Do Elementary Teachers Have Time for Aviation/Aerospace Education?

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Today many elementary school educators, rural and urban, are going through budget cuts, demands by parents, legislative edicts, textbook censoring, accountability, student motivation. In addition to the regular curriculum, they must now include drug abuse education, sex education, and AIDS education. It is not surprising that many teachers say, "I do not have time to include aviation/aerospace education in my teaching."

Some of the vibrations from the elementary schools indicate that among students, dissatisfaction exists. Students are increasingly displeased with the traditional 3 Rs, basics, confinement to learning in a class room environment, and the mediocre offerings by the educational system which are not challenging the students. Parents are concerned with the relevancy and the quality of these same offerings.

According to the Association for Supervision and Curriculum Development, a fourth-grader receives 28 minutes of science instruction daily, 100 minutes of language arts, 52 minutes of mathematics, and 34 minutes of social studies. That is almost four hours of the school day, so can we add anything to the curriculum?

NASA's five-year plan that emphasized elementary education developed in 1988 was concerned with the time spent in science and math instruction.

Some teachers, administrators, school board members, and other personnel are bold enough to come forward and try to induce changes in the curriculum. The resistance they sometimes encounter is amazing. Aviation/Aerospace Education should result from this search for vitality in the school offerings and ways to motivate children.

Unfortunately, some elementary teachers still ask what is aviation/aerospace education? I define aviation/aerospace education differently than some science or math educators would. I define it as that branch of general education concerned with communicating knowledge, skills, and
attitudes about aviation/aerospace activities and the total impact of air and space vehicles upon society.

One of the most promising vehicles for motivating is readily available to parents and school personnel. They need only look into the sky and there is their textbook—the entire region extending from the earth’s surface through the total expanse of space. Aviation/Aerospace Education is: airplanes, Sky Lab, Space Shuttle, rockets, hot air balloons, astronauts, paper air planes, the Columbia, etc. Have you ever watched a paper airplane soar through the air? Or nose dive straight to the ground? Most of us have wondered, in awe, just what makes a plane fly. The history of the aviation/aerospace industry is abundant not only in world history but local history as well.

Just these two ideas, the paper plane and aviation/aerospace history, could give the creative elementary teacher the added zest and excitement needed to plan daily lesson designed to motivate elementary students.

Aviation/aerospace education affords excellent opportunities to relate and combine science, math, language, arts, and social science into meaningful cohesiveness for the student.

Many of the ideas and activities materials, which are available to elementary teachers, are designed to serve in the creation of a space science and math curriculum. I say this is a mistake. We should look for aviation/aerospace activities to create a broad curriculum that is both child-centered and exciting. Most activities which fit the math and science curriculum can be used also in language arts, music, art, and social studies.

Children need to learn to read in elementary school, but they can read about aviation/aerospace activities. From this they learn to develop skills and appreciation of many things. Should all of their experiences be second hand? Can we not change their setting once in a while? Must they always be regimented to the point of memorizing and filling in blanks? Should we not expose our students to a process of experiencing in their own way some process of developing a problem-solving technique? Most elementary teachers teach the basic food groups as well as what is good nutrition. This discussion can include the different kinds of food available for an astronaut to eat in space, as well as what space research spin-offs mean to the students. The table on
The next page shows a few aviation/aerospace concepts which can be included in various areas of the curriculum. All of these concepts are limited only by the creativity of the teacher to motivate the children.

Aviation/aerospace education is not the sole answer to better motivation and greater student interest, but it does offer opportunities for more hope for future success for all children, and at no additional cost to our basic educational system or the taxpayer. We do not need a new course, we just need to incorporate aviation/aerospace teaching in our present curriculum. Yes, the busy elementary teacher does have time for aviation/aerospace education.

### AVIATION/AEROSPACE EDUCATION IN THE ELEMENTARY CURRICULUM

<table>
<thead>
<tr>
<th>Area</th>
<th>Concept</th>
<th>Activity</th>
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</thead>
<tbody>
<tr>
<td>Language Arts</td>
<td>What is a noun?</td>
<td>Airport Noun Game (Label the nouns found in the picture of an airport)</td>
</tr>
<tr>
<td></td>
<td>Learn to use reference in the Library</td>
<td>With a list of topics such as rockets, balloons, spacecraft, practice using reference system.</td>
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<tr>
<td>Social Studies</td>
<td>Periods of historical development of the aviation/aerospace industry</td>
<td>With pictures and books identify famous aircraft for each period.</td>
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<td></td>
<td>Leaders in aviation/aerospace history</td>
<td>Choose a leader and research that person’s contribution.</td>
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<td></td>
<td>Career in Aviation/Aerospace</td>
<td>Identify employees at an airport and write a report about one career.</td>
</tr>
<tr>
<td>Art</td>
<td>Familiarization with spacecraft and persons associated with space flight</td>
<td>Make an aviation space collage.</td>
</tr>
<tr>
<td>Health and Physical Education</td>
<td>Physical fitness required for astronauts</td>
<td>Check pulse rate before and after exercise.</td>
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