



Wikimedia Movement and Art Schools

Final Project Based on a Scientific Illustration  
Assignment (Final Art Course)  
**Assignment:**

## Educational Illustration of the Mineralization Process in the Naica Mine

How fluids emanated from a magma chamber and formed an anomalous concentration of remarkable elements

### Illustration assignment

Watch the following documentary, which shows a recreation of the mineralization process:

- *El misterio de los cristales gigantes* ["The mystery of the giant crystals"]

The Naica Mine (Chihuahua, Mexico) is an underground lead, zinc, silver and copper mine. The mineralization process took place 26 million years ago, when hydrothermal fluids emanated from a magma chamber. At a depth of 4-7 km beneath the earth's surface, these fluids interacted with carbonate rocks, giving rise to the mine's mineral deposits.

Among the precipitated minerals was anhydrite ( $\text{CaSO}_4$ , also known as calcium sulfate). Anhydrite is usually of little economic interest, but its presence and abundance in the Naica Mine played a fundamental role in the formation of the giant crystals in the mine's famous Cave of the Crystals.

Your assignment is to create educational illustrations that explain the mineralization process that formed these crystals. You will have access to reference materials and the guidance of an expert.

### Specifications

You must make several illustrations, some of which will include magnified insets.

1. Location of the magma chamber.
2. Emanation of fluids from the highest points of the chamber and reaction with the enclosing rock mass (include magnified inset showing reactions with carbonate rocks).
3. Mineralization (include a magnified inset of the sequence of precipitated minerals).

A subject-specific adviser will provide instructions, guidance and reference images.

### Possible documentation sources

Illustrations, diagrams and explanations in scientific or popular publications.

Reference illustrations of magma and fluids from Wikimedia Commons, visual encyclopedias and textbooks.

The **subject-specific adviser** for this assignment, geologist Àngels Canals Sabaté (University of Barcelona), will provide additional documentation.

### Formats

If you create the illustration on **paper**:

- Recommended minimum size: DIN A5 (landscape). Photographs of illustrations must be studio photographs. Scans of illustrations must be high-quality, sharp and high-resolution.

If you create the illustration as a **bitmap**:

- Digitized PNG files must not be compressed.
- Approximate **minimum** size of the file to be published: 1800 x 1270 pixels (more than 2 Mpx). Maximum file size: 100 MB.

If you create a **vector graphic** (preferable), use the standard SVG format.

Image viewing guidelines:

- Approximate image display dimensions on description page: 718 x 500 pixels.
- Approximate image display dimensions in a Wikipedia article: 500 x 348 pixels.

Keep in mind the approximate display dimensions to ensure that the illustration has an appropriate level of detail for its publication context.



**Amical Wikimedia** <http://viquimedia.cat>

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Subject-specific adviser for this assignment: Àngels Canals Sabaté

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Previous page: Example of the assignment sheets followed by internship students. This was the initial information they received before starting the assignment.

## RESULTS:

[http://commons.wikimedia.org/wiki/File:Naica bloque diagrama de la mina.jpg](http://commons.wikimedia.org/wiki/File:Naica_bloque_diagrama_de_la_mina.jpg)

[http://commons.wikimedia.org/wiki/File:Naica Ubicaci%C3%B3n de las cuevas en la mina.jpg](http://commons.wikimedia.org/wiki/File:Naica_Ubicaci%C3%B3n_de_las_cuevas_en_la_mina.jpg)

[http://commons.wikimedia.org/wiki/File:Naica proceso de mineralizaci%C3%B3n.jpg](http://commons.wikimedia.org/wiki/File:Naica_proceso_de_mineralizaci%C3%B3n.jpg)

[http://commons.wikimedia.org/wiki/File:Crystalization with different levels of nucleation.jpg](http://commons.wikimedia.org/wiki/File:Crystalization_with_different_levels_of_nucleation.jpg)

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Description of the experience:

*“Explaining Naica Infographically for Wikipedia: A Project by Two edRa Students”*

[http://outreach.wikimedia.org/wiki/WikiArS/Case\\_Studies/Explaining\\_Naica\\_infographically/ca](http://outreach.wikimedia.org/wiki/WikiArS/Case_Studies/Explaining_Naica_infographically/ca)