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| **ё****Project ID: 2021-1-CZ01-KA220-SCH-000034484****COURSE FOR ENVIRONMENTAL EDUCATION***e-Modules: Teaching Learning activities and their technology enhanced material set to develop****DISCLAIMER****Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the European Education and Culture Executive Agency (EACEA). Neither the European Union nor EACEA can be held responsible for them.***COURSE AUTHORS**

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| Нет описания фото. | Lydmila Zadorozhnya |

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| **MODULE 6** | **SUSTAINABLE DEVELOPMENT AND SOLUTIONS TO ENVIRONMENTAL PROBLEMS AND CLIMATE CHANGE**  |
| **PART 2** | **Stewardship and Restoration of Ecosystems** |
| **Lesson 1-2** | **Preservation of ecosystems and conservation of biodiversity** |

**SUMMARY**

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# 1. COURSE TIME, TARGET AND TOPIC

* **Age of target students:** 15+
* **Teaching time:** 2 hours
* **Disciplines:** Biology, IT, Human Sciences
* **Title:** **Preservation of ecosystems and biodiversity**

# 2. COURSE OBJECTIVES

## Competences promoted in this lesson:

* Communication in foreign languages competency
* Digital competency
* Learning to learn competency
* Social and citizenship-related competencies

## Lesson objectives:

* Students give examples of human practices affecting the sustainability of ecosystems and contributing to diversity of ecosystems.
* Students explore first peoples’ knowledge and other traditional ecological knowledge in sustaining biodiversity.
* Students apply first peoples’ perspectives and knowledge and local knowledge to create a conservation project.

# 3. LEARNING – TEACHING PROCESSES

There are 4 activities in this lesson:

1. **ENGAGE:** Show a short video depicting various ecosystems and discuss the impact of human activities.
2. **EXPLORE:** Divide students into small groups and assign each group a specific traditional ecological practice from First Peoples (e.g., controlled burning, sustainable hunting, seasonal harvesting).
3. **EXPLAIN:** Provide a mini-lecture on the role of First Peoples’ knowledge in modern conservation efforts, including examples from different regions and cultures.
4. **EXTEND:** Have students develop a conservation project incorporating traditional ecological knowledge and local knowledge and create a poster to illustrate the conservation project.

# 4. EVALUATION

**Peer Review:** Have students review each other's posters and provide constructive feedback.

**Reflection Essay:** Have students write a short essay reflecting on what they learned about traditional ecological knowledge and its application in modern conservation efforts.

# 5. DOCUMENTS

### ENGAGE

Students are shown a short video depicting various ecosystems and the impact of human activities (e.g., deforestation, pollution, urbanization).

[the impact of human activities (e.g., deforestation, pollution, urbanization). - Google'da Ara](https://www.google.com.tr/search?sca_esv=31b6d4a86adabbb5&sca_upv=1&hl=tr&sxsrf=ADLYWIK__gKdljxBP8sxGOphzt6pXEsM-A:1719738082177&q=the+impact+of+human+activities+(e.g.,+deforestation,+pollution,+urbanization).&tbm=vid&source=lnms&fbs=AEQNm0CgMcZ11KbHg1uunEmuo39LYaLxf_n_v5Qu9vkTINnKPFxIgupDJiyYgOOMj7PxlorLHmd2DHeNseH1IrAilxCXhhqaxAKOm1x28b4XF7ZKeUXxY7vd_k8moTO8bljh2ze2_CXj-ql7jFMbnzc5gsyF1u3ZVITowsxddd3kGcFRjhB4QnRL9vg4ueDAb77HQX0W8D5k&sa=X&ved=2ahUKEwjhqvrL-4KHAxUTSPEDHX-ECloQ0pQJegQIEBAB&biw=1358&bih=620&dpr=1#fpstate=ive&vld=cid:3113881c,vid:Um-bo2MWDsQ,st:0)

Students are asked some discussion questions :

1.What are some human practices that you think affect the sustainability of ecosystems?

2.How can we mitigate these impacts?

The ‘Quick Write’ activity is started. Students are asked to write a short paragraph on what they know about traditional ecological knowledge and how it might help in conserving biodiversity.

