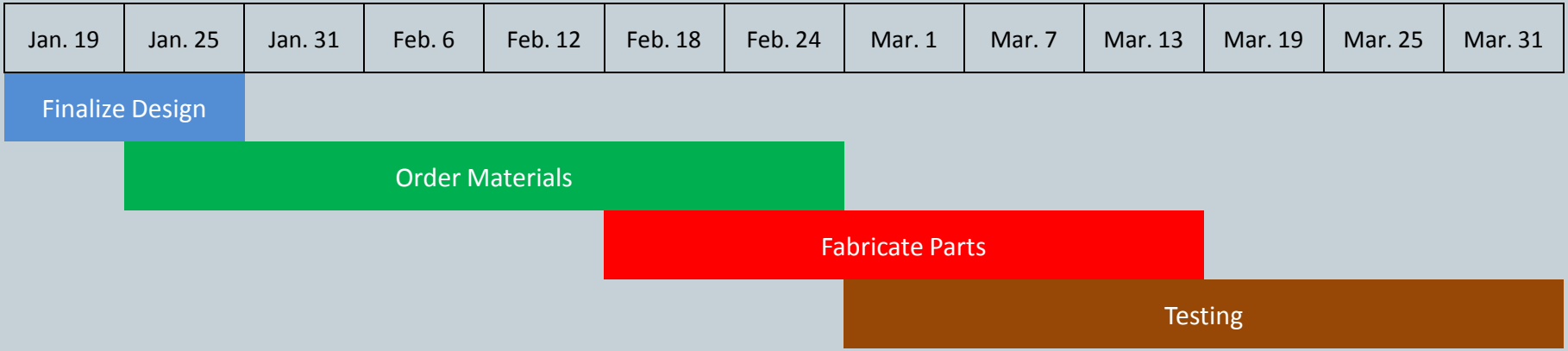
- Limitations
  - Velocity profile of air flow
  - Turbulent nature of air flow
- Fixed angle of attack



Planning

- Finalize design and have approved
- Order materials
- Fabricate all necessary parts
- Test system

Planning


Jan. 19
Jan. 25
Jan. 31
Feb. 6
Feb. 12
Feb. 18
Feb. 24
Mar. 1
Mar. 7
Mar. 13
Mar. 19
Mar. 25
Mar. 31
Finalize Design
Order Materials
Fabricate Parts
Testing

Summary

- Scope has not changed due to Brogan Museum closure
- Show drag through use of multiple shapes in race type experiment
- Re-examine airfoil possibility
- Order required materials

Questions