

Europeana Learning Scenario

Title

The Antikythera Mechanism – The first computer in history

Author(s)

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Summary

Table of summary

Subject	ICT, Geography
Topic	Computer evolution, Roman Empire from 27 BC – 180 AD
Age of students	13-15
Preparation time	Two hours, in order to adjust worksheets, prepare short tutorials for web tools and provide some support in search engines and Europeana collection.
Teaching time	Four 45-minute lessons
Online teaching material	www.wordart.com www.padlet.com www.sutori.com www.crosswordlabs.com https://en.wikipedia.org/wiki/Antikythera_mechanism http://www.antikythera-mechanism.gr https://www.computerhistory.org/timeline/computers/
Offline teaching material	Colorful pens and paper for marking the places on the Roman Empire map
Europeana resources used	www.europeana.eu/portal/en What is the Antikythera Mechanism? https://www.europeana.eu/portal/en/record/2064901/https://www.searchculture.gr/aggregator/edm/NOESIS/000048_3A11609_001_03394.html?q=antikythera+mechanism#dclid=1547915465935&p=1 A real copy of the mechanism: https://www.europeana.eu/portal/en/record/2055735/11609_001_03394.html?q=antikythera+mechanism#dclid=1547915465935&p=1



Table of summary

Map from "The Student's Roman Empire. A history of the Roman Empire from its foundation to the death of Marcus Aurelius. 27 B.C.-180 A.D". A detailed map of the Roman Empire where students should mark where the ship set off, its destination and the area where it sank and was found, 1900 years later.

https://www.europeana.eu/portal/en/record/9200387/BibliographicResource_3000117240713.html?q=Roman+Empire#dclid=1548615208201&p=1

Exhibition man and computer. Newsreels in which Dutch subjects of a certain week are presented. The evolution from the abacus to the computer can be seen at the exhibition 'Man and computer', which is held in the Museum for Education in The Hague. SHOTS: abacus; a child plays 'noughts and crosses' on the computer; cue chip; with the help of a large model children learn how a video game console works; demonstration of a 'talking' handheld computer that checks the children's spelling; children behind a computer; printing a drawing with a line printer; imitating the landing on the moon with a computer; PCB:

https://www.europeana.eu/portal/en/record/2051906/data_euscreenXL_http_open_beelden_nl_media_22208.html?q=computer+evolution#dclid=1548497631247&p=1

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Integration into the curriculum

"ICT literacy is a basic aim of the new modern curriculum and students should be able to use ICT tools and digital services in order to access information on the web and participate in knowledge society." (Greek Ministry of Education, 2017 <https://www.minedu.gov.gr>)

- How did man start to design mechanisms that could be used to make multiple calculations and estimations for future?
- How did these machines work without electricity?
- Evolution of these machines through time- How we reached the modern computer

Aim of the lesson

Students will be able to understand how man began to think of making complex machines that would assist him in calculations and predictions, how this developed through time and how we reached the modern computer. Also they will understand how the commerce took place during the Roman Empire with ships leaving from Asia Minor and travelling to Rome.

Trends

Inquiry-based and collaborate learning, students work in groups in order to access web pages and find information and pictures for their project which will be uploaded to Padlet.

21st century skills

Critical thinking and problem solving: Students are required to think and make a timeline of computer evolution through time.

Communication: Students have to communicate - present the results of their activity in their classroom.

Collaboration: Students work in groups during the activity, upload their work on Padlet, make quizzes or word clouds and finally timelines.

Information literacy: Students learn about websites that are reliable for finding information and also print map from Europeana on which they mark significant places, the Antikythera mechanism wreckage and Roman Empire cities.

Activities

Name of activity	Procedure	Time
Lead-in	Students are required to find the picture of the Antikythera Mechanism on Europeana, which will be uploaded on a Padlet.	10'
Brainstorming	Have you ever heard of the Antikythera Mechanism and what represents? Do you know where it was found? Why is this mechanism so important?	10'
Video documentary	The teacher shows a video documentary about the evolution of technology in ancient Greece, with special reference to the Antikythera mechanism.	43'
Research	Students are asked to find more info (details and pics) about the Antikythera Mechanism and upload their findings on a Padlet.	20'
Map	Students are asked to find a Roman Empire map on Europeana that shows the empire from 27 B.C.-180 A.D and mark the place of the wreck on it.	4'
Video documentary	The teacher shows a Dutch documentary about computer evolution through time.	4'
Timeline	Students are asked to make a timeline presentation of the computer evolution from 20 B.C. till 2017, marking the most significant dates.	35'
Quiz	Students make a quiz about important mechanisms that helped computer evolution.	25'
Presentation	Students make a short presentation of their group work in the classroom.	35'
Assessment	The class compares the timelines and quizzes and chooses the best one that will be uploaded on the website of the school. Finally, a word cloud is made in order to be printed in classroom.	10'

Assessment

Students will be assessed based on:

1. Finding correct info about the Antikythera Mechanism
2. Designing timeline and quiz about computer evolution

3. Marking the correct place of the wreck on the map
4. Presentation skills in class and team work

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

Student feedback

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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.