

LESSON PLAN

ELEMENTARY SCHOOL
GRADES 4-6



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LESSON PLAN 1 (two 45-minute teaching periods)

TARGET GROUP STUDENTS: ELEMENTARY SCHOOL GRADES 4-6

Objective: The students will be able to recognise the role of bioeconomy in our lives and share their knowledge with the whole school community. More specifically,

- students will understand the concepts of bioeconomy and renewable biological resources. (Teaching Period 1)
- students will realise how plants and natural materials can be used in the creation of products we use every day. (Teaching Period 1)
- students will brainstorm ideas for sustainable practices in their own lives, learn about eco schools and the 7-step methodology and use it to disseminate their ideas to the school community. (Teaching Period 2)

Materials Needed:

1. Whiteboard and markers or chalkboard and chalk
2. Projector and screen (if available)
3. Pictures or samples of renewable biological resources (e.g., plants, wood, cotton)
4. Printed/online materials or visual aids about bioeconomy and eco schools (resources can be found on the [GenB Online Library](#))
5. Handouts with simple explanations and illustrations of bioeconomy concepts (resources can be found on the [GenB Online Library](#) e.g educational cards)
6. Drawing / colouring/ craft materials (paper, pencils, crayons)
7. Small plants or pictures of plants
8. Chatterpix kids application
9. PowerPoint presentation of the lesson
10. Worksheets (writing, assessment, exit ticket)

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Session 1 - Lesson Outline

Introduction - Warm-Up Activity (5 minutes):

1. Show the students the pictures of things we use every day. Ask them if they know where the things come from. Encourage them to think about other materials around them in their clothes, school supplies, and food.
2. The teacher explains how we use materials from nature to make products. For example, we can use some fruit peels to make color pigments ([File "Visuals" - A. Paints from fruits](#)). Then the teacher splits the class into groups and asks them to think of any other materials we find in nature, and we use to make new products. The groups write their answers on post-it notes and stick them on the class board.
3. After the initial introduction and discussion, the teacher asks the students to fill in the first and second column of [the KWL chart \(Know-Want to Know-Learnt\)](#). The students should wonder "What are the things I already know about Bioeconomy?" and "What do I want to learn about this new concept?"

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

Introduce the term "bioeconomy" through the short video https://www.youtube.com/watch?v=ir3MgOSmvLg&t=8s&ab_channel=BiowaysProject (example in English, you can find more languages [HERE](#), or refer to the [GenB Online Library](#) for videos in your language)

Ask the students to come up with a definition after they watch the video. Explain that it involves using renewable biological resources (like plants and animals) to create products and services.

- Show examples or pictures of renewable biological resources, such as plants, wood, and cotton and their applications in modern life ([File "Visuals" - B. Examples of bio-based products](#)).
- Use visual aids or simple examples to help illustrate these concepts. (pictures taken from "[What is Bioeconomy](#)" book)

Main Activities (30 minutes):

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1. Quiz Time – Trash or Treasure (5 minutes):

- The teacher checks the students understanding through a matching activity ([File: “Reflection Worksheet”](#), **A. Bio-Based resources and products - Matching Activity**)

2. Individual Activity: 25 minutes

- Ask the students to draw a renewable biological resource (or a bio-product we get from it. Alternatively, you can give them visuals /pictures of resources and products ([File “Visuals”](#)- **C. Draw your biobased products and resources!**)
- **Project:** Pretend you are a bio-resource or a product. Follow the model text and write a few sentences to introduce yourself to your classmates ([File “Project – CHATTERPIX VIDEOS”](#)).
 - Use the application Chatterpix Kids (for [android](#) and for [ios](#)) to make your picture speak. ([File “Project video sample ChatterPix”](#)).
 - Present your video to your classmates (If the device availability is limited the children can alternatively recite their text acting as their bioproduct of choice or draw a speech bubble with the caption on the image).

Session 2 - Lesson Outline

Introduction - Warm up (10 minutes)

1. Group Activity: The teacher introduces the topic of the day, namely the 7-step methodology of ECO Schools. They explain that the students will try to use specific steps of the 7-step circle to disseminate the knowledge they acquired through session 1 and which relates to the concept of Bioeconomy. The teacher uses a video ([link](#)) to introduce the 7-step methodology of ECO schools to the students.

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2. Main Activities (15 minutes)

- The teacher explains that the focus of the session will be on two steps, the Dissemination Stage, and the creation of an ECO-CODE. The students work in teams and brainstorm on the ways they can use to disseminate their knowledge using the videos they created. They also propose ways the whole school can use to take action. They vote on the best ideas and write them down. They delegate roles and responsibilities. ([File: "Brainstorm map"](#)), see questions to be answered in ppt presentation)
- The students create the ECO –CODE of Bioeconomy at school. ([File: "ECO CODE & BIOECONOMY"](#))

Assessment and Reflection (15 minutes):

1. Assessment (10 minutes):

- Ask the students to reflect on what they learnt during the lesson. Encourage them to play an online game. (quantitative)

<https://wordwall.net/resource/71151472>

<https://create.kahoot.it/details/5d109e00-bfd8-42ff-8f04-71da275f0750>

- The students fill in the last part of [the KWL chart](#) with the things they have learnt about bioeconomy. They reflect on their knowledge (e.g. comparing the W and L columns).
- Ask the students to write an exit ticket ([File: Reflection Worksheet", Exit Ticket](#)) as they leave the class answering the question "What makes bioeconomy a good option for a sustainable future?" or "Write the most impressive thing you learnt about bioeconomy". (qualitative)

2. Reflection and Assessment (5 minutes):

- The students also reflect on the 7-step methodology and the process they followed by answering the question "If you were to do the Bioeconomy project again, what would you keep and what would you leave out?" filling out the "**Three checks – One cross**" handout ([File:](#)

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Reflection Worksheet) with three things they would like to experience again and one that was not particularly interesting or helpful.

- The lesson ends by emphasising the role of individuals and communities in building a healthier planet.

Homework/Extended Learning: Encourage students to present eco-friendly practices at home or in their community. They can use the videos to organise a Bioeconomy Contest.

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