

# Space Detectives: using space to showcase science

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## Abstract

Space Detectives is a story-based activity, run in the course of several days, designed to immerse kids in a fun, intriguing environment based on a storyline that takes them to space and the planet Mars.

## 1. Introduction

Space is a subject that is sure to attract kids. It fits right into their imaginations and desire to find out all about the Universe. Thus, space has a strong potential to arise in them a passion for science. However, in the school system, the need to follow strict guidelines and to comply with what the curriculum mandates can contribute to make them lose interest in the scientific areas. NUCLIO, a non-profit association that promotes science education for schoolkids, teachers and the general public, designed an activity that takes kids on a journey of the imagination with stops in many scientific fields.



Figure 1: Solving puzzles and finding the story-line.

## 2. The concept

As the name indicates, the activity is focused on following clues, investigating different matters, solving problems and coming up with answers. It aims to create a fun and intriguing learning environment that motivates participants to conduct

their own scientific investigations and develop a personal understanding of their own learning journey.

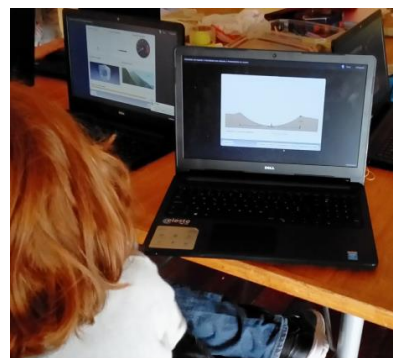


Figure 2: Using an impact simulator.

## 3. Implementation

Space Detectives has been run in two occasions, in school holiday periods. The basis has been a story with mystery elements that the kids have to disentangle. In both instances, the storyline was centered on the exploration of Mars, but it required the participants to explore a range of diverse subjects, such as rockets, communication and navigation, binary encoding and decoding, astronomical software, asteroid and impacts, robotics, Solar System exploration, the Martian environment and story-telling.



Figure 3: Tracking a rover on the surface of Mars.

In short, the programme incorporated a strong narrative basis, hands-on activities providing fun moments and encouraging team-building, group discussions, integrated game mechanics and also digital technologies and tools.



Figure 4: Putting together a robot with camera.

## 4. Results

During the trial implementation phases, we have found that we can inspire intrigue and excitement in a diverse range of subjects, and help in the development of an understanding of context, as well as demonstrate the links between the different subjects.

This activity has not been run in a formal school environment; the participants were self-selected children that very likely already had a penchant for leaning more about space exploration. Thus, their response was good, with peaks of interest that varied between individuals according to their very own preferences.

Plans are being developed to run Space Detectives either as a stand-alone activity or as a tie-in to the European Commission-funded project Stories of Tomorrow to be run in schools of five European countries.

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