



7/8 Science Project Overview

Forces and Motion

2007-2008



Ms. Jensen

Ms. Thomas

Ms. Hinkle

Peggy

What are we doing?

This project is based on two important concepts in physics: how objects in the universe move and the forces that control motion. The quarter will be full of engineering design challenges that demonstrate these forces. You will work both individually and in teams. We will be building gliders, rockets, boats, roller coasters and bridges. You will begin this project in flight school. We will be studying how planes and rockets get up in the air by looking at the underlying forces. You will then see how boats float by trying to design an aluminum boat that will hold the most weight without sinking. Next, we will learn about and construct the three basic types of bridges. We will end the quarter studying and applying the principles of energy related to roller coaster motion.

Essential Questions:

- Why do things move the way they do?
- How do rockets and planes get in the air and stay there?
- Why do some things float and some things sink?
- How do roller coasters make it over the hill?
- What does it feel like to defy gravity?
- How do bridges support weight? What causes them to collapse?

Rubric Pieces

- Glider mini-presentation
- Rocket lab report
- Floating and sinking density lab report
- Bridge design PowerPoint
- Roller coaster energy design project
- Final exam

Expectations

As in all of your classes you are expected to come to class prepared. You will need a pencil (we do a lot of graphing!), paper, and a three ring binder. You will need dividers for each section: Gliders, Rockets, Boats, Roller Coasters, and Bridges. You are expected to participate and put forth ideas in class conversations as well as be respectful of other students' ideas. There will be several team labs that you will be expected to work cooperatively in. You should be working towards the MMS outcomes of Problem Solving, Self Direction, Effective Communication, and Community Membership.

Extra Help

Extra help is on Tuesdays from 3-4 pm. You may use this time to complete assignments, work on extension projects, or review material with a teacher.

Teachers

- Homebase Henson: Ms. Jensen and Peggy
- Homebase Disney: Ms. Jensen and Ms. Thomas
- Homebase Angelou: Peggy

Contact Information

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