

Europeana Learning Scenario

Title

Fossils

Author(s)

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Summary

Table of summary

Subject	Biology, Chemistry, IT
Topic	Fossils
Age of students	12-14
Preparation time	One day
Teaching time	50'
Online teaching material	https://create.kahoot.it/k/015d7057-5fdd-415a-8bc2-d546a3608ee2 https://padlet.com/dijana_sutak/mqzs5g80pniu
Offline teaching material	water, gypsum, plastic model of an animal or a plant
Europeana resources used	www.europeana.eu - Fossil2 www.europeana.eu - Fossil3

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Integration into the curriculum

The subject belongs to the area of evolution in the curriculum of biology and physiochemical properties of the substances in the curriculum of chemistry for the seventh grade of primary school. This interdisciplinary area also includes arts and crafts where students create models, geography, history and IT tools.

Aim of the lesson

To encourage students to think about the importance of fossils for life on Earth.



Trends

- Collaborative Learning: a strong focus on group work
- Lifelong Learning: learning does not stop when leaving school
- Project-Based Learning: students get fact-based tasks, problems to solve and they work in groups. This kind of learning usually transcends traditional subjects
- Open source learning: teachers copy, share, adapt and reuse free educational materials

21st century skills

Critical thinking and networking: reasoning to understand

Collaboration and communication: expressing their ideas in a clear and effective way, students support each other's progress

Activities

Name of activity	Procedure	Time
Introduction (Presentation, Group discussion)	<p>Students watch a video "What's a fossil?" and answer three questions:</p> <ul style="list-style-type: none"> • What is a fossil? • Where can we find fossils? • How are the fossils formed? <p>https://youtu.be/3rkGu0BItKM</p>	10'
Elaboration Part A.	<p>The teacher shows students photo collection of fossils from different geological periods of Earth. By using internet, they try to determine which organisms are shown.</p> <p>www.europeana.eu - Fossil2 www.europeana.eu - Fossil3</p>	10'
Elaboration Part B.	<p>Students make gypsum fossils.</p> <p>Accessories and materials: Clay or plasticine, bivalve shells / snail shells / dinosaur toys, insects and the like, water, gypsum, plastic plug or receptacle, aluminum foil, oil</p> <p>Workflow:</p> <ol style="list-style-type: none"> 1. Find a bigger and deeper plastic plug or a smaller plastic container (the size must be bigger than the shells, snail shells or dinosaur toys). 2. Cover the cap / bowl with an aluminum foil on the inside. 3. Scrap the plasticine (not very thin) and place it on the bottom of the plug / receptacle. 4. Firmly press the previously shelled shellfish shell, snail shell, dinosaur toy, etc. to leave the shell / cottage / toy after removal 	20'+ drying time

Name of activity	Procedure	Time
	5. Remove shell / box / toy from the plasticine. 6. Make a mixture of gypsum and water (to be thicker, according to the instructions on the gypsum). 7. Quickly pour the mixture into a plastic mold so as to overlap the print and be slightly thick (about 1 cm). 8. Leave the plaster to dry for several days. 9. Separate gypsum from china (carefully due to fracture). 10. Enjoy the fossil.	
Conclusion Part A.	Kahoot: https://create.kahoot.it/share/fossils-are-fun/015d7057-5fdd-415a-8bc2-d546a3608ee2	5'
Conclusion Part B.	Padlet feedback: https://padlet.com/dijana_sutak/mqzs5g80pniu	5'

Assessment

Kahoot: <https://create.kahoot.it/share/fossils-are-fun/015d7057-5fdd-415a-8bc2-d546a3608ee2>

Kahoot questions about fossils:

- Q1: Which science studies fossils?
 - Geology, **Paleontology**, Ornithology, Herpetology
- Q2: Trilobites belongs to which geological period?
 - Proterozoic, **Paleozoic**, Mesozoic, Cenozoic
- Q3: Which transitional form is shown in the figure?
 - **Reptilians to birds**, Amphibians to birds, Pisces to amphibians, Birds to mammals
- Q4: The fossil residue can't be found for:
 - Ammonite, Trilobite, **Paramecium**, Nautilus
- Q5: We can't find fossils on:
 - Rocks, Ice, Amber, **Water**

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

Student feedback

https://padlet.com/dijana_sutak/mqzs5g80pniu

Teacher's remarks

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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.