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Airplane and Rocket Overview

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Airplane and Rocket Family Science Overview

Major activities in the first two years of family science are the investigation of aeronautics primarily through the construction of small airplanes and rockets. Such building was always a family activity with one vehicle per family. The family unit worked as a team in completing all the tasks required. In many cases, teams had at least three generations of family members engaged in some way even if only to act as “cheerleaders.” Parents played an active role in encouraging their younger children. It was “hands on” as well as giving “wise advice” for everything.

For the first year of the program, the emphasis was on small airplanes from pre-cut balsa wood gliders and the flight characteristics of those aircraft. In the later part of the first year, more complex aircraft, the Delta Dart™ were made from a kit and the airplanes had propellers driven by rubber bands. A great number of gymnasium-based flight exercises completed the first year’s activity.



In year two, the focus shifted to rocket propulsion with the first exercise being the construction of an AlkaSeltzer™ powered rocket. Launches were on the gymnasium floor. Then each team was then supplied with an Estes™ Gnome Rocket which was capable to reaching an altitude of about 800 ft. Assembly was on one night and the outdoor launch of those vehicles was the next family science night. Additionally, faculty members at the school prepared several much larger rockets for launch; these aircraft could reach an altitude well over a thousand feet.



Assembly instructions for the Delta Dart and the Estes Gnome Rocket can be found below. Photos of all these activities are posted in the Gallery Collection of this website under the Family Science section.