



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

Preface

In March 1990, seventy-eight teachers from the New Haven Public Schools became Fellows of the Yale-New Haven Teachers Institute to prepare new curricular materials for school courses. One-fourth of these teachers were participating in the Institute for the first time. Established in 1978, the Institute is a partnership of Yale University and the New Haven Public Schools, designed to strengthen teaching and improve learning of the humanities and the sciences in our community's schools. Through the Institute, Yale faculty members and school teachers join in a collegial relationship. The Institute is also an interschool and interdisciplinary forum for teachers to work together on new curricula. The Institute has repeatedly received national recognition as a pioneering and successful model of university-school collaboration that integrates curriculum development with intellectual renewal for teachers.

Teachers had primary responsibility for identifying the subjects the institute would address. Between October and December 1989, Institute Representatives canvassed teachers in each New Haven middle and high school to determine the subjects they would like the institute to treat. The Institute then circulated descriptions of seminars that addressed teachers' interests. In applying to the Institute, teachers described unit topics on which they proposed to work and the relationship of these topics to Institute seminars and to courses they would teach in the coming school year. Seven seminars were organized, corresponding to the principal themes of the Fellows' proposals. The seminar entitled "What Makes Airplanes Fly? History, Science, and Applications of Aerodynamics" was led by Peter P. Wegener, Harold Hodgkinson Professor Emeritus of Engineering and Applied Science. Between March and August, Fellows participated in seminar meetings, researched their topics, and attended a series of lectures by Yale faculty members.

The curriculum units Fellows wrote are their own; they are presented in seven volumes, one for each seminar. A list of the eighty-three volumes of Institute units published between 1978 and 1990 appears on the following pages. Guides to each year's units, a topical index of all six-hundred-ninety-six units written between 1978 and 1990, and reference lists showing the relationship of the units to school curricula are available from the Institute. The units that follow contain four elements: objectives, teaching strategies, sample lessons and classroom activities, and lists of resources for teachers and students. They are intended primarily for the use of Institute Fellows and their colleagues who teach in New Haven.

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New Haven

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