

Activity C4. ECONOMIC IMPLICATIONS OF SAVING ENERGY.

THE LANDSCAPE CREATED BY THE FORCES OF NATURE. February 23, 2021. MEETING IN ITALY





The power of water: Frasassi Cave

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THE FRASASSI CAVES



Students:

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Class: 2D liceum

Credits: Frasassi Cave from Wikipedia. The marvellous Candle's chamber





INTRODUCTION

The Frasassi caves are a fantastic underground karst caves located in the Village of Genga, Ancona Province, Marche Region.

The caves are part of the Natural Regional Park of Gola della Rossa and Frasassi and they have been part of the UNESCO World Cultural and Natural Heritage since 2017.









HISTORY

In July 1971 a group of 7 explorers of the area was attracted by a strong air current escaping from a small opening.

The discovery of the Frasassi caves dates back to September 25, 1971 by the Italian Alpine Club of Ancona.

Giulio Presti









GENESIS

About a million years ago the Sentino river flowed much higher up in the gorge than it does today.

Its cold waters met with underground sulphureous water with which they mixed, increasing exponentially the dissolution of the calcareous rock.

Biscioni Laura











STALACTITES AND STALAGMITES

Inside the karst cavities you can admire natural sculptures. The water, conveying carbon dioxide in the limestone rocks, creates a chemical process that dissolve CaCO₃ giving rise to calcium bicarbonate Ca(HCO₃):

$$H_2O + CO_2 + CaCO_3 \longrightarrow Ca(HCO_3)$$

This solution travels through the rock until it reaches an edge and if this is on the roof of a cave it will drip down and particles of calcium carbonate CaCO₃ are deposited. Formation of stalagmites and stalactites occurs:

$$Ca(HCO_3) \longrightarrow CaCO_3 + H_2O + CO_2$$





Did you know?

 In Luray Cave, in Virginia, United States, the picture explains the difference between stalactite and stalagmite:

Stalactite has a "c" in it, as in "c" for "ceiling," and stalagmite has a "g" in it, as in "g" for "ground".

Activity in the classroom



Left, how to grow stalactites: http://tlc.howstuffworks.com/family/nature-activities-for-kids1.htm



http://science.howstuffworks.com/environment al/earth/geology/stalactite-stalagmite1.htm





https://en.wikipedia.org/wik i/Luray_Caverns#/media/Fil e:Luray.jpg

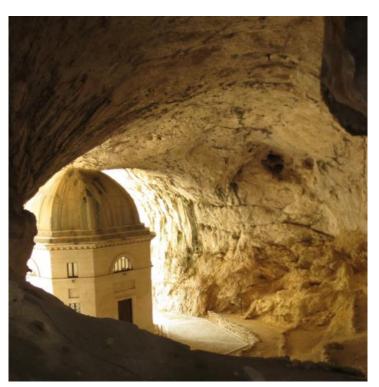
Alexander Cognigni



Thanks for your attention



Erasmus+



Valadier Temple, Frasassi Gorge



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