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Title	Asteroid Day: a vehicle for raising public awareness of astronomy and space exploration among primary students in Ireland
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Publication Date	2018-03-24
Publication information	Cardinot, Adriana, Shearer, Andy, & Fairfield, Jessamyn A. (2018). Asteroid Day: a vehicle for raising public awareness of astronomy and space exploration among primary students in Ireland. Paper presented at the Communicating Astronomy with the Public Conference CAP 2018, Fukuoka, Japan, 24-28 March, DOI: 10.13025/S82D1M
Publisher	NUI Galway
Link to publisher's version	https://doi.org/10.13025/S82D1M
Item record	http://hdl.handle.net/10379/14935
DOI	10.13025/S82D1M

Asteroid Day: A Vehicle For Raising Public Awareness Of Astronomy And Space Exploration Among Primary Students In Ireland

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Abstract. Asteroid Day is a global awareness campaign which takes place annually to learn about asteroids, their impact and to increase awareness on how we can protect the Earth from future asteroid impacts. At the event students tested their own hypothesis and carried out investigations to discover new concepts in Astronomy. The activities encouraged learning and promoted positive attitudes towards Astronomy.

1. Introduction

Space had been used as a theme to immerse people with science for many years. The Asteroid Day is a global awareness campaign which takes place annually to learn about asteroids, its impact and to increase awareness on how we can protect from future asteroid impacts. In Ireland, the event was organised by the National University of Ireland Galway on June 27th in a primary school in Galway. Altogether, more than 100 primary students were involved in a playful learning environment designed to establish a learning approach enhanced with the use of hands-on activities.

2. Event Outline

The declining interest in science is a serious concern for all countries. Research has been showing that it is mainly affected by the way science is presented at schools with a low level of interaction and connection with real world [1,2]. In this event, we aimed at using different approaches which had more emphasis on scientific inquiry and hands-on activities that could encourage students to develop a deep understanding and appreciation for astronomy. The event consisted of three parts: (1) talk with an Astronomer from NUI Galway about asteroids and the science behind it, (2) workshops to encourage students to think in ways similar on how scientists do and (3) a public lecture at the university.

Each workshop reinforced the links between astronomy and their its contributions to our modern life. We aimed at conducting activities that would challenge the participants to investigate asteroids and other astronomical objects. School workshops included:

1. “The Size of the Sun”: a game to explore the relative size of different celestial objects in the Solar System.

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2. “Being an Engineer”: students were challenged to create a rover made with pasta, and a rocket made with a plastic bottle that was launched at the end of the event.

3. “Modeling Asteroids”: using clay and paper models students investigated the shape and formation of asteroids.

3. Conclusions

Our hands-on activities encouraged learning and promoted positive attitudes towards Astronomy. Also, the use of household materials in the workshops made the teaching of Astronomy interesting and easily adaptable for any age group in and outside the school.

Postgraduate participation in public engagement with science events has the potential to enhance their education, developing skills and capacities that are useful in both academic and non-academic careers.

4. Future Work

We plan to investigate further the use of arts for promoting astronomy to underrepresented groups in STEM in Galway. This future work is part of the Making Space Programme which is funded by the Royal Astronomical Society under the Outreach and Engagement Fund (RAS200).

Acknowledgment

We would like to thank Dr Ray Butler for his support. This work was funded by: Centre for Astronomy, School of Physics and Marketing & Communications Office, NUIG. The first author is a fellow from CAPES - scholarship number {88881.128466/2016-01}.

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