

Europeana Learning Scenario

Title

The little paleontologists

Author(s)

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Abstract

Add here a paragraph summarizing the learning scenario. This text will be used to introduce your learning scenario on the [Teaching with Europeana blog](#), so please try to be as clear and concise as possible. If this learning scenarios is in another language than English, make sure to add the abstract both in that language and English.

All students are fascinated by dinosaurs. Through this lesson, students will travel in a magical world, in an immemorial time, with fantastic characters. A special emphasis will be placed on the scientific content and by putting them in the position of little paleontologists they will develop their imagination, stimulate their curiosity and want to discover the secrets of the disappeared world.

Keywords

Add here 5 keywords that you think best describe your learning scenario. Other teachers will find your learning scenario on the [Teaching with Europeana blog](#) based on these keywords, so please try to be as accurate as possible.

dinosaurs, missing animals, paleontologists

Table of summary

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Subject	List all the subjects that this learning scenario is intended for. If this is an interdisciplinary lesson, list multiple subjects. Science, Practical skills
Topic	Add here a topic that the learning scenario addresses. For example, if this scenario is intended for a History lesson, the topic could be the Napoleonic wars. Prehistoric animals
Age of students	6-11 years
Preparation time	15 min
Teaching time	45-50 min
Online teaching material	List here all the links of online tools, applications and support documents that you will use during the lesson, such as: Padlet, Kahoot, Historiana, etc. https://padlet.com/domar68/dhzftjlo1w0g
Offline teaching material	List here all the offline tools, such as: paper, glue, etc. Paper, glue, scissors, video projector, laptop, images
Europeana resources used	List here links ALL of the Europeana resources used for this learning scenario. All pictures from: Barcelona. Museus. Dinosaurios al Museu de la Ciència



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Integration into the curriculum

Detail in a few sentences how the topic of the learning scenario will fit into your national curriculum.

The lesson can be integrated into the chapter **The lives are in danger of disappearing** at the lesson: **What were the dinosaurs?** (basic needs - water, air, food; growth; reactions to environmental changes; evolution)

Aim of the lesson

Describe in 1-2 sentences what you would like to achieve with your students by the end of the lesson.

The specific competence targeted by educational instructive content is **Exploring the characteristics of bodies, phenomena and processes**. The lesson aims are to stimulate students' imagination and scientific curiosity.

Outcome of the lesson

Describe in 1-2 sentences what kind of outcome the lesson will have. This can be a tangible end-product or any other particular outcome.

The students will learn a few notions about dinosaurs, about their appearance, lifestyle and reasons for their disappearance.

Trends

List the relevant trends that the lesson incorporates: <http://www.allourideas.org/trendiez/results>

STEM learning, project-based learning

21st century skills

Add here how the learning scenario corresponds to 21st century skills. To find out more: <http://www.p21.org/our-work/p21-framework>.

1. **Collaboration (as they will be working in groups of four);**

2. Oral communication - will be used in the project to present the findings and also to interact with peers;

Activities

Describe here in detail all the activities during the lesson and the time they require. Remember, that your learning scenario needs

Name of activity	Procedure	Time
1. Brief introduction to Europeana collections and conditions of use of the platform		5 min
	<ul style="list-style-type: none"> a) Stimulating children's interest for different species of dinosaurs that have lived on earth; b) Presenting the European platform, the existing materials on the platform, especially in the field of natural sciences and conditions of use. 	
2. Explanation of the scientific content		25 min
	<ul style="list-style-type: none"> a) I focus students' attention on a board that contains several pictures with different dinosaurs. 5 min <ul style="list-style-type: none"> - What is the name of these animals? - Do they still live today? - Try to establish similarities between dinosaurs and animals that currently exist. b) Starting from a set of questions, supported by a power point presentation, students will actively participate in obtaining information on: <ul style="list-style-type: none"> - the time period in which dinosaurs appeared and disappeared; - the ways in which people learned about the appearance and way of life of dinosaurs; - the similarities between dinosaurs and reptiles existing today; - the physical characteristics of the dinosaurs; - number of species discovered; - the dinosaurs living environment; - the type of food; - how to multiply the species; - theories of scientists regarding the disappearance of dinosaurs. c) I encourage activity by asking students to look for answers to the following questions - problem: <ul style="list-style-type: none"> - How do you explain that some dinosaurs have some triangular- shaped bone plates on the spinal cord, and in the middle of the tail two pairs of strong backward spines? - Why do some dinosaurs have a long neck? - Why do you think dinosaurs are gone? - Why do some dinosaurs have a long, thick tail and have strong claws? - Why do some dinosaurs have very sharp and very strong teeth? 	
3. Stimulating curiosity and achieving performance		20 min
	<p><i>Mystery Bones Activity:</i> I will create small groups of 4 explorers who, guided by me, will reconstruct the body of the dinosaurs based on bones discovered in the ground.</p>	

to use Europeana resources. If you are using any external documents, please scroll to the end of the document and add them to the Annex. Add more rows to the table if needed.

Assessment

Describe here the assessment method of the lesson, if any. For example, if you plan on assessing your students with a quiz, include here questions and answer options with color-coding the correct answers.

Mystery Bones Activity

Possible Scenario

1. Have students form group of three or four.
2. Give students a short introduction like “There was a site where fossilized dinosaur bones were found. We are very luck to collect them. We flat them out and put them in an envelope.”
3. Provide each group with an envelope that includes paper bones.
4. Ask students to put the dinosaur bones together in a logical order using their prior knowledge about skeletons that they have learned through the owl pellet and disarticulated bones activities.
5. Ask students to discuss and describe how this dinosaur moved around based on the skeleton arrangement that they come up. Students would feel familiar with all the bones since these bones are similar to the ones from owl pellets and disarticulated skeletons. However, they would soon find that these bones don’t seem to fit.
6. Ask students to make an oral presentation in which they describe how the dinosaur moved around based on their skeleton arrangement. Students may say that this animal is a swimmer or a flyer.
7. Ask students, if any, whether their prior knowledge affected their inferences they came up with about how the dinosaur moved around. You might want to explain that palaeontologists deal with animals that do not currently exist so they have to make inferences from the collected data and their prior knowledge often influences their interpretations of the data.
8. Discuss why students had different inferences (e.g., a swimmer versus a flyer) from the identical set of bones. You might want to ask students “Do you think scientists can face a similar situation? Why do you think so?” “If yes, how can they solve such a difference?” Explain to students that all too often scientists may reach differing conclusions based on the same evidence, just as the students have done in this activity.
9. Present students with Figure 1 and 2 that indicate the palaeontologist’s inference from the mystery bones. Students would be surprised at how far off their inferences were.
10. Make it explicit to students that what they have done is very similar to what palaeontologists and other scientists that investigate fossils often do. You can conclude this activity by showing Figure 3 below on the overhead. Ask students about what they think the cartoon is trying to tell us. Scientists attempt to reconstruct the past from artefacts they discover.

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

Student feedback

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

The didactic activity has a positive impact because the students have enthusiastically, cheerfully participated in activities, guessed the appearance of dinosaurs using their imagination.

Teacher's remarks

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

I urged the students to retain the information presented. I recommend that they look for new images, information about dinosaurs, creating a file to add to the existing portfolio.

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.