### EXPLORE

This stage is started with a **Research Activity.** Students are divided into small groups and assigned a specific traditional ecological practice from First Peoples (e.g., controlled burning, sustainable hunting, seasonal harvesting). They are suggested some resources to research:

* The principles behind the practice
* The role of this practice in sustaining biodiversity
* Case studies where this knowledge has been applied successfully

**Suggested Book to review : TRADITIONAL ECOLOGICAL KNOWLEDGE CONCEPTS AND CASES Edited by Julian T. Inglis**

The Link of the book (pdf) : [google.com.tr/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKEwifqODs\_YKHAxXiQfEDHbGuAvwQFnoECCMQAQ&url=https%3A%2F%2Fidl-bnc-idrc.dspacedirect.org%2Fserver%2Fapi%2Fcore%2Fbitstreams%2Fbc943e52-186d-4b89-a958-49c5f3bea845%2Fcontent&usg=AOvVaw3dnpDNQ\_1Ag6pX1msmPMWx&opi=89978449](https://www.google.com.tr/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKEwifqODs_YKHAxXiQfEDHbGuAvwQFnoECCMQAQ&url=https%3A%2F%2Fidl-bnc-idrc.dspacedirect.org%2Fserver%2Fapi%2Fcore%2Fbitstreams%2Fbc943e52-186d-4b89-a958-49c5f3bea845%2Fcontent&usg=AOvVaw3dnpDNQ_1Ag6pX1msmPMWx&opi=89978449)

**Suggested video to watch : Traditional ecological practices**

[**https://youtu.be/rjge4UGlEHA**](https://youtu.be/rjge4UGlEHA)

**An Interactive Exploration is started.**  Students are asked to use an online platform or interactive simulation to explore the impacts of various conservation practices on ecosystems.

Overall, by exploring the impacts of various conservation practices on ecosystems , students can gain a deeper understanding of the interconnectedness of environmental, social, and economic factors and the benefits of the traditional practices and knowledge from the first people.

### EXPLAIN

That stage is started with the **Group Presentations. E**ach group is asked to present their findings on the assigned traditional ecological practice, focusing on its importance and effectiveness.

On the basis of the group presentations, a C**lass Discussion** is started. Students are asked to discuss common themes across different traditional practices and how they contribute to ecosystem sustainability.

That stage is finalised with a D**irect Instruction:** Students are provided with a mini-lecture on the role of First Peoples’ knowledge in modern conservation efforts, including examples from different regions and cultures.

The lecture is suggested to built on videos and documentaries on traditional ecological knowledge (e.g., "Braiding Sweetgrass" by Robin Wall Kimmerer)

"Braiding Sweetgrass" by Robin Wall Kimmerer :

["Braiding Sweetgrass" Chapter 1: Skywoman Falling - Robin Wall Kimmerer (youtube.com)](https://www.youtube.com/watch?v=1_BYbAshB4A)

Traditional ecological knowledge and its importance on the conservation of biodiversity.

[World Bank Document](https://documents1.worldbank.org/curated/en/995271468177530126/pdf/443000WP0BOX321onservation01PUBLIC1.pdf)

### EXTEND

The lesson is extended within **Conservation Projects:** Students are asked to work in groups to develop a conservation project incorporating traditional ecological knowledge and local knowledge. They should consider:

* Identifying a local ecosystem or issue
* Applying specific traditional practices to the conservation project
* Engaging the community and other stakeholders

In the next step **Poster Creation** is suggested. Each group is asked to create a poster to illustrate their conservation project and present it to the class.

**SUGGESTIONS :**

**Guest Speakers**  are suggested to invite. Local Indigenous leaders or conservationists may speak with the students about their work and perspectives.

**Community Projects** are suggested. Students can participate in a local conservation project or volunteer with an organization that applies traditional ecological knowledge.

**Additional Research** is suggested. Students are encouraged to explore further how different cultures around the world contribute to biodiversity conservation.

### EVALUATE

* **Peer Review: Students are asked to review each other's posters and provide constructive feedback.**
* **Reflection Essay: Students are asked to write a short essay reflecting on what they learned about traditional ecological knowledge and its application in modern conservation efforts.**