

# Elementary Education

## Aviation in Social Studies

In a search for learning materials that would better convey social science concepts and generalizations to students, aviation education has been found to be a natural vehicle with a high degree of motivation.

A team of Fountain Valley, California, teachers, sponsored and initiated by Cessna Aircraft Company and American Airlines, were given planning time and extra resources to design an elementary unit which will be as functional as possible in serving teachers. The unit recognizes recent developments in social studies education which includes the use of key ideas from history and the social sciences woven into a K-8 program. It also recognizes that there are understandings, skills, attitudes, and values which can be developed with this unit as a vehicle to serve the continuing social studies programming of schools. The unit also makes it possible for teachers to utilize this material in language arts, science, and arithmetic, and it can be included for use in core programs as well as self-contained classrooms.

The format of this unit is developmental and the learnings and activities have been designed from simple to complex, concrete to abstract. Suggestions have been made as to appropriate grade levels for these activities, but they could be used with very little alteration at different grade levels and it is up to the teacher to make the selection. The teacher could take any one activity and go into as much detail as needed. There are probably more suggestions offered in the unit than any one teacher would use but the material is designed for use as a resource from which to draw a variety of ideas, combined with the teacher's own ideas and suggestions.

### Purpose

The purpose of this unit is to:

- \* Teach social science concepts using aviation as a vehicle to create interest and provide a meaningful context.
- \* Facilitate skill development through varied learning experiences which meet the individual needs of students.
- \* Provide learning experiences which build upon previous knowledge.
- \* Develop the ability to apply knowledge to real-life situations.
- \* Develop the student's ability to think critically and logically.
- \* Develop wholesome attitudes, feelings and sensitivities through group interaction.

In pursuit of these goals, three major observations are woven through the unit's concepts and activities: 1) aviation has affected, is affecting, and will affect man's cultural patterns. 2) Aviation is vital to modern man's communication and interaction in society. 3) Modern man is dependent upon an economic system which is influenced by intelligent use of aviation resources.

### Anthropology

Understandings: Man's progress is based upon his use of past experiences. People rely on the ideas and accomplishments of others in order to progress. Aviation has helped our country grow and progress.

General Objectives: As a result of participating in this unit, the student will:

K-2—List ways that aviation affects his daily life. Describe how aviation affects his immediate environment.

K-4—Describe the importance aviation has for the community.

2-4—Compare how the historical sequence of the development of aviation has affected man's use of transportation and communication.

2-6—Compare how man's use of aviation in the past and in the present has affected the shaping of society's cultural patterns.

4-6—Compare the relationship between the development of aviation and the technological advancement of man.

4-8—Describe the effect of aviation on American culture as compared to the effect of aviation on one other culture in the American hemisphere.

6-8—Use man's knowledge of aviation to predict advancements in aviation as a means of coping with future cultural needs. Create a plan to show how man would use aviation as a means to communicate and transport in an advanced technological society.

### Sample Activities:

K-2—Bring an advertisement or letter received through the mail; identify those delivered by air and list reasons for using airmail delivery. Bring a list of foods chosen from mother's shopping list; categorize those foods which have been transported by air. Why were they brought by air? How long did it take? What kind of airplanes are used?

4-5—In committees, study and determine the various forms of transportation used by different cultures. The committee can: Compare the length of time it takes to travel a given distance by the various forms of transportation; list the most popular modes of transportation in each culture in the 19th century and identify the reasons for the popularity of the particular modes; for comparison, repeat process for same cultures in the mid-20th century.

7-8—Discuss problems related to aviation that may arise in the future such as location of airport, size of airport, traffic problems, sound level, speed of aircraft. Explore the reasons students have for predicting each problem and discuss possible solutions uncovered in the research. Imagine and illustrate futuristic designs of aircraft and aviation facilities emphasizing technological advancements such as airport facilities, airplanes, and airports.

### Economics

Understandings: People work to satisfy some of their needs and wants. Modern man attempts to satisfy his needs and wants by using income to purchase goods and services.

Aviation has helped man to satisfy many of his needs and wants as a producer and as a consumer.

**General Objectives:** As a result of participating in this unit, the student will:

K-2—Identify and list the effects modern aviation has upon the home and family. Identify the occupations and services necessary to operate a local airport.

K-4—Compare the relationship between the airport and the economy of the community.

2-4—Identify the function of modern aviation as it relates to the economic needs and services provided by aviation.

2-6—Identify the interdependency between the industries of the state and the services provided by modern aviation.

