Europeana Learning Scenario

Title:

Geometric Animals and Flower Symmetry

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Abstract

This cross-curricular learning scenario links Art to Science, English, Mathematics through a project-based approach including a series of interrelated tasks which follow one another.

Europeana animal drawings and paintings will be the starting point which will lead the students to design a flower, an animal and dissect symmetry. This is where students will be invited to create a link between what they have learnt in Mathematics and what they will be using during the Art lesson. The result would look like a mandala artwork.

Keywords

Flower, Art, Design, Geometric, Mathematics, Science

Table of summary

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Subject	Science, Art, Mathematics,
Topic	Science – Flowers Mathematics – Geometric shapes. Art – Design and pattern-making based on flower drawings.
Age of students	9-11
Preparation time	2hr
Teaching time	3hr
Online teaching material	Padlet, Europeana website, Search Engines.
Offline teaching material	**Science** – Europeana selected images projected on Interactive Whiteboard**;** Video clip about various animals and flowers. **Mathematics** – flashcards of geometric shapes. **Art** – Paper, pencil colours/watercolours, different paint, paint brushes, water containers.

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Europeana resources used	[Resource 1] [Resource 2] [Resource 3]

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Integration into the curriculum

Science - Identify and classify the different animal and flowers categories.

Mathematics - Recognize unit fractions and use them to find fractions of shapes and numbers, make and describe shapes and patterns.

Art – Use of media and visual elements. Creating and designing.

Aim of the lesson

Art – Students will be able to observe the elements and principles of Art that could be found in animal paintings and flowers.

Science – Students will become more aware about the different animal categories and flowers.

Mathematics – Students will be able to draw symmetries.

Art – Students will be able to create/design their own design symmetries, using contrasting colours.

Outcome of the lesson

Students will end up with their own design in an irregular shape of an animal of their choice from a selection provided which will be painted in contrasting colours. The students will get feedback about the designs they would have done during the Art lesson.

Trends

Project-Based Learning: students get fact-based tasks, problems to solve and they work in groups. This kind of learning usually transcends traditional subjects.

Activities

Name of activity	Procedure	Time
Art	**<u>Observe the visual elements and principles of Art from the Europeana selected animal paintings and stained glass Art works.</u>** 1) Explain the basic visual elements (Line, Shape, Form, Space, Value, Colour, Texture) and principles of Art (Pattern, Contrast, Emphasis, Balance, Scale, Harmony, Rhythm/Movement, Unity, Variety). 2) *In pairs* - Observe and list down the visual elements and principles of Art that are evident in the images shown: Resource 1, 2, 3 3) *Whole class* – Discuss and check these altogether.	0.5 hr
Science	**<u>Students will be made aware of the different animal categories.</u>** 1) Discuss the animal classification: Invertebrates, Vertebrates, Fish, Amphibians, Reptiles, Birds, Mammals. 2) *Whole class* – Watch a video clip documenting different animals. https://www.youtube.com/watch?v=dCm5CcQhU-c	0.5 hr
Mathematics	**<u>Understand symmetry, rotation, fractions and properties of different shapes, including regular and irregular shapes.</u>** 1) Discuss symmetry and different properties of regular and irregular shapes. 2) *In pairs* - Find similarities/differences among different shapes. 3) *Whole class* - Discuss different properties of 2D/flat shapes, fractions/parts of different shapes. 4) *In pairs* – Choose an irregular shape of an animal face. Divide it in different sections – smaller geometric shapes/tangrams.	1 hr
Art	**<u>Design your own selected animal mask design using contrasting colours.</u>** 1) *Whole class* - Discuss what would make an attractive animal mask and why should it be attractive. 2) *Whole class* - Discuss the basic elements of Art namely line, shape, colour, space and the principles of Art namely pattern, contrast, balance and harmony. 3) *Individually* - Students design their own selected irregular shape of the face of an animal to transform it into a geometric mask inspired from the Europeana animal drawing and paintings. They must include contrasting colours. 4) *In groups/pairs* - Students describe their design to one another.	1 hr

Name of activity	Procedure	Time
	5) Geometric Animals mask designs can be scanned and uploaded on the school website or the school's Facebook page.	

Assessment

Art – Continuous assessment related with the understanding of the basic elements and principals of Art.

Science – On-going assessment related to different animal categories.

Mathematics – Continuous assessment related to the understanding of regular, irregular and geometric shapes. The breaking down of an irregular shape (animal faces) into smaller geometric shapes.

Art – The geometric animal's masks created using geometric shapes that they would have learnt about during Mathematics.

Student feedback

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

Teacher's remarks

The lesson has not been taught yet.

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.