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C. Garmany, M. Gibbs, and J. W. Moody

Lessons From Breezy Hill: Thirteen Years of Children's Activities at Stellafane

Kristine Larsen
Physics Earth Sciences Department, Central Connecticut State University, New Britain, CT 06053, USA

Abstract. This poster describes the challenges and constraints encountered in thirteen years of providing astronomical children's activities at the annual Stellafane Convention of Amateur Astronomers.

1. Introduction

One of the most important institutions in amateur astronomy is the annual Stellafane Convention (http://www.stellafane.org). Surveys of Stellafane attendees conducted in 1993 and 1994 by this author found that the convention was unwittingly ignoring the needs of its youngest attendees. In response, the author began offering a program of hands-on educational astronomy activities at each convention in order to actively engage children.

2. Challenges and Constraints

Over the past thirteen years, the author has identified and overcome a number of challenges and constraints. First and foremost, it is important to effectively use the limited available space and resources. Twenty-four children can be comfortably accommodated in the library of the McGregor Observatory. Since the room has multiple uses, all materials need to be easily stored between workshops. All materials used in the activities must be brought in by the author (including water, if needed).

It is also important to KICS (Keep it cheap stupid). There is no budget for these activities so all materials are either donated or purchased by the author. Club members collect coffee cans, paper towel tubes, or other common household items for use in the workshops. Annual outlay for the workshops has been successfully kept to under $50.00.

One cannot predict the number of participants or their ages. Sufficient materials must be held in reserve for unexpectedly large crowds. Although the activities are advertised for children ages 5-12, children much younger may attend. With parental help, very young children can participate in cutting and writing, but astronomy-based coloring pages, puzzles and crayons are a valuable alternative. Activities should be selected for their ability to be extended for older children and simplified for younger children.

Some children will attend all workshops in a given year and also attend year after year. As a result, activities should not be repeated any sooner than every three years.

Time is also a valuable commodity so one must KIBS (Keep it brief stupid). Each session is allotted one hour and is composed of two short activities. This allows latecomers to do at least one whole activity. It is also advisable to have on hand astronomy games (such as solar system bingo) to fill time as needed.

Finally, it is important to ensure the relevance and educational value of the workshops. Activities are selected which are aligned with national science standards (National Research Council 1996) and utilize a number of varied skills. The relevance of the workshops to the convention is achieved by tying the theme of the workshops to that of the keynote speaker.

3. Walking the Walk: The 2007 Convention

The 2007 keynote talk discussed Mars landing sites. A general theme of planets was, therefore, chosen for the workshops. The National Science Education Standards (National Research Council 1996) selected to frame the activities were: observable properties of objects (K-4); changes in the shape of the moon (K-4); the structure of the solar system (5-8); and the causes of the phases of the moon and eclipses (5-8).

The six activities comprising the three workshops were as follows: Models of Saturn and its rings using a 2.5" styrofoam ball and an uncoated CD; Mars-Earth comparison flashcards ; Scale model of the Earth-Moon system using 3" and 3/4" styrofoam balls attached with a precut 90" string; Moon phase flipbook; Construction paper for scale sizes of the eight planets, which the children used to compare and contrast their sizes; Adding machine tape and scale model of the solar system. Attendance varied from 8 to 16 children per workshop, ages 3 to 10. Parents were as enthusiastically engaged in the activities as the children, and a number of elementary school teachers and scout leaders took additional materials home to utilize the activities themselves.

4. Conclusion

The children's activities program at Stellafane has enjoyed thirteen years of success. Individual children have attended for five years or longer, and have even come back as "helpers" once they became too old to take part in the activities. Despite the practical constraints and challenges to developing such a program, the Stellafane experience has demonstrated that success can be achieved with limited resources and limitless potential.

References

National Research Council, *National Science Education Standards*, (National Academy Press, Washington D.C., 1996)

Template available at http://www.physics.ccsu.edu/larsen/earthmars.html