

**DISCOVERY DAY, INTRODUCING SPACE SCIENCE TO THE HIGH SCHOOL; R.C. Melchior and J.O. Annexstad, Bemidji State University**

Bemidji State University is part of the Minnesota Space Grant Consortium. To maximize exposure of the University's space grant activities in the region, it was felt that some activity involving local high schools would be appropriate. Our location in the relatively remote northern part of the state however, makes communication and interaction with local high school students and staff, a problem. To solve this problem the idea of Discovery Day was proposed. The objectives of our Discovery Day program were multiple. They included an intent to introduce space science to a rural area of northern Minnesota, to introduce ourselves and our university programs to a range of college bound young people and to provide an opportunity for area high school teachers and university staff to exchange ideas on mutual concerns.

Discovery Day consisted of a group of high school teams competing at the University for a Space Grant scholarship. Each team consisted of 7-10 individuals selected by the high school teacher. The competition was organized around the theme -- "Life in the Universe." To allow for adequate planning, area high schools within a fifty mile radius of Bemidji were invited to participate several months before the competition. The subject matter to be addressed in the competition was announced and the ground rules for participation were briefly proposed. Comments were invited from high school teachers concerning the Discovery Day proposal and plans for its implementation. What emerged was a day long conference on Life in the Universe. Instruction on various aspects of the problem was performed by University Staff and included the following topics:

- a) Evolution, presented by a distinguished mammologist
- b) Cosmology, presented by a well known northern Minnesota Educator
- c) Chemical basis for life, presented by the Head of the University Chemistry Dept.
- d) Solar systems, presented by John Annexstad
- e) Theological aspects of extraterrestrial life, presented by a local Minister
- f) Legal aspects of encountering extraterrestrial cultures, presented by a local lawyer

The range of topics and presenters was organized to complement the preliminary instruction done by the high school teachers at their own schools.

The schedule for discovery day began with the arrival of the students and their instructors. Students were given a guided tour of the campus while the teachers met for coffee with University Staff. The presentations followed as a series of 25 minute talks. The theological aspects of extraterrestrial life were presented as a luncheon speech followed in the afternoon by a discussion of the legal aspects of meeting extraterrestrial cultures. These latter two talks were added to the series to emphasize the idea that life in the universe is not strictly a scientific problem.

At the conclusion of the lecture series, each high school team was given a half hour to prepare an argument for or against the possibility of life elsewhere in the cosmos. A panel of Judges consisting of Ralph Harvey, (U. of TN), Bill Garrard (Head of Aerospace Dept., U of MN) and Doug Blanchard (NASA) heard the presentations and awarded the \$500 scholarship prize.

We learned a few lessons from the Discovery Day experience that are worth passing on.

- First, there is a great deal of interest in our area about Space Science. Response to our first attempt, both by the high schools and the public, was greater than we anticipated. Local media covered the event in print and on television. Several dozen adults who were otherwise unconnected to the event attended the lecture series. A number of middle school students took a day off from classes to attend.

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- Second, we feel that our relations with area high schools were improved by Discovery Day. We have been approached, by students and by teachers concerning plans to have a second Discovery Day next year. The competition was very popular with the students, and the teachers appreciate the opportunity to incorporate the Discovery Day theme in their classes. Next year's theme will be "Planetary Atmospheres and Weather."
- Finally, we propose to present the idea of Discovery Day to other members of the Minnesota Space Grant Consortium for the purpose of starting a statewide consortium.

References:

1. Goldsmith, D. and T. Owen. 1980. *The Search for Life in the Universe*. Benjamin/Cummings Publishing Co., Reading, MA. 433 p.