Europeana Learning Scenario

Title

STEM in Sports & Dance

Author(s)

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Summary

Table of summary	
Subject	Maths, Science, Technology & Engineering
Topic	**Maths** - Data Handling (bar chart, frequency tables, interpretation of data) **Science, Technology & Engineering** - Spy robot using WeDo lego
Age of students	8/9/10 years
Preparation time	2 hours
Teaching time	3 hours
Online teaching material	*Europeana website, YouTube, tablets*
Offline teaching material	*WeDo Lego, handouts, Europeana pictures, writing material.*
Europeana resources used	*https://www.europeana.eu/portal/en/record/2064950/https___www_searchculture_gr_aggregator_edm_Ymca_00007 5_11739_2790.html?q=athletics#dcId=1548783717496&p=1* *https://www.europeana.eu/portal/en/record/08547/sqml_eu_php_obj_spp04115.html?q=Paralympics#dcId=15487837 17496&p=1* *https://www.europeana.eu/portal/en/record/2064109/Museu_ProvidedCHO_Spielzeugmuseum_der_Stadt_N_rnberg__ Museum_Lydia_Bayer__49732__Datensatz_.html?q=robot#dcId=1548783717496&p=1* *https://www.europeana.eu/portal/en/record/2048087/ProvidedCHO_Battersea_Arts_Centre_BAC_8_BAC_003_001_07 1.html?q=dance+#dcId=1548783717496&p=3* *https://www.europeana.eu/portal/en/record/2048087/ProvidedCHO_Battersea_Arts_Centre_BAC_4_PAR_001_003_01 6.html?q=dance+#dcId=1548783717496&p=5*

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Integration into the curriculum

The learning scenario will take an interdisciplinary approach. "A cultural approach to STEM in Sports & Dance" will be linked to the current learning outcomes/syllabi in primary schools (accessible at www.curriculum.gov.mt.)

Maths - Students will do a bar chart and a frequency table. Students will interpret the data.

Science, Technology and Engineering - Students will create a Spy Robot through coding.

Aim of the lesson

Maths - Students will become aware of the forms of handling data. Students will understand how to interpret data. Students will think creatively to interpret a poster mathematically.

Science, Technology & Engineering – Students will experience computational thinking.

Trends

Students will solve problems through a cultural approach. Students will enhance their creativity through open-ended questions.

21st century skills

Creativity, Collaboration, Communication, Digital Literacy

Activities

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

Name of activity	Procedure	Time
Maths	Part 1: YMCA 1923 Thessaloniki Data 1) Students will watch a video of the song YMCA through the link below. https://www.youtube.com/watch?v=YCDCwuGcEmA Students will be asked about information regards the history of the song. 2) Students will watch an approx. 2 minutes video to get information about the YMCA training camp. https://www.youtube.com/watch?v=COZhkdkRJLE 3) Students will look at the data from the Europeana Collection. 4) Students will be reminded about what a bar chart is by including an example in the powerpoint. Students will create a bar chart with the different types of sports and the number of matches. i. Which sport is most frequently played? ii. Can you say which sport is the least frequently played? Why?	1.5 hrs

	5) Students will be reminded about what is a frequency table by including an example in the powerpoint. They will then make a frequency table with the different types of sports and the number of men that took part in the **matches**. 6) They will make a frequency table with the different types of sports and the number of men that took part in the **practices**. i. How many more men took part in the swimming practices than in the swimming matches? ii. State one difference and one similarity about the two frequency tables.	
Science, Technology & Engineering	<u>Part 2: Spy Robot for the visually impaired athletes that take part in the Paralympic</u> 1) Introduce, define and provide some information included in the powerpoint about the Paralympic. 2) One type of sport practice in the Paralympics is skiing. Students will be introduced to a problem. "The visually impaired athlete needs to know if someone is around to avoid accidents. Can we do something to help the athlete ski safely?" 3) Show the first toy robot made in Japan from Europeana collection. 4) Discuss what robots do. 5) Students will build a spy robot (using Lego WeDo) to help the visually impaired athlete ski safely using the below link to the building instructions. https://le-www-live-s.legocdn.com/sc/media/lessons/wedo-2/building-instructions/detecting-motion-instructions-904fbe7b49901fd7bce209dc3b181005.pdf 6) Students will be invited to create the program below. 	1 hr
Maths	<u>Part 3: Dancing Poster</u> 1) Show the dancing poster. 2) Encourage students to: i. To interpret a mathematical fact from the poster. ii. To identify important missing mathematical information. *Take Home Task* - Show another dancing poster from the Europeana collection. Write **<u>one</u>** mathematical fact from the poster and identify **<u>one</u>** important missing mathematical information.	0.5 hr

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.

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

Student feedback

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

Teacher's remarks

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

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.