The Olmicomics and The Lord of Rings: Two Cases of Non-traditional Education

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In 2003-2004 the Public Outreach & Education office (POE) of INAF-Osservatorio Astronomico di Brera (Milan, Italy), besides the traditional activities carried out two experiments of educational games: the role-playing game "The Lord of Rings – the mysterious case of the stolen rings" and the narrative laboratory “The Olmi-comics”.

"The Lord of Rings – the mysterious case of the stolen rings" is an astronomical role-playing game for kids, ageing from 10 to 13 years old. Its goal is to introduce pupils to some of the main topics of our Solar System: a) the role of gravity; b) the distribution of mass; c) the distribution of light; d) how rotation works in building complex structures; e) where the water is (as far as we know. Since the game was hold at the second edition of the Perugia Science Festival (3-12 September 2004), in the following description we refer to that experience. The pupils are divided into 6 groups of 8 members. They are told that the rings of Saturn were stolen by a Centaur while Saturn was sleeping. They are appointed astro-detectives in-charge and asked to find the rings out browsing around the Solar System, which is scaled so to fit Perugia's historical center. Each group starts playing the game from a different area of the city. The astro-detectives soon discover that the rings were incidentally destroyed, so that they must gather the physical ingredients to re-build them. They are requested to collect the right quantities of gravity, light, rotation, inclination, dust and water represented by simple objects like apples, spinning tops, bottles of water and so on. The winner group is the one which prepares the best receipt to re-build the rings in the minor amount of time.

The project “The Olmicomics” is an annual narrative laboratory carried out in collaboration with Prof. Maria Giaele Infantino, a teacher at the ISC middle school “Munari”, in the Olmi quarter of Milano. Its goal is to incite school students to use scientific suggestions as a starting line for creative processes in literature and comics. All along the scholastic year, we take a series of informal meeting with pupils and teachers, both in their school and in our Osservatorio, and we discuss some aspects of modern astronomy, so that pupils get a view of contemporary astronomical challenges. After that, they read some tales of Italo Calvino’s “Cosmicomics” (Le Cosmicomiche), one of the most famous experimental work of literature and science. Finally they try to write down tales, fables and comics about the subjects we discussed together, trying to use scientific ideas as narrative structures or simply suggestions.