

GenB Educational Model

Empowering educators to inspire the next generation of bioeconomy leaders

A science-based, interactive, and adaptable model to equip young minds with the skills, knowledge, and mindset needed for a sustainable bioeconomy.

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What is Bioeconomy?

A sustainable **economy based on nature and innovation**. It uses **renewable biological resources**—such as plants, microorganisms, and organic waste—to create **sustainable alternatives** to fossil-based products and processes.

- Includes **sectors such as agriculture, biotechnology, bio-based materials, and green energy**.
- Drives **economic growth, green jobs, and innovation for a low-carbon future**.

Bioeconomy in action

Bio-based
textiles

Biodegradable
packaging

Sustainable
food
production

Biofuels

Why bioeconomy education?

A 2020 global survey revealed that **92% of students think sustainable development should be universally taught and promoted**. Additionally, **85% expressed desire to learn more about sustainable development, and 73% believed it should be actively incorporated into all courses**.

[\(SOS- Students for Sustainability\)](#)

A 2022 global survey indicated that **70% of students desire more experiential learning focused on sustainability**. Additionally, **65% expressed that they want more case studies on the topic**

[\(Yale Center for Business and Environment\)](#)

🌱 The bioeconomy is already **valued at €2.35 trillion in the EU**, and growing 🌱 Bioeconomy already **employs over 16 million people** across Europe 🌱 By 2050, **green skills will be essential across industries** 🌱 Educators play a **key role** in shaping youth mindsets.

Key Benefits

Prepares students for real-world sustainability challenges, creating new professional opportunities in the green economy.

Aligns with **EU strategies** (Green Deal, Bioeconomy Strategy, SDGs) to accelerate the shift to a **low-carbon, circular economy**.

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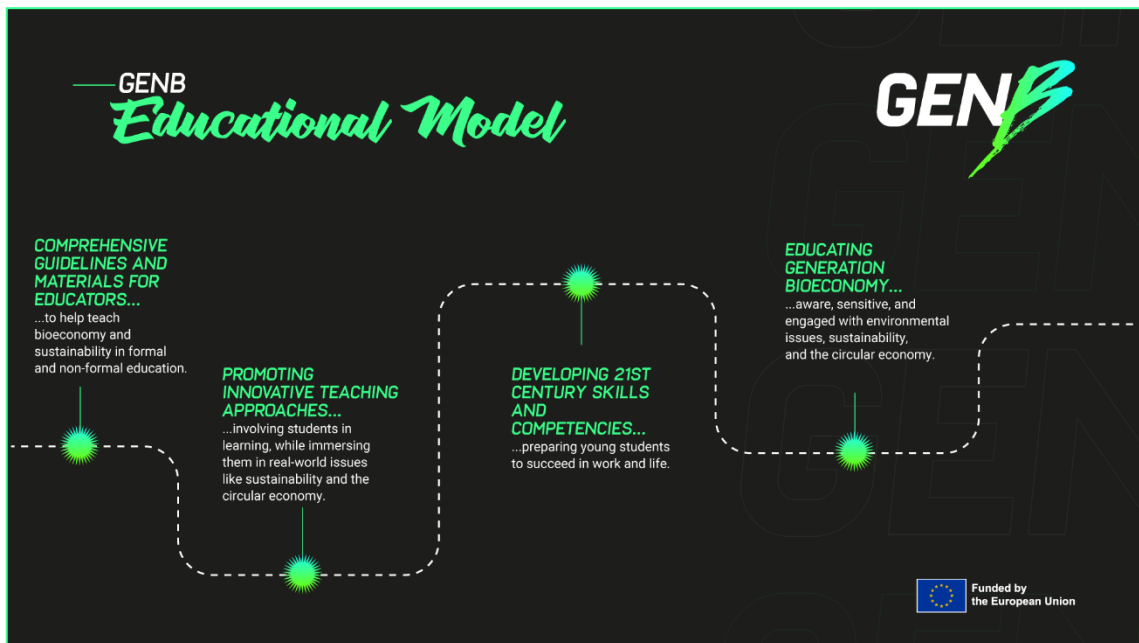


Funded by
the European Union

The GenB educational model: designed for educators, built for impact

This framework for bioeconomy education is rooted in experiential, project-based, and interdisciplinary teaching methods, and aligns with GreenComp (EU Sustainability Competences) & 21st Century Learning.

It integrates adaptability for different age groups and features **✓4-8 yo** - Storytelling and play-based learning **✓9-13 yo** - Role-playing and science experiments **✓14-18 yo** - Career exploration and real-world problem-solving.



Included resources and tools for educators

- MOOC on bioeconomy education** → *self-paced professional development*
- Lesson plans and toolkits** → *structured activities age-specific, case studies and best practices*
- Interactive learning** → *hands-on learning and real-world bioeconomy applications*
- Digital and gamified resources** → *games and participatory tools.*
- Capacity building for educators and GenB Ambassadors** → *Learn and engage.*

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Call to Action

Bioeconomy is not just a subject - it's the future already here. Equip students with the knowledge and skills to build a circular, sustainable world.

Start teaching today

Download free resources

Enroll in the MOOC

Join a growing network of educators transforming sustainability learning! Explore the GenB learning community

Start inspiring with bioeconomy today!

Access the GenB toolkit and MOOC

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