



## **“Let’s take back our roots through Science”. The Sicilian Sulfur: a mineralogical treasure to rediscover.**

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The name of sulfur is synonymous of Sicily! Sicilian Sulfur minerals and evaporitic deposits are well-known because they are connected with an important evolution stage of the old mediterranean area. In this Island, in the southern part of Italy, a geological formation of Messinian age, called "gessoso solfifera", outcrops. These rocks are widespread in the south and south-west Sicily, and, there, salt mines and “zolfare”, sulfur mines, were located. The formation is characterized by large amounts of gypsum, potassium salts, sodium chlorates and other deposits. Most of the main mineralogical museum collections all over the world have at least a sample of one of these minerals that are usually characterized by a high aesthetic quality.

When I proposed a lesson on the origin of sulfur in evaporitic rocks, I realized that an important part of the history of our region was in danger to be forgotten by younger generation. The exploitation of this mineral resource in the past is strictly linked to the troubled social and cultural transformation of Sicily during the last century. Thus, this is a particularly suitable topic for a multidisciplinary approach. In cooperation with the Mineralogical Museum (SteBiCeF Department, University of Palermo), a learning project was proposed to a group of 4th year high school students. It has been carrying on in order to develop the knowledge of the geological and chemical features of evaporitic deposits and to promote scientific abilities together with a better understanding of social-environmental issues.

Project aims and activities include:

[U+27A2] Solubility and saturation experiments to reconstruct a simplified model of minerals deposition

[U+27A2] Working in groups: collection of data about old geological outcrops and current evaporating basins where rocks are forming in the world as well as information on sicilian mines from literature and historical documents (video, interviews, pictures, newspapers and others)

[U+27A2] a guided tour of the Mineralogical Museum and participation to laboratory activities, especially focussing on the identification of sulfates and chlorates minerals and on the observation of samples of different kind of rocks coming from the outcropping areas.

[U+27A2] a trip to the Floristella Geopark, instituted on the area of one of the oldest sulfur mine and most eloquent site of industrial archeology and scenario of the fighting for the workers’ social rescue.

The project can be experienced as a virtual journey through the geological time but also as a dramatic picture of the hard working conditions into the mines. Students are motivated and engaged to learn about geological processes using their whole scientific competences. Nevertheless, expected learning outcomes will be the final awareness to manage responsibly natural resources, even because of the strong impact on social daylife. That’s we can definitely say how to take back our roots through Science!