# Using geo-myths in a classroom: towards creative science writing for scholars

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## Geo-myths in science communication

There is a longstanding and intimate relationship between myths and the Earth. Myths represent human beings in childhood when a primitive language made of symbols transmitted the wisdom necessary to live in harmony with nature. An American geologist, D. Vitaliano, coined the term "geo-mythology" to indicate a new discipline based on the idea that myths can be explained in terms of actual geological events witnessed by various group of people (Vitaliano 1973).

Since myths are a type of narrative, they have a structure familiar to most people. Today the narrative mode is considered to be a reliable way to express and transmit information complementary to paradigmatic cognition (Bruner 1990; Cohen 1989;) Empirical studies based on cognitive theories have recently been conducted also in classrooms suggesting that narratives represent an interesting tool for science communication to convey science not only in an attractive and reliable format, but also in a memorable way (Lanza and Negrete 2007; Negrete 2009; Negrete and Lartigue 2010;)

### **Geo-myths** can be used in a classroom to:

- · Attract pupils' attention, raising discussion of how science today explains what myths tried to without scientific knowledge.
- Raise interest and awareness of the territory in which they live.
- Help them to get in contact again with nature
- Promote Geo-ethics (Lanza EGU2014-14120)
- Boost their creativity. There are several studies suggesting that taking pupils out of the classroom and working in an outdoor environment for part of their time in school can foster their creative development (Davies et al. 2013); Geo-myths gave us this opportunity.

## Geo-myths in a class-room 2009-2019

Typolo:

Science

Where:

in Rome

Myth or

Orig

Italy

Legend of Colapesce

#1 (2009)



**Typology**: Geo-myths+ Open air museum Where: Secondary School in Velletri (Rome) Myth or legend: Myth of Rex Nemorensis Origin: Nemi (Rome), Lazio, Italy (Lanza 2014)

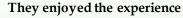
#3 (2017-2018)



**Typology**: transforming myths in fairy tales for children (creative writing) Where: Secondary school School in Albano (Rome) Myth or legend: Romolo and Remo (Orgin: Rome); Nymph Egeria (Origin: Ariccia, Rome, Lazio, Italy) (Lanza and D'Addezio 2020)

Prerequisiti di conoscenza del fenomeno terremoto

## Some results

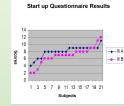




#1 Students enjoyed especially the science theatre experience. In light blue the percentage of the students who surely appreciated the experience

### They learned about the geology and became aware of the hazard of the territory where they live

#2 A start up questionnaire administrated after the training activity of group A (experimental group), and to the group B (control group) showed how poor was the prior knowledge of Nemi Lake area and the project is an opportunity and exclusive means to acquire it. (La Longa et al. EGU2013-3209)





#3 A comparison between two of the items of the input and final questionnaires shows an increased awareness of the hazard of the area especially concerning the less known gashazard (radon) (Lanza and D'Addezio EGU2018

### the reactivity towards creative writing The experience stimula



shows one of the slides e students to tell the story of the Ninfa Egeria in the form of fairy tale to primary school children. The flower is the way students avoided the concept of death, re-writing the

#### The major difficulty students encountered:

Students found difficult to trace back the links between ancient myths and the geology of the area. #1#2#3





