Curriculum Units by Fellows of the Yale-New Haven Teachers Institute
1990 Volume VII: What Makes Airplanes Fly? History, Science and Applications ofAerodynamics

Aerodynamics and Me

Guide for Curriculum Unit 90.07.01
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The purpose of this unit is to learn and experience various educational activities using aerodynamics as a focal point. Most students do not have a background in this area and using aerodynamics as a focal point to introduce and review some scientific principles will help to motivate the student.

The unit begins with an introduction to the metric system. We measure mass, volume, length, and time. With some of the exercises we graph and interpolate results which will aid the student when taking standardized tests. Moving to the atmosphere we learn some laboratory techniques for collecting gases and some of their properties. We also learn a little more about the troposphere.

When we study the airplane we concentrate on the major parts of the airplane and how they function, the forces acting on the plane in level flight and constant speed, and how to control the airplane when in flight. We talk about navigation, learning how to read a compass rose, and how to determine our speed, distance, or time when given two of the factors. The unit ends with a brief discussion both, pro and con.

(Recommended for General Science, grade 8)

Key Words

Science Aerodynamics