

LESSON PLAN

TARGET: MULTIPLIERS



OUR CONSORTIUM



Funded by
the European Union



LESSON PLAN 2 (two hour teaching periods)

TARGET: MULTIPLIERS

Objective: Participants will develop an understanding of the concept of bioeconomy, its importance, and its potential applications. More specifically,

- participants will engage in interactive discussions and activities aiming at exploring the applications of bioeconomy in daily life.
- participants will explore the challenges and benefits of bioeconomy
- participants will be trained in using the 7-step Eco-schools approach into problem solving and disseminating their knowledge on bioeconomy to a larger community. (Teaching Period 2)

Materials Needed:

1. Whiteboard/Flipchart and markers
2. Handouts or access to online resources on bioeconomy (resources can be found on the [GenB Online Library](#) e.g. educational cards and infographics)
3. Case studies or examples of bioeconomy applications ([GenB Online Library](#) includes several diverse case-studies to be chosen based on the target audience)
4. Post-it notes
5. Pens/pencils
6. Powerpoint presentation (
7. Handouts (assessment, exit ticket, questionnaire etc)

Session 1 - Lesson Outline

Introduction - Warm-Up Activity (5 minutes):

The participants watch a video on bioeconomy.

<https://lumen5.com/user/marianthikiannakopoulou/what-is-bioeconomy-z3eqf/>

https://www.youtube.com/watch?v=ir3MgOSmvLg&t=8s&ab_channel=BiowaysProject

(refer to the [GenB Online Library](#) for more videos and videos in your language)

OUR CONSORTIUM



Funded by
the European Union



They also look at the picture and read an excerpt about the topic ([File: "Activity - Introduction Bioeconomy Concept"](#)).

Definition of the bioeconomy concept - Discussion (10 minutes):

1. Group work -Participants will delve into the key components of bioeconomy through a questionnaire -cards with questions and answers ([File: "Question cards - answer cards"](#)). Some of them have the questions and some of them have the answers. They will stand up and start moving around. They will try and pair up with the participant that has the answer to their question. Then, they need to find the answers and pair up. After the matching is done, they all read aloud the questions and answer, and they revisit their definition. Do they have anything to change, add or omit?

What is bioeconomy?

Can you name three renewable bio resources?

How are plants used in bioeconomy?

Why is it important to use renewable resources?

Can you give us examples of products made from renewable bio -resources?

How can bioeconomy help to reduce the environmental impact of climate change?

What are some of the challenges in implementing bioeconomy practices?

How does bioeconomy promote sustainability?

Can you give an example of a bio-based product you use in your daily life?

What role do forests play in bioeconomy?

Activity about the benefits and challenges (15 minutes)

Participants engage in a discussion on some clue cards ([File: "Benefits vs Challenges"](#)) regarding the benefits of bioeconomy (e.g., reduced greenhouse gas emissions, job creation, resource efficiency) and the challenges (e.g., competition with food production, land-use conflicts, technological barriers). Divide participants into smaller groups and give out post-it notes. Then, ask each group to make a list of the benefits and challenges related to bioeconomy.

OUR CONSORTIUM



Funded by
the European Union



Then, each group shares their findings with the rest of the participants and they discuss as a whole class.

- Summarise the benefits and challenges of bioeconomy.
- Share successful examples of bioeconomy applications from countries all around the world.

Resources for this activity:

<https://www.fao.org/in-action/sustainable-and-circular-bioeconomy/resources/news/details/en/c/1329389/>

https://www.genb-project.eu/imagem/0_GenB_Capacity%20Building_Basic%20level%201_Maste r%20presentation_FINAL.pdf

Project /Homework: “**Pretend you are a [Young Reporter for the Environment](#)”**. Ask the participants to create a short video (using free online tools like [Lumen](#) or [Canva](#)) or write a short article on how a bio-resource is used to create a bioproduct (instructions/steps in the ppt presentations).

Session 2 - Lesson Outline

Introduction - 10 minutes

Group Activity: Remind the participants about the concept of bioeconomy. Introduce the 7-step methodology of eco schools (resources: *Training material – 7 presentations developed for the MOOC*, <https://ecoschools-ch.org/en/what-is-eco-schools/>). Focus on the previous session to show the participants how to form an ECO committee who will present real-life examples of bioeconomy and discuss the lessons learnt from them.

2. Main Activities (25 minutes)

Encourage participants to disseminate their knowledge to the wider community they belong to. Some example activities:

- They could start a campaign by using their videos and articles to raise awareness on the benefits of bioeconomy.

OUR CONSORTIUM



Funded by
the European Union



- They could write posts in social media to inform the general public or present the results of their research (based on the resources provided or any resources related to this topic) to their audience.

They need to present the opportunities in bioeconomy, in the fields that are of their audience's specific interest, choosing from a wide range such as:

- Biotechnology
- Biofuels
- Bioplastics
- Bio-based Materials
- Bio-based Chemicals
- Bioenergy
- Bioremediation
- Biomedical Applications

The participants can organise a campaign to inform the general public, or the students at a university, their peers, the visitors of a museum or a community/cultural center, about the benefits and challenges of using Bioeconomy and encourage them to use biobased products.

Resources for this activity:

https://www.bioeconomy-library.eu/wp-content/uploads/2019/11/2016_Biostep_Bioeconomy_Glasgow_Scotland.pdf

<https://stateofgreen.com/en/news/five-examples-of-the-circular-bioeconomy-in-practice/>

https://gbs2020.net/wp-content/uploads/2021/10/GBS2015_06_Product-Exhibition.pdf

<https://library.genb-project.eu/VLTeachers>

Assessment and Reflection (15 minutes):

- Ask the participants to reflect on what they learnt during the lesson. Encourage them to complete the **multiple-choice activity** ([File: "Assessment-Multiple Choice"](#)) (quantitative)

OUR CONSORTIUM



Funded by
the European Union

- Ask the participants to write an **exit ticket** ([File: “Reflection worksheet for multipliers”](#)) as they leave the class answering the question “How will you implement Bioeconomy in your everyday life? (qualitative)”

Optional/Extended Learning: Encourage participants to present eco-friendly practices at home or in their community. They can use the videos to organise a Bioeconomy Contest. They can encourage everyone to start collecting food scraps and organic waste and make compost for the community/university/school/museum garden.

OUR CONSORTIUM



Funded by
the European Union