



Activity C4. ECONOMIC IMPLICATIONS OF SAVING ENERGY.
THE LANDSCAPE CREATED BY THE FORCES OF NATURE. February 23, 2021. MEETING IN ITALY



Istituto di Istruzione Secondaria Superiore
CARLO URBANI
Via Legnano 17 – Porto Sant’Elpidio (FM)



The power of water: Frasassi Cave

Rebecca Longo, Irene Zampaloni and Donia Bel Haj

2D scientific liceum. School: IISS Polo Carlo Urbani - Porto Sant’Elpidio (FM) – Marche region.



Erasmus+

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THE FRASASSI CAVES



Students:

Rebecca Longo, Irene Zampaloni
and Donia Bel Haj

Class: 2D liceum

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

Irene Zampaloni



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.

Giulia 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.



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 dissolves CaCO_3 giving rise to **calcium bicarbonate** $\text{Ca}(\text{HCO}_3)$:



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** CaCO_3 are deposited. Formation of **stalagmites** and **stalactites** occurs:



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>



from:

<http://science.howstuffworks.com/environmental/earth/geology/stalactite-stalagmite1.htm>



https://en.wikipedia.org/wiki/Luray_Caverns#/media/File:Luray.jpg

Alexander Cognigni



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Thanks for your attention



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Valadier Temple, Frasassi Gorge



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