

# Europeana Learning Scenario

**Title: Brain Challenges**

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**Summary:** Despite all we know about human brain it still is a mystery. But, what do we know? Let's organize our knowledges about the more complex human organ and learn some stuff about brain injuries, diseases and brain friendly-habits

## Table of summary

<b>Subject</b>	<i>A brief tour of the human brain, its cells and functions, with a variety of activities designed to give students simplified but necessary bits of information to understand and treat better our brain</i>
<b>Topic</b>	<i>Psychology lessons: know more about human brain</i>
<b>Age of students</b>	<i>17-18 12th Grade</i>
<b>Preparation time</b>	<i>60 minutes</i>
<b>Teaching time</b>	<i>550 minutes</i>
<b>Online teaching material</b>	<p><b>online tools</b>  <i>Padlet: <a href="https://padlet.com/">https://padlet.com/</a>            Quizizz: <a href="https://quizizz.com/">https://quizizz.com/</a> or Pear Deck <a href="https://www.peardeck.com/">https://www.peardeck.com/</a>            Canva: <a href="https://www.canva.com/">https://www.canva.com/</a>            Mentimeter: <a href="https://www.mentimeter.com">https://www.mentimeter.com</a></i></p> <p><i>Presentation tools that students can choose between those <a href="https://create.lensoo.com/">https://create.lensoo.com/</a>, for example) or another tool that they choose showing their autonomy</i>  <a href="https://www.healthline.com/health/brain-disorders#types">https://www.healthline.com/health/brain-disorders#types</a>  <a href="https://sharpbrains.com/blog/2018/03/02/lets-improve-brain-health-literacy-during-brain-awareness-week-2018/">https://sharpbrains.com/blog/2018/03/02/lets-improve-brain-health-literacy-during-brain-awareness-week-2018/</a>  <a href="https://www.healthliteracy.media/blog/health-literacy-in-action-traumatic-brain-injury-caregiver-guide">https://www.healthliteracy.media/blog/health-literacy-in-action-traumatic-brain-injury-caregiver-guide</a>  <a href="https://bit.ly/2TwC5Z3">https://bit.ly/2TwC5Z3</a> (in Portuguese)</p>
<b>Offline teaching material</b>	<i>offline tools blackboard; paper; text book;</i>
<b>Europeana resources used</b>	<p><i>La era del cerebro - <a href="https://bit.ly/2Fyp7Hz">https://bit.ly/2Fyp7Hz</a>            Sabatier, Georges. Gredos. Repositorio Documental de la Universidad de Salamanca - <a href="http://hdl.handle.net/10366/45775">http://hdl.handle.net/10366/45775</a>. CC BY-NC-ND - <a href="https://creativecommons.org/licenses/by-nc-nd/4.0/">https://creativecommons.org/licenses/by-nc-nd/4.0/</a></i></p> <p><i>El cerebro digital <a href="https://bit.ly/2HpQANs">https://bit.ly/2HpQANs</a>            I. Marcos Sánchez, Vanesa. Gredos. Repositorio Documental de la Universidad de Salamanca - <a href="http://hdl.handle.net/10366/121736">http://hdl.handle.net/10366/121736</a>. CC BY-NC-ND - <a href="https://creativecommons.org/licenses/by-nc-nd/4.0/">https://creativecommons.org/licenses/by-nc-nd/4.0/</a></i></p>



*Diferencias, discriminación, cerebro y sexo: controversias científicas de lo social y lo biológico*

<https://bit.ly/2TXjeXE>

- I. Ayala, Saray; Belli, Simone; Broncano, Fernando. Gredos. Repositorio Documental de la Universidad de Salamanca - <http://hdl.handle.net/10366/125633> . CC BY-NC-ND -

<https://creativecommons.org/licenses/by-nc-nd/4.0/>

*From Sex Differences in Neuroscience to a Neuroscience of Sex Differences: New Directions and Perspectives* <https://bit.ly/2RvN73K> Book abstract de Belinda Pletzer

## Licenses

**Attribution ShareAlike CC BY-SA.**

## Integration into the curriculum

The Psychology Program of 12th grade addresses several key issues. In Unit 1 the question 'What is the specificity of the human being? ', focuses a set of questions related to what happened “before me”, that is, the process of evolution of the human being and what, biologically, gives the human species, specific characteristics like the brain.

So, it's supposed to study our brain evolution, structure, how it works and some information about brain injuries or diseases.

## Aim of the lesson

- To identify and describe the individual units known as cells (neurons and glia) as well as the parts of the brain
- To explain the two hemispheres of the brain, lateralization and plasticity
- To identify the location and function of the lobes of the brain
- To know some Brain disorders: brain injuries; brain tumors; Neurodegenerative diseases; Mental disorders
- To discuss hypothetical differences between men and women brains
- To discuss brain changes produced by technology
- To present some tips for a healthy brain

### Generics aims

- Use the Europeana repository to search information related with this topic
- Understand the importance of working collaboratively
- Understand and apply the basic principles of copyright
- Develop their ICT skills regarding the development of digital products

## Trends

**Personalized and Peer Learning:** students working with their peers, learn together, teacher can attend to individual needs also;

**Collaborative Learning:** "Collaborative learning is based on the idea that learning is a naturally social act in which the participants talk among themselves" (Gerlach, 1994);

**Student centered Learning:** bringing students to the stage, they learn with autonomy and they must present to the class what they learn;

**STEM learning:** it's all about sciences (psychology and biology);

**Visual search & learning:** students must investigate and make researches by their own, learning with images and videos about the brain;

**BYOD (Bring your own device):** students will be invited to bring their own device and to use it during classes.

## 21<sup>st</sup> century skills

This Learning Scenario aims to facilitate educational contexts where students will develop a set of crucial competencies that today are defined as a key factor for the professional and personal life of our students.

