

Europeana Learning Scenario

Title

The Philips' Revolution

Author(s)

Sonia Tomás Cardona

Abstract

In this activity we make use of digital heritage to guide our secondary students in a journey through the evolution of electricity and its applications. To do that we will study the history of one of the most important electrical companies (Philips) and locate in the Europeana Platform various electrical appliances, allowing our students to produce a poster and an oral presentation summarizing their work.

Keywords

Philips, bulb, electricity, innovation, Eindhoven

Table of summary

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Subject	Technology; Physics, Design
Topic	Evolution of electricity and its use in appliances.
Age of students	12-13
Preparation time	3 h
Teaching time	3 h
Online teaching material	Padlet , Wevideo , Canva and Impress .
Offline teaching material	Laptops (Tablets), paper, posters, markers
Europeana resources used	https://blog.europeana.eu/2019/10/philips-illuminating-the-world-from-eindhoven/

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Integration into the curriculum

This activity is connected to the Spanish Curriculum through the BL 4.1. of the area of Technology second course of ESO, following Valencian Community curriculum:

- Search and select information in various sources, such as communities and virtual classrooms, from a filtered and proven strategy, organizing the information through synthesis procedures or presentation of the contents, registering it on paper or storing it digitally to obtain texts of the scope academic or professional, under safe environments of Information exchanges.

Aim of the lesson

Create and edit digital content such as text documents or multimedia presentations with an esthetic sense, using desktop computer applications to expose a technological object, and know how to apply the different types of licenses

Outcome of the lesson

Students will be able to make a poster related with the Phillips Factory and its inventions for its use in an oral presentation, with digital support.

Trends

- **Mobile learning:** Get access to information and knowledge through smartphones and tablets (learn anytime, anywhere);
- **Collaborative learning:** a strong focus on group work; They are working by pairs.
- **Peer Learning:** students learn from peers and give each other feedback;
- **BYOD:** Students bring their own mobile devices to the classroom.

21st century skills

This Learning Scenario aims to facilitate educational contexts where students will develop a set of crucial competences that today are defined as a key factor for the professional and personal life of our students, for example the critical thinking and the ICT skills. Besides the importance of developing a critical conscience about electricity productions with non-pollutant methods ad sustainability, the activities on the LS aims to drive students to develop also other competences such as:

- **Collaboration:** by working as team students will need to interact, plan, make decisions as a group to develop the tasks of this LS.
- **Creativity:** since they will have some “freedom” in creating the final product they will be driving to apply creativity on their creations
- **Communication:** students will have to present the work developed to their peers. This will allow them to develop communication skills.
- **Curiosity:** another important skill that our students must develop is curiosity. The LS must be presented in a way that students are eager to investigate the topics of the LS, involving them on the activities and guide them through the all process keep them always eager for them to learn more.

Activities

Name of activity	Procedure	Time
1) Presentation and general discussion	Teacher will present to students what is the main idea of the activity. The Europeana platform will be presented, explaining how to search for information and the types of licenses in the objects. https://www.europeana.eu/portal/es	10 min
2) Teams' creation and roles assignment	Teacher creates teams (4 people) with roles according to student's profile. Each team decides a team manager responsible for the communication of the team with the teacher and optionally specific roles such as: an investigator, final product creator.... Each team decides on a main idea about the activity.	20 min
3) Draft developing (collaborative work)	Each team must develop a draft plan that will be their guide for the LS. On a Padlet students will write a short sentence about the work they will do (if they prefer, they can record a short video with Wevideo also and publish it on the Padlet)	20 min
4) Research and investigation (collaborative work)	Students will have to research on the topic, investigating the sources provided in the LS and using others that they consider reliable.	30 min
5) Data collection (critical thinking)	According to their investigation and the draft designed previously students will select all the information needed to create the final product (video, oral presentation, scientific poster with QR connections). They must pay attention to copyright issues regarding the data they collect.	30 min
6) Final product development (ICT skills and creativity)	Using all the information collected students develop their final product.	40 min
7) Final Presentation (communication)	Each team will present the result of their work to all the class. During the presentation the peers will evaluate the other teams work using an online	30 min

Name of activity	Procedure	Time
form (Annex). Results will be shared after all the presentations and evaluations have been made.		

Assessment

A Quiz can be used to evaluate students' inputs to the work (optionally this can be done via Kahoot or Google forms). The teacher can decide on topics that are mandatory for the students to explore on the activity and that can be included on the quiz.

- **Question 1:** An immense variety of products has been produced by this Philips, one of this is not a product of Phillis: coffee makers, electric razors, X-Ray machines, hard disks, cassette tapes, colour televisions...
- **Question 2:** How many brothers were under the surname of Phillips?
- **Question 3:** Philips profited during [World War I](#) by gaining market share in the countries that boycotted the import of technological products from Germany. Choose 3 of them: the UK, Portugal, France, Italy and Russia.
- **Question 4:** Complete: A large amount of migrant workers, predominantly from _____, moved to the Netherlands to come work for the company.
- **Question 5:** Complete: The history of Philips started _____, grew _____, and continues until this day.

