

GalileoMobile: Interactive astronomy activities in schools

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Abstract

GalileoMobile is an itinerant science education initiative run on a voluntary basis by an international team of astronomers, educators, and science communicators. Our team's main goal is to make astronomy accessible to schools and communities around the globe that have little or no access to outreach actions. We do this by performing teacher workshops, activities with students, and donating educational material. Since the creation of GalileoMobile in 2008, we have travelled to Chile, Bolivia, Peru, India, and Uganda, and worked with 56 schools in total.

1. Introduction

GalileoMobile's activities are centred on a Handbook of Activities that comprises around 20 astronomical activities which we adapted from many different sources, and translated into 4 languages. The activities are the core of the project. They are the means by which we interact with the students, so they are selected and planned as to both communicate basic astronomy concepts to the students and encourage them to share their opinions and views of the Universe. Our methodology is to convey basic physical concepts in an interactive and playful way. The main topics are our planet Earth, the Solar System, and the Milky Way because they are easily observable by eye and offer concepts that can be treated at a basic level to excite the imagination for other worlds and illustrate the uniqueness and fragility of our own planet.

2. Summary and Conclusions

The experience we gained in Chile, Bolivia, Peru, India, and Uganda taught us that (1) bringing experts from other countries was very stimulating for children as they are naturally curious about other cultures and encourages a collaboration beyond borders; (2) high-school students who were already interested in science were always very eager to interact with real astronomers doing research to ask for career advice;



Figure 1: Learning about constellations in India.



Figure 2: Experimenting with the lenses of a Galileo-scope in Bolivia.

(3) inquiry-based methods are important to make the learning process more effective and we have therefore, re-adapted the activities in our Handbook according to these; (4) local teachers and university students involved in our activities have the potential to carry out follow-up activities, and examples are those from Uganda and India.