



Toolkit 2

Bioeconomy Kit for Teachers

Are you ready to teach your students about the economy of the future? With so many educational materials about the bioeconomy scattered across the internet, it can be difficult to know where to start. With this kit, we gathered in one place the most essential resources, which can help you teach and raise awareness about the bioeconomy from primary to university level.

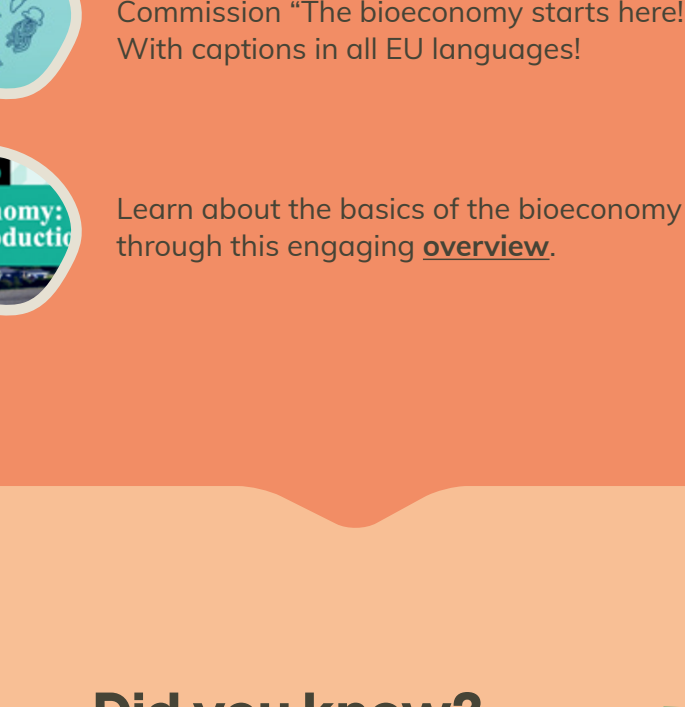
Table of Contents

1. What is a sustainable bioeconomy?
2. Where can I find primary school level resources on the bioeconomy?
3. Where can I find more secondary school level resources on the bioeconomy?
4. What upcoming EU projects dealing with bioeconomy education should I look out for?



1

What is a sustainable bioeconomy?

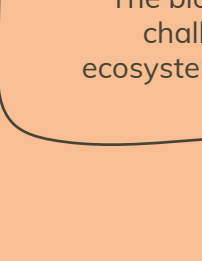


Did you know?

Nature serves as the greatest source of inspiration in the bioeconomy?



The bioeconomy includes the knowledge-based production and use of RENEWABLE RESOURCES from the land, forests, sea and microorganisms. It uses BIOLOGICAL PROCESSES and PRINCIPLES (e.g. biotechnology) to provide products and services across all economic sectors.



Get started with this [video](#) from the European Commission "The bioeconomy starts here!" With captions in all EU languages!



Learn about the basics of the bioeconomy through this engaging [overview](#).

Did you know?

The bioeconomy helps us address many global challenges – like climate change, land and ecosystem degradation, and a growing population.



A SUSTAINABLE bioeconomy strives to be CIRCULAR by preserving resources for future generations and promoting the use of residues from agriculture, forests, fishing and aquaculture, organic waste and by-products from industry (such as food).

