



Curriculum Units by Fellows of the Yale-New Haven Teachers Institute  
1988 Volume VI: An Introduction to Aerodynamics

---

## **The Spirit of St. Louis: The Man, The Machine, The Legacy**

Guide for Curriculum Unit 88.06.05  
by Robert W. Mellette

On May 20th, 1927, a daring young aviator parlayed his skill, his ambition and his courage to pilot a flight that would promote the cause of aviation in the hearts and minds of people around the world. Charles A. Lindbergh's historic flight would celebrate the culmination of all the advances in aviation that had gone before him, and herald the potential of air service that was to follow.

My curriculum unit, "The Spirit of St. Louis: The Man, The Machine, The Legacy," capitalizes on this historic real life drama in order to teach middle school children basic concepts and understandings in aeronautics. The basic strategy is to follow the flight plan of Lindbergh's epic journey, from his take-off in New York to his landing in Paris. Using Lindbergh's own writings along with serial "clips" from the classic Jimmy Stewart film "The Spirit of St. Louis," principles of flight are studied and investigated in the order suggested from the story line. For example, historical records reveal that at precisely 7:51 a.m., on an overcast day, the "Spirit of St. Louis" lumbered down a muddy runway and struggled to gain altitude at the end of the field. At this "teachable moment," the film would be stopped or the reading suspended. The following question would be asked: What force or forces act on an aircraft that allow it to leave the earth and remain suspended in the air? At this point students are guided to examine in detail the shape of an aircraft's wing. The examination of airfoil cross-sections is followed by the introduction of Bernoulli's Principle. In similar fashion students would investigate other forces involved in the flight of an aircraft.

After each classroom investigation, students would return to the story of Lindbergh's actual flight. In logical order, which is suggested by the script of the movie or the biographical notes from Lindbergh, students study principles of flight. The preparations made for landing at Le Bourget Field in Paris is used to introduce the mechanics of how an aircraft executes the landing procedure. The unit concludes with a lesson on the legacy of this historic flight and its impact on the future of aviation.

(Recommended for Science, Social Studies, and Humanities classes, grades 5-12)

### **Key Words**

*Ecology Environmental Science Air Pollution*

---

<https://teachersinstitute.yale.edu>

©2019 by the Yale-New Haven Teachers Institute, Yale University

For terms of use visit <https://teachersinstitute.yale.edu/terms>