

Europeana Learning Scenario

Title

Using Arts to reconstruct a volcanic eruption

Author

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Summary

Table of summary

Subject	Science
Topic	Volcanic eruptions, this scenario could be used (with different resources from Europeana platform) for other natural phenomena, like landslides, tsunami, earthquakes, that determine change in the landscape in short period of time.
Age of students	11-13
Preparation time	30 minutes
Teaching time	160 minutes



Table of summary

Online teaching material	<p>Engaging: www.padlet.com</p> <p>Brainstorming: https://www.mentimeter.com/</p> <p>Information about Mt. Vesuvius eruptions: http://www.ov.ingv.it/ov/images/stories/crono-vesuvio.png</p> <p>Video about volcano monitoring (In English) https://www.iris.edu/hq/inclass/animation/volcano_monitoring_volcanic_earthquakes https://www.iris.edu/hq/inclass/animation/volcano_monitoring_measuring_magmatic_gas https://www.iris.edu/hq/inclass/animation/volcano_monitoring_measuring_deformation_and_tilt_with_gps</p> <p>Video about monitoring of Mt. Vesuvius In Italian: https://www.youtube.com/watch?v=KBtmKr3NzKI&t=59s</p> <p>Tweet about 79 EC eruption deposits : https://twitter.com/VMRG_MQ/status/1034504661330534410</p> <p>79 EC eruption reconstruction: https://www.britishmuseum.org/whats_on/exhibitions/pompeii_and_herculaneum/pompeii_live/eruption_timeline.asp</p> <p>Timeline: https://www.timetoast.com/</p> <p>Mt. Vesuvius eruption http://www.parlandodivulcani.it/images/books/vesuvio-through-history-and-science.pdf (page 81)</p> <p>How to behave during volcanic eruption (in English) https://volcanoes.usgs.gov/vhp/during_eruption.html https://volcanoes.usgs.gov/vhp/after_eruption.html</p> <p>(in Italian) http://www.protezionecivile.gov.it/jcms/it/cosa_fare_vulcanico.wp?sessionId=4AA703C7D090705DD087A36709F809A5.worker3</p> <p>Khaoot: https://kahoot.com</p> <p>Canva: https://www.canva.com/</p>
Offline teaching material	-
European resources used	https://www.europeana.eu/portal/it/search?page=2&q=Vesuvius&qf%5B%5D=ERUPTION

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Integration into the curriculum

This lesson is included in the “Astronomy and Earth Sciences” subject and is related to the topic of “knowledge about Earth structure and plate tectonics, seismic volcanic and hydrogeologic risks in order to design prevention plan” (National Indication for Science, Italian Ministry of Education, 2010).

Aim of the lesson

Students will be able to recognize different phases of an explosive volcanic eruption, and understand the relevance of being aware of the correct behavior during different types of volcanic phenomena.

Trends

Inquiry-based and collaborative learning, integrated STEM

21st century skills

Environmental literacy: students learn about natural hazards in general, and volcanic risks in particular;

Critical thinking and problem solving: students are required to think about the timeline of an eruption and resolve the problem of safety in classroom;

Communication: students have to communicate the results of their activity;

Collaboration: students work together during the activity and to design the emergency plan and presentation,

Information literacy: students learn which websites are reliable to find information about natural hazards.

Activities

Name of activity	Procedure	Time
Engaging	Students are required to make a simple drawing of the gulf of Napoli. They will upload the drawings on a Padlet.	10 minutes
	The class analyze the drawings searching for common items. This activity aims at underlining that the Mount Vesuvius is one of the most important morphologies in the gulf of Naples and a volcano with a long history .	10 minutes
Brainstorming	For brainstorming, the teacher may use Mentimeter to ask to students: <ul style="list-style-type: none"> Do you know the date of the last Vesuvius eruption? Do you know if the Vesuvius is an active or inactive Volcano? Do you know who is in charge of monitoring the Vesuvius? 	10 minutes
	The teacher may show a video about the Mt. Vesuvius monitoring room (or this video about Volcano monitoring) and briefly introduce how they monitor volcano activity nowadays.	10 minutes
Volcanic eruption	The teacher introduces to students how it is possible to find information about past eruptions of the Vesuvius, for example “reading” the volcanic deposits generated during an eruption. The teacher shows students that the study of deposits is very important. Show the tweet of a geologist who visited the fall deposits related to the 79 CE. This allows to introduce the different type of volcanic deposits related to explosive eruption (fall, pyroclastic flow, surge) and the type of eruption that will generate these deposits.	30 minutes
Mt Vesuvius eruption	Students have to search for images related to Vesuvius on the Europeana portal and in particular the one that described the eruption between 1750 and 1790. Suggested keywords are: Eruption, Vesuvius.	30 minutes

Name of activity	Procedure	Time
	The teachers shows students an example of reconstruction of a Mt. Vesuvius eruption by British museums . In group of 4 students have to use the drawing found on Europeana and, using a timeline and a description of eruptions, they have to reconstruct one of the Mt. Vesuvius eruptions between 1750 and 1790. Students have to match drawings found on Europeana with the information provided about the eruption, and also with their knowledge. They are required to add all the information on a timeline and to credit the drawings found on Europeana and the information about the Vesuvius eruptions.	30 minutes
Sharing	Students have to work on a short presentation about their work.	30 minutes
Assessment	The class compares the timeline by students and creates a class timeline that will include all the information found by students.	30 minutes
	Students are asked about what they will do in case of volcanic eruption and in order to underline that different type of volcanic activity require different behavior. Students become familiar with suggested behavior during vulcanic eruptions.	30 minutes
	Students are required to design an emergency plan for their class in case of a volcanic eruption, using Canva as template. Working in groups of four, they have to think about how to behave in case of a different eruption scenario and design 3-4 questions and answers to create a Kahoot about their plans. All of the questions and answers will be collected to be presented to other students of the school.	60 minutes

Assessment

Students will be assessed for:

- Providing the correct information and timeline of the Vesuvius eruptions;
- Presentation skills;
- Design of emergency plan and a related test.

***** AFTER IMPLEMENTATION *****

Student feedback

Add here the method with which your students will be able to give you feedback and discuss the lesson.

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Teacher's remarks

*Add here your comments and evaluation **AFTER** the implementation of this lesson. You can always use a rubric for self-assessment.*

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About the Europeana DSI-4 project

[Europeana](#) is Europe's digital platform for cultural heritage, providing free online access to over 53 million digitised items drawn from Europe's museums, archives, libraries and galleries. The Europeana DSI-4 project continues the work of the previous three Europeana Digital Service Infrastructures (DSIs). It is the fourth iteration with a proven record of accomplishment in creating access, interoperability, visibility and use of European cultural heritage in the five target markets outlined: European Citizens, Education, Research, Creative Industries and Cultural Heritage Institutions.

[European Schoolnet](#) (EUN) is the network of 34 European Ministries of Education, based in Brussels. As a not-for-profit organisation, EUN aims to bring innovation in teaching and learning to its key stakeholders: Ministries of Education, schools, teachers, researchers, and industry partners. European Schoolnet's task in the Europeana DSI-4 project is to continue and expand the Europeana Education Community.