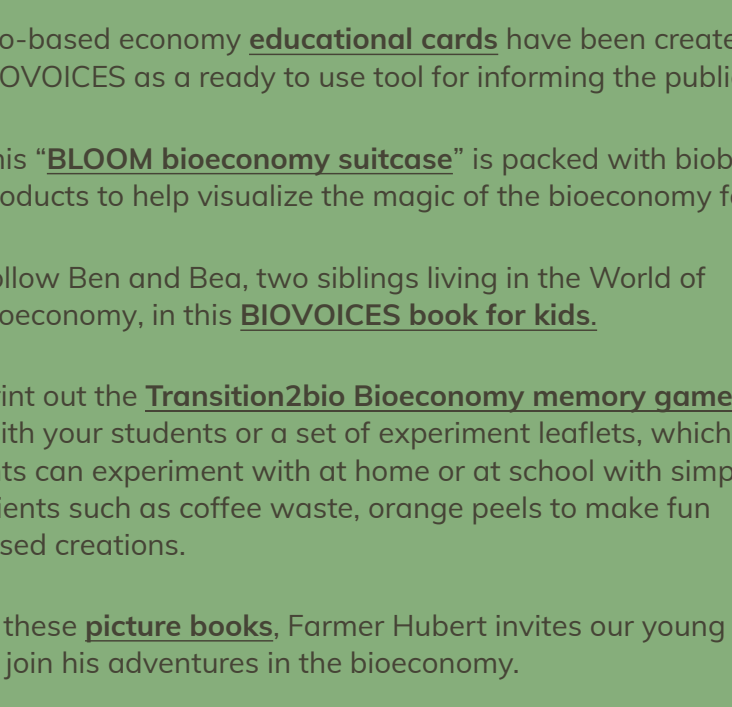


Let's get familiar with a definition of the bioeconomy. According to the **European Commission**, "the bioeconomy covers all sectors and systems that rely on biological resources (animals, plants, micro-organisms and derived biomass, including organic waste), their functions and principles."

In addition to renewable material and energy resources, the bioeconomy provides critical biological KNOW-HOW on natural cycles, its system and processes. With the help of the life sciences, the bioeconomy explores the characteristics, abilities and functions of natural organisms in order to develop NEW products and solutions or BIO-INNOVATIONS.

2

Where can I find primary school level resources on the bioeconomy?



Did you know?

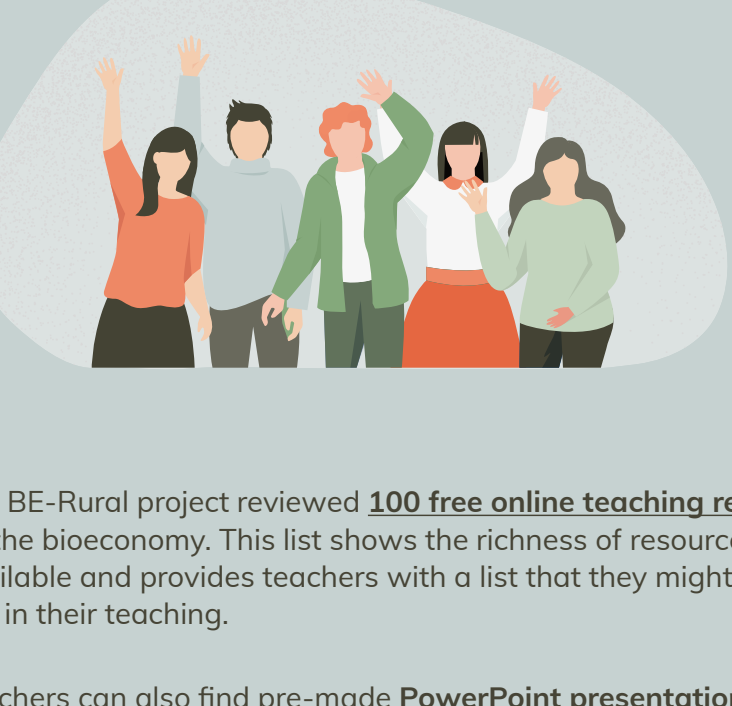
That introducing the concept of bioeconomy in your classroom can help trigger interest in science for subjects and raise awareness on important societal challenges.

- ▶ Transition2bio organized a free online peer2peer training for teachers (teaching pupils from age 5 to 11) on how to teach bioeconomy on primary school level.
- 📖 **BLOOM School Boxes** provide a valuable collection of bioeconomy related teaching resources for all ages which educators can use to introduce the concept of bioeconomy in their classrooms.
- 📖 Introduce your students to bio-based materials with this AllThings.Bio **booklet**.
- 📖 Bio-based economy **educational cards** have been created by BIOVOICES as a ready to use tool for informing the public.
- 📖 This "**BLOOM bioeconomy suitcase**" is packed with biobased products to help visualize the magic of the bioeconomy for kids.
- 👍 Follow Ben and Bea, two siblings living in the World of Bioeconomy, in this **BIOVOICES book for kids**.
- 🎮 Print out the **Transition2bio Bioeconomy memory game** to play with your students or a set of experiment leaflets, which students can experiment with at home or at school with simple ingredients such as coffee waste, orange peels to make fun bio-based creations.
- 👍 In these **picture books**, Farmer Hubert invites our young guests to join his adventures in the bioeconomy.
- 🎮 These games are a great resource for students (and teachers) to test out their newly acquired bioeconomy knowledge.
 - 🎮 **BIOES Game** lets you test out what you have just learned.
 - 🎮 **BIOCHALLENGE** is an exciting game-quiz that will further put your knowledge of bioeconomy to the test.
 - 🎮 **Bio...What?** inspired by Super Mario, this game takes the player on a fun-packed adventure where you encounter all sorts of enemies and traps from fossil-based products.