Besides the importance of developing a critical conscience about brain functions and importance, the activities on the LS aims to drive students to develop also other competences such as:

### Key Subjects and 21st Century Themes

#### Sciences

"Knowledge is power. Information is liberating. Education is the premise of progress, in every society, in every family." Kofi Annan

"Like all science, psychology is knowledge; and like science again, it is knowledge of a definite thing, the mind."  
James Mark Baldwin

### Weaving 21st century interdisciplinary themes into key subjects:

#### Health literacy

That is the ability to obtain, read, understand, and use healthcare information in order to make appropriate health decisions and follow instructions for treatment. Students with this LS will get information how to improve brain health literacy and to adopt smarter brain-friendly habits.

#### Learning and Innovation Skills

Students will discuss, in groups, between other subjects, gender questions, behaviors questions around brain - friendly habits, and they will produce paper works, presentations and mind maps, as well as games that will demand **creativity** and **innovation**, **critical thinking**, **communication**, because students will have to present the developed work to their peers, **and collaboration**, this last one by working as team students they will need to interact, plan, make decisions as a group to develop the tasks of this LS.

#### Information, Media and Technology Skills

Students will develop Information Literacy; Media Literacy; ICT (Information, Communications and Technology), because they will research, analyze, use new technologies

#### Life and Career Skills

Flexibility and Adaptability, by working together; Initiative and Self-Direction, by choosing the brain disorders they are going to explore and the tools they will use to present their work; Social and Cross-Cultural Skills, by discussion of gender stereotypes

## Activities

Name of activity	Procedure	Time
<b>Presenting the LS</b>	Teacher will present to students the main idea of the learning scenario, introducing the brain theme and its relevance. Teacher will describe the development of the activities and discuss with students the disease that which group want to investigate and how can present the work results	20 min
<b>Presenting the Europeana Platform</b>	Present Europeana ( <i>explain how to search for information</i> ) portal and the Europeana's importance	30 min
<b>Teams creation and roles</b>	Using Wheel Decide, or letting students choose the team (4/5 elements each) with roles according to student's profile. Decide a team manager responsible for the communication of the team with the teacher.	20 min
<b>Teams draft developing (collaborative work)</b>	Each team as to develop a draft plan that will be their guide during for the LS. On a Padlet wall students will write a short sentence about the work they will do (if they prefer, they can record a short video or record sound, also and publish it on the Padlet)	60 min
<b>Exploring contents</b>	Read, Write/Listen (or Acquisition), Inquiry, Practice, and Collaboration Students will have to do research about the topic, investigate sources provide on the LS and use others that they considered reliable.	120 min
<b>Organizing information</b>	Production, Collaboration, according to their investigation and the draft designed previously students will select all the information needed to create their presentation. They must pay attention to copyright issues regarding the data they collect.	90min
<b>Debating ideas</b>	Discussion between groups moderated by the teacher	30 min
<b>Presenting</b>	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 form. Results will be published after all the presentations and evaluations have been made.	150 min
<b>Evaluate</b>	Practice	30 min

## Assessment

Quizizz or Pear Deck can be used to evaluate students' inputs to the work,

<https://quizizz.com/admin/quiz/5c31ef63784051001c48b49e/the-brain> (like this adapted Quizizz)

Teacher will use evaluation rubrics that can be designed to formulate standards for levels of accomplishment and used to guide and improve performance, but also, they can be used to make these standards clear and explicit to students.

Team group evaluation [https://rubric-maker.com/samples/teamwork\\_sec.pdf](https://rubric-maker.com/samples/teamwork_sec.pdf) (example)

Oral presentation rubric [https://rubric-maker.com/samples/oral\\_presentation\\_sec.pdf](https://rubric-maker.com/samples/oral_presentation_sec.pdf) (example)

Research project rubric [https://rubric-maker.com/samples/research\\_project\\_sec.pdf](https://rubric-maker.com/samples/research_project_sec.pdf) (example)

Brochure rubric [https://rubric-maker.com/samples/brochure\\_sec.pdf](https://rubric-maker.com/samples/brochure_sec.pdf) (example)

Since we are all about using digital tools to increase productivity and sustainability, we can use for instance co-rubrics or a Google Drive form

\*\*\*\*\* AFTER IMPLEMENTATION \*\*\*\*\*

### Student feedback

On Google Drive the teacher will create a form asking students to provide a feedback about the work developed and what were their contributions for this activity. Important also to ask students how this activity was important concerning their learning and knowledge acquirement. Another possibility could be asking students to make a video feedback using a tool platform like FlipGrid: <https://flipgrid.com/>

### Teacher's remarks

Teacher will analyze students auto evaluation and also what worked better and not so better in the LS implementation.

### 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.