

Developing a bioeconomy education programme for primary, secondary and tertiary level students

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BioBeo is a Horizon Europe project which is developing an innovative bioeconomy education programme for primary, secondary, and tertiary level students. The consortium consists of 15 partners across 10 European countries. 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 (EC, 2022).

The learning materials in this project are based on five themes: food loop, forestry, life below water, outdoor learning and interconnectedness. Although the term ‘food chain’ is widely used by the scientific community and policy makers, it was decided to use ‘food loop’ in this case as it implies the potential for a circular bioeconomy approach, where the waste management hierarchy (EPA, 2024) includes prevention, composting, and anaerobic digestion among a range of options.

The BioBeo bioeconomy education resources created to date are available on the website www.biobeo.eu and are shown in Figure 1. The education programme has been developed and trialled in primary and secondary schools so far and will be published shortly. The lesson plans are compiled to facilitate implementation according to