- The bioeconomy still remains a mystery to many. Try out these Allthings.bio quizzes to see how you fair.
 - ❓ **Quiz – Are you ready for the bioeconomy?**
 - ❓ **Quiz – Gear up and test your knowledge on biofuels!**
 - ❓ **Quiz – Bio-based or biodegradable: that is the question!**
 - ❓ **Quiz– Bio-based food packaging**
 - ❓ This ReFresh **quiz** lets you find out what new products can be made from food waste!
 - ❓ Bloom's **online quiz** is a fun way to learn some surprising bioeconomy facts hyperlink

3

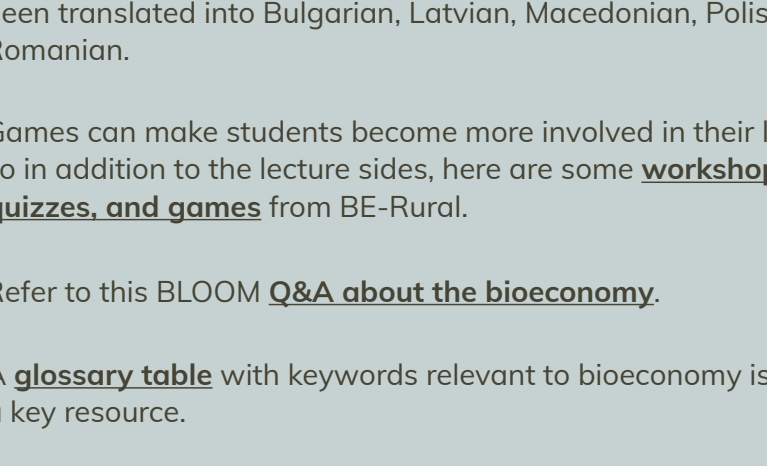
Where can I find secondary school level resources on the bioeconomy?



Did you know?

Teachers can integrate the bioeconomy into geography, biology, environmental studies, technology or business lessons

- Many teaching resources are already available online. Toolkit 1 is a great collection and introduction to the bioeconomy. With several engaging resources, it will be sure to spark interest in the fascinating world of the bioeconomy.



- 🔗 The BE-Rural project reviewed **100 free online teaching resources** on the bioeconomy. This list shows the richness of resources already available and provides teachers with a list that they might want to use in their teaching.
- 🔗 Teachers can also find pre-made **PowerPoint presentations** with practical notes on all the key sectors of the bioeconomy as well as its connection to the SDGs and circular economy. All presentations have been translated into Bulgarian, Latvian, Macedonian, Polish and Romanian.
- 🔗 Games can make students become more involved in their learning, so in addition to the lecture sides, here are some **workshops, quizzes, and games** from BE-Rural.
- 🔗 Refer to this BLOOM **Q&A about the bioeconomy**.
- 🔗 A **glossary table** with keywords relevant to bioeconomy is also a key resource.

4

What upcoming EU projects dealing with bioeconomy education should I look at for?



Did you know?

Several EU projects dealing with bioeconomy education will be producing new material in the coming years, which you will not want to miss.

- GenB (2022- 2025) - Informing and educating young people on more sustainable behaviours and choices to build a future Generation informed and interested in Bioeconomy.
- BioBeo (2022- 2024) - Education for the bioeconomy.
- BioGov.Net (2022- 2025) - Mobilizing European Communities of Practice in biobased systems for better governance and skills development networks in bioeconomy.
- Engage4BIO (2022- 2025) - Better understanding, intensified engagement, training and development in regional bio-based systems.