

A High School Tiered Lesson **PHYSICS**

As a result of the Lab, students should:

Know

Key vocabulary (thrust, drag, lift, fluid, pressure, velocity, camber, airfoil, chord, trailing edge, leading edge)

Understand

Bernoulli's Principle—As the velocity of a fluid increases, its pressure decreases. (Moving fluid creates an area of low pressure. Decrease in pressure on the top of the airfoil causes lift.)

Newton's Third Law of Motion (For every action, there is an equal and opposite reaction)

Aerodynamics is the study of forces acting on an object because air or another gas is moving.

Be Able to Do

Construct objects that project themselves through space in different ways as a demonstration of student knowledge of key information and understanding of key principles.

Great opportunity to make teams of theoretician/scholars and designer/builders

In the lab students make

Paper Airplanes that fly for

Maximum Distance
Maximum Hang Time
Tricks

easiest



Hardest



Kites

Diamond easiest



Box hardest

Triangle-Layered



Pinwheels

Forward Motion easiest

easiest



Backward Motion hardest

Upward Motion hardest

