

Europeana Learning Scenario

Title

“Bees teach us”

Author(s)

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Summary

Table of summary

Subject	<ul style="list-style-type: none"> - <i>Mathematics and environmental exploration</i> - <i>Visual arts and practical skills</i>
Topic	<p><i>Bee.</i></p> <p><i>Form, shape and space.</i></p>
Age of students	8
Preparation time	3 hours
Teaching time	1 hours
Online teaching material	Europeana, Padlet
Offline teaching material	<p><i>Paper (yellow) sheet with hexagonal prism unfolded (for each student) – pattern to help students construct their own hexagon to demonstrate their understanding of geometric shapes.</i></p> <p><i>Paper, scissors, glue.</i></p>
European resources used	<ul style="list-style-type: none"> • <i>Europeana: "The Inspiration of Nature", "Impressionism and beyond".</i> <p><i>Bee, honeycomb:</i></p> <p>Blackberry Flower and Bee</p> <p>Honey bee</p> <p>Honey Bee2</p> <p>red-tailed bumblebee</p> <p>The hexagonal structure of cells</p> <p>Western honey bee</p> <p>Head of a honey bee</p> <p><i>Hexagon and hexagonal prism in nature:</i></p> <p>1. Giants Causeway</p>



[Giants Causeway](#)

2. [turtle](#)

[turtle](#)

3. [giraffe](#)

[giraffe](#)

4. [flowers](#)

[flowers](#)

5. [snowflake](#)

[snowflake](#)

6. [Honeycomb architecture](#)

[Honeycomb architecture](#)

- [Padlet](#)

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Integration into the curriculum

In the curriculum of mathematics and the exploration of the environment, the topics covered are: "Life Sciences" and "Geometric Forms and Shapes" (Collages with the Forms geometric learning).

Practical approaches are covered in the curriculum: the realization of two-dimensional and three-dimensional collages of different types of paper.

Aim of the lesson

- *students discover and be aware of the importance of bees in the natural and built environment*
- *to apply in diverse and creative contexts the notions about be and three-dimensional forms acquired,*
- *to practice working skills with paper and language skills.*

Trends

- *Project Based Learning*
- *Collaborative Learning*
- *Mobile Learning*

21st century skills

- *Social competences: ability to work and collaborate in a group, developing communication skills and creativity, cross-cultural understanding.*
- *Second language communication: ability to use new English vocabulary related to Geometry terminology.*
- *Digital competences: usage of new tool for learning: Padlet*
- *Critical thinking and problem solving interprets information and draws conclusions based on the best analysis*
- *Productivity and accountability: work or interact with specific objects until complete*
- *Information and media literacy: understand how computers are used to obtain information; used learned knowledge in new situations.*

Activities

Name of activity	Procedure	Time
Read Watch Listen	Presentation of the subject and objectives of the lesson	3 Mins
Discuss	<p>Using the "Europeana" collection, more precisely "The Inspiration of Nature," "Impressionism and beyond", students are looking at wonderful paintings (landscapes). There is a discussion with students about nature - as a source of inspiration for artists. Rich and diverse vegetation is also due to bees that naturally pollinate plants. Students will describe the link between honey plants and bee protection.</p> <p>Students repeat knowledge about bees and their role in nature, emphasize the fact that bees are a endangered species and must be protected.</p>	15 Mins
Investigate	<p>Teamwork - Searching for and collecting information / images on Europeana Students will work in groups of three. They will look for the Europeana collection, images and the necessary information.</p> <p>Before it starts, the teacher will explain that not all of the images can be used. Students will learn how to correctly access the information.</p> <ul style="list-style-type: none"> First, they will use, in turn, to search for information, the following words: bee, hive, hive, hive honey <p>Thus, they will discover through the image the hexagonal structure of the honeycomb.</p> <p>All the images found will be collected in a Padlet created by the teacher.</p>	10 Mins
Practice	<ul style="list-style-type: none"> Then students will look for information about existence in nature of the geometric shape discovered - the hexagon. Keywords: tortoise, giraffe, snowflakes, flower, Giant's Causeway. <p>All the images found will be collected in a Padlet created by the teacher.</p> <ul style="list-style-type: none"> Students will collect information about the use of the hexagonal prism, honeycomb shape in the built environment, in architecture. Keywords: honeycomb architecture. <p>All the images found will be collected in a Padlet created by the teacher.</p>	10 Mins

Produce	Students will create their own honeycomb using cartons, scissors, glue.	15
	They will work individually, then the honeycombs obtained will form a collective work. They will consolidate their acquired knowledge and practice their skills. They will better understand the work of the bees and the team spirit.	
	Students will complete the collective work (honeycombs), they can describe the role of bees in nature, their importance; they can enumerate some elements of the nature in which the hexagonal shape is present and will recognize the merits of the bees as a source of inspiration in the work of the people, especially architects.	7

Assessment

Students will be assessed by analyzing their behaviour during the lessons, but especially through the products made:

- ✓ *Padlet containing the images collected using online resources.*
- ✓ *The practical work: honeycomb - tri-dimensional collage that is a collective work.*

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

Student feedback

An open-ended question that gets them writing/talking. What else could the bees teach us? How can we improve the bee's life?

1. *Students will be able to give feedback by presenting the final work or the padlet to the rest of their class or to the pupils of another class or to an exhibition at school.*
2. *Students can imagine a story where the main purpose is "Little Hexagon". The story will describe his journey / adventures in nature.*

Teacher's remarks

Students were delighted to look for the required information in the European collection. They worked in pairs. They needed the teacher's guidance to select the allowed images. The transfer of knowledge from the visual examples to the practical work was easy. Finally, they said they liked working together, although the lesson lasted longer than it was planned.

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.