4-6—Identify the physical and human resources necessary for the expansion of the aviation industry.

4-8—Identify aviation's contribution to the law of supply and demand.

6-8—Describe ways in which modern civilization has affected international trade. Compare the relationship that has taken place between the growth of modern aviation and the development of the modern economy.

**Sample Activities:**

K-2—Build a model of the airport through block play or paper construction. Use the model to illustrate occupations and services.

2-4—List ways in which a father employed in the aviation industry spends his wages. Discuss the effect his spending has on other enterprises in the community.

4-6—List enterprises in the state which rely heavily upon aviation; identify specific reasons for this interdependence in each case.

6-8—Construct a graph to show changes in the number of flights offered at different times of the day, week, and year (e.g. more scheduled flights early and late in the day, on weekends, and during summer months); develop hypotheses on the "law of supply and demand" for airlines; also, note where people go during different times of the year.

7-8—Organize a public forum or "town meeting;" class members assume roles of representative of specific community organizations confronting an issue involving aviation (e.g. deciding on a new local airport, need for air-taxi service, or creating an industrial park).

**Sociology**

**Understandings:** Man, being a social creature, must have guidelines in order to function within a society. Rules and regulations are needed to develop useful citizens. Aviation has developed rules and regulations for safety, convenience, and effective organization.

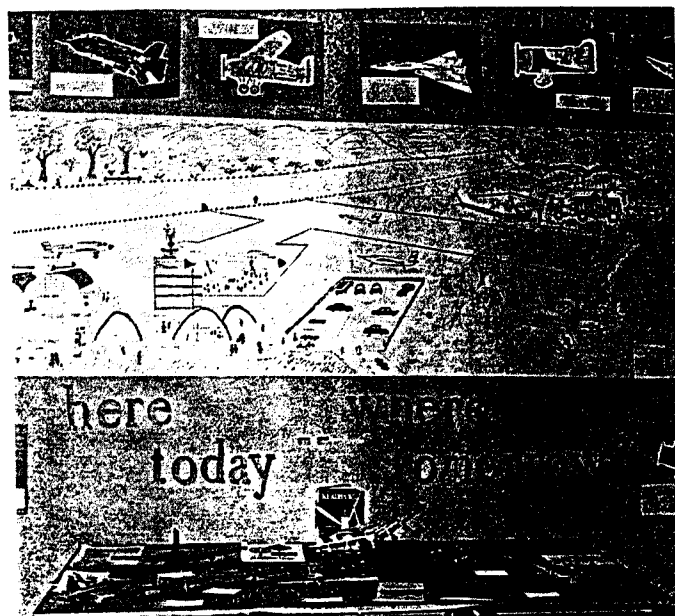
**General objectives:** As a result of participating in this unit, the student will:

K-2—List the ways that the use of aviation has affected people in his immediate environment. List and describe the organizations and agencies within the community that use aviation in their operation.

K-4—Describe the relationship of aviation and the expansion of community services.

2-4—Compare the function of the local airport with a nearby large metropolitan facility and examine the need for more general aviation facilities.

2-6—Identify and discuss the need for expanded and more sophisticated types of communication and transportation facilities at a large metropolitan airport.



4-6—Discuss the need for surrounding states to establish guidelines in order to have a functional interstate communication system for all aspects of air travel.

4-8—Compare how cultural needs of different nations determine the operation of that nation's system for transportation and communication.

6-8—Identify ways by which modern aviation can help to solve the communication and transportation problems of a modern technological society. Identify, using aviation as a vehicle, the implications for establishing an international system for communication and transportation.

**Sample Activities:**

K-2—Discuss and compile the ways in which aviation affects our family in regard to: sound level; height of airplanes over homes; travel for business, pleasure, vacations, traffic to and from airport.

2-4—Locate, plan, design and construct a model airport with a single 4,000-foot runway, taking into account community needs, consequence of site location, equipment and personnel necessary for operation.

4-6—Write a class letter to the Federal Aviation Administration to determine: who controls aviation rules and why they are necessary; how these rules are policed; how consistent they are from state to state and country to country.

6-8—With the class divided into three committees, research the transportation and communication facilities in Europe, Asia, and Latin America. Compare the ways in which air transportation and communication facilities have affected these three parts of the world.

8—Discuss the need of a common communications system in aviation. Explain the use of the international phonetic alphabet. Identify reasons for communication. Use the information gathered on the phonetic alphabet, identification numbers, and communication format to demonstrate a dialogue for takeoff, flight, and landing of the airplane. □