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

Student feedback

My students have had to upload to the server that uses our education counselling the archives of the documents they have been preparing and the result that they have presented to the rest of the class. Everybody has read the others teams documents previously their exposition and they were able to ask any questions in order to learn more about Philips. When they finished their exhibitions, they had to answer some questions about each exposition in a google form. The link is this one:

<https://forms.gle/mqGhyq8auzZbT1Ra7>

Teacher's remarks

The activity has been very motivating for my students, and it should be noted that it has not been complicated because the previous course we already started working using some of these apps, teamwork and the development and presentation of contents to the rest of the group. The result has been satisfactory. To evaluate I have used this rubric that I present in Annex I.

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.

Annex I

Assessment rubric	Excellent learning 4	Good learning 3	Medium learning 2	Poor learning 1
TEAM VALUE ASPECTS				
Group work (10%)	Group work has been developed without conflict. The tasks have been allocated adequately, without the intervention of the teacher.	Group work has generally been developed without conflict. Task allocation was done by the teacher..	There have been disagreements that have tampered team work, nonetheless they managed to complete the task.	The group has worked with difficulty and the task has been incomplete.
The content of the exhibition (reference to the LS) and questionnaire (20%)	They've been able to organize and clearly allocate the contents following a script. The presentation was developed in an orderly manner. The questionnaire responses were answered correctly. The voice of all team members has been heard.	They've been able to organize and divide the contents partially through a script. The move from one part of the presentation to another has been somewhat confusing. Most questionnaire questions were correct. The voice of all team members has been heard.	They've been able to organize and divide the contents partially through a script. The parts of the presentation were not clearly defined or not all the members of the team participated. Only half of the questions and/or answers were related to the topic.	They haven't been able to organize and divide contents following a script. Less than half of the questions and/or answers were related to the topic.
Contents (30%)	They cite the entire content of Philips history according to the chosen LS, with reference to most elements of its context. They expose the main repercussions of several of his inventions. They cite Philips' historical evolution in a chronologically developed and orderly way.	They cite most of the content of Philips history according to the chosen LS, with reference to many elements of its context. They exhibit quite a few repercussions of several of his inventions. They cite the historical evolution of Philips in a partially developed and chronologically ordered way.	They cite some of the content of Philips history according to the chosen LS, with reference to some elements of its context. They expose some repercussions of some of his inventions. They cite Philips' historical evolution in a poorly developed and chronologically disordered way.	They cite little content from Philips history based on the chosen LS, with reference to some element of its context. They expose few repercussions of some of his inventions. They cite Philips' historical evolution in a wrong developed and chronologically disordered way.

Evaluation Rubric	Excellent Learning 4	Good learning 3	Middle Learning 2	Poor learning 1
INDIVIDUAL ASSESSMENT ASPECTS				
Fulfillment of individual responsibilities (10%)	He has led and contributed to group tasks in a responsible and supportive way. He has performed all the tasks entrusted to him. He has taken the initiative in carrying out the tasks and making decisions for the advancement of common work.	He has participated in group tasks in a responsible and supportive way. He has performed most of the tasks entrusted to him.	He has participated in some of the group tasks, fulfilling the assigned role. He has performed some of the tasks entrusted to him.	He has participated little in group tasks or has ignored them. He has not been able to perform only the tasks entrusted to him.
Tic tool management (10%)	He has managed the app (Kahoot, Canva, Impress ...) without difficulty, providing help to others in case necessary.	He has handled the apps without much difficulty.	It has been lost at some point, but it has made progress with help.	He has always needed help and would not have been able to do the homework without help.
Cleaning, clarity and correction of the script (10%)	The editing of the text, expression and spelling is correct. The text is well understood and can be read easily.	The editing of the text, expression and spelling is correct, but they admit improvements. Despite this, the text can be interpreted properly.	The editing of the text, expression and spelling is partially correct, and they allow notable improvements. The text is interpreted with some interruption.	The editing of the text, expression and spelling is incorrect, and they admit notable improvements and / or four or more spelling mistakes. Text is interpreted with interruptions.
Clarity of the exhibition (10%)	The voice is clear and the speech without crutches or stutters. The main ideas to be transmitted without reading them are underlined. A lot of suitable temporary connectors and verb tenses are used.	The voice is clear, and the speech hardly contains stutters. Several main ideas that you want to convey without reading them are underlined. Some appropriate temporary connectors and tenses are used.	The voice is clear, although it contains Stuttering or muffins, what is said is understandable. Only one main idea that you want to convey without reading it is underlined. Temporary connectors are scarce and / or not all verbal tenses used are adequate.	The voice is not clear, it contains stutters or muffins that make it difficult to Understanding what is being said. No main idea that you want to convey without reading it is underlined. Do not use the temporary connectors and / or not all the verb tenses used are appropriate.

ESTIMATION SCALE	Excellent learning	Good learning	Medium learning	Poor learning
PUNCTUATION	Between 3.5 and 4 points	Between 2.8 and 3.4	Between 2 and 2.7	Less than 2
QUALIFICATION	SB	NT	SU - BI	IN

Annex

Online peer to peer evaluation form:

https://docs.google.com/forms/d/e/1FAIpQLScU08jj6z5pINN3Avzrc5_uTPvTQuJsuo2JcCr83lokIBiIHA/viewform

