Creating an ECO online Natural Fit Virtual Programs to Prepare Students for boostIng 21st century Skills 4 the Future (UNITY)

2021-1-SE01-KA220-SCH-000032448

STE(A)M-focused PBL for transferring 2021st skills for fighting against climate change

LESSON PLAN 7: Our beautiful flora!

Presented by Osnovna škola Glina

Lesson procedure:

Date:	__/__/____
Teaching staff:	Mr/Mss/Ms
Term:	2022-2023
Week:	1
Year Level:	Primary/low secondary
Time/length	Project day (one school day)
Key Learning Area:	Use of soft skills for climate change and blending interdisciplinary subjects, including science, math, art and social studies
Topic/focus:	Endangered plants

Lesson Name: Our beautiful flora!

Foreseen Outcomes:

At the end of this lesson, students will be able to:

- ✔ define the endangered plants
- ✔ describe levels of endangerment
- ✔ detect most endangered plants in your country
- ✔ describe reasons why some plants become endangered
- ✔ describe ways humans can help plants from becoming endangered
- ✔ design posters and artwork, relevant to topic,
- ✔ improve their social skills, including group communication, interaction and discussion, improve their soft skills such as design thinking, critical thinking, decision making, efficient use of resources.

Lesson Description:

This lesson shall demonstrate:

- Which are endangered plants?
- What are the levels of endangerment?
- Which are the most endangered plants in your country?
- What is making plants endangered?
- What is a seed vault?
- What is a botanical garden?
- How can humans help plants from becoming endangered?

Prerequisites to this lesson plan (not applicable):

Length (Lesson procedure):

This lesson is organized as a school project day and will take 6 hour, which also includes interdisciplinary learning.

Depending on how to implement the planned lesson, the teacher will need some ICT materials (computers, tablets, etc.) and other materials for the art workshop. The teaching staff shall follow the following steps to implement the lesson successfully:

Step 1. Lead in:

Teacher greets the students, and asks them to think about the endangered plants. After collecting the feedback from the students, the teacher asks for groping in accordance with the students' learning intelligence and or learning style. Here, teacher group students as:

- ✔ Group A: 2-3 students, having science learning interest/intelligence/capability/style
- ✔ Group B: 2-3 students, having technology learning interest/intelligence/capability/style.
- ✔ Group C: 2-3 students, having engineering (creativity) learning interest/intelligence/capability/style.
- ✔ Group D: 2-3 students, having art learning interest/intelligence/capability/style.
- ✔ Group E: 2-3 students, having math learning interest/intelligence/capability/style.

Note: As grouping the students, the number of students can change according to the class-size.

Lesson standard:

- ✔ The lesson is standardized around STEAM focused PBL for transferring 2021st skills for fighting against climate change. Here, we focus on understanding the importance of endangered plants and how to prevent their disappearance.
- ✔ Through creating and performing, students will gain knowledge about how endangered plants are important for human existence.
- ✔ Regarding this, it can be expected that understanding of the topic will lead students to work on taking more care that less endangered plants exist on our planet.

Common Core State Standards:

The teacher shall connect and correlate the lesson with the national syllabus and or program, which shall incorporate the lesson with the national curriculum.

Enduring Understandings:

The students will understand the core ideas and philosophy behind the endangered plants. Also they will find out what can be done for people to reduce the number of plants to be considered endangered. Students will understand their role of doing it in everyday life. The learning outcomes of the lesson shall be used by the students in their future life and incorporated in their local communities. Besides, the lesson is connected with following areas:

- ✔ soft skills development,
- ✔ interdisciplinary learning,
- ✔ blended/hybrid learning,

The lesson will also answer the following questions:

- ✔ Is the lesson transferable for skills development?
- ✔ Can it be teachable over and over again?
- ✔ Does it connect to real-life issues?

Essential Questions:

- Which are endangered plants?
- What are the levels of endangerment?
- Which are the most endangered plants in your country?
- What is making plants endangered?
- What is a seed vault?
- What is a botanical garden?
- How can humans help plants from becoming endangered?

Before the lesson implementation, the teaching staff shall brainstorm the above questions with the colleagues at the same school.

Case section:

The teacher shall follow the following steps:

1. Teacher writes endangered plants on the board and reads it to the students. Then he/she asks them to think and tell them how important it is to have less endangered plants.
2. Teacher asks students to brainstorm what would happen if we don't take care of endangered plants. Students can give their answers freely by raising their hand.

'**Step 1. Lead in**''. Each question is asked to the students who are grouped from A to E. Each group should have a tablet or a computer.

Questions for group A (Science-mınded students):

- ✔ Which are the most endangered plants in the world?
- ✔ Which plants don't exist any more on our planet?
- ✔ What are the levels of endangerment?
- ✔ Which are the most endangered plants in your country?

Questions for group B (Technology-minded students):

- ✔ Research the term endangered.
- ✔ What is most endangering for plants and why?
- ✔ Which human technologies can help plants from becoming endangered?

Questions for group C (Engineering-minded students):

- ✔ Research basic information about the plant black market.
- ✔ What is a seed vault?
- ✔ What is a botanical garden?

Questions for group D (Art-minded students):

- ✔ Can you design a poster and a slogan to promote protection of endangered plants?

- ✔ Can you create an origami plant?
- ✔ Research the internet and find videos about extinct plants.

Questions for group E (Math-minded students):

- ✔ Research the internet and find quantities of endangered plants in the world.
- ✔ Research the internet and find quantities of endangered plants in your country.
- ✔ Use Excel charts and graphs to show collected data.
- ✔ Calculate the percentage of endangered plants in your country compared to a world level.

When all groups are done each group presents their findings to the rest of the class. Students from other groups when each presentation is over are free to ask questions.

'**Step 2. Make it real**''

Teacher will organize an art workshop where students will make brooches. Each brooch will be made with recycled materials like paper, cloth, etc. and will represent one endangered plant of student choice. At the end a display can be organized on the school corridor.

Skill focus:

During the lesson, Cognitive Skills, Decision Making, Problem solving, Creative Thinking and Interpersonal Skills will be the focus.

Content:

The content of the unit is based on the disciplinary or topic-area concepts.
Building Knowledge through learning by doing.

Assessments:

Describe the diagnostic, formative, and summative assessments employed in this lesson to gauge student learning.

Evidence of Student Learning:

Provide a list of the process documentation that you plan to acquire during the course of the lesson. These may include photographs of students engaged in learning, drafts of student work, quotes from students, interviews of students, video, etc.

Texts/Resources:

The collection of short and extended works aligned to the standards and content. Examples: materials for the art workshop.

Learning Activities:

A series of tasks the student will engage in over the lesson. The activities are based on what students need to understand and be able to do for the performance and are aligned to the defined standards "**Our beautiful flora!"** and the essential questions defined under **Case section.**

Practice:

Teacher will deeply explain the roles and importance of the environmental impact on endangered plants. Here, the teacher shall elaborate or describe the lesson using these prompts provided.

The teachers shall create a flexible learning environment for the students. Here, the teacher uses:

Warm-up: ask about the questions and make the students ready for learning for the topic-specific

subject.

Practice: The teacher sets-up demonstration/modeling (I do-we do-you do)
Studio/Rehearsal/Workshop (students engage in creating/planning/refining).

Clean-up: During the procedure, the teacher walks around the class and observes the students on what they need and control. If the students have questions, the teacher answers them.

Presentation of Work

Suggested Extensions:

Organize a visit to a botanical garden, nature park or a national park.