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MODEL ROCKETRY— AN EXCELLENT TEACHING AID

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As unlikely as it may seem, hobbies can serve as a powerful aid in the teaching of science. They not only provide concrete examples but capitalize on the student's interest. Model rocketry activities are an excellent example of such "high involvement" learning hobbies.

A question that we as educators must continually ask ourselves is: "Are we teaching for today or tomorrow?" Who knows what new developments the future will bring and what contributions students will be expected to make in their lifetime? Many dreams of yesterday are in essence realities today. Rocket travel is one of the best examples.

Aerospace education is necessary for students. They have witnessed the rocket launches of manned space flights and often do not understand what principles and concepts are involved. Aerospace education is not limited to only the travel of space vehicles. It is an interdisciplinary subject including the study of weather, geography, communications, biology, chemistry, medicine, physics, mathematics, and environmental control. In the elementary classroom, it can help students understand the basic principles of rocketry by building and launching their own rocket. The secondary level aerospace education can offer sophisticated experiences for the interested students.

Hill and Ochs described how model rockets could serve as concept models in science and mathematics. The concept of work was taught utilizing model rockets as an aid. Usually the launchings generate a great deal of enthusiasm and speculation as to the height of flight. Questions will arise concerning the speed of the rocket. These and similar problems provide the opportunity for individualized, follow-up activities that are inquiry oriented and not teacher suggested. These investigations, depending upon their complexity, can involve algebra, trigonometry, and geometry. Specific problems encountered, such as determining the height of flight, can involve investigating how to measure angles or calculate the apex of flight. The sextant or altimeter can be utilized to determine the apex of flight. The task could involve trigonometry for the more sophisticated physics students. Depending upon the interest of the students, other more sophisticated activities involv-

ing the theory of flight, power plants, rocket propulsion systems, guidance systems, and launchings can be studied and investigated.

Pitz and Sund have stated that no field of human knowledge affords a greater outlet for creative activity than science. Model rocketry can provide students a creative, hands-on experience. In addition, model rocketry is not only educational but fun. Best of all, students will be learning by doing.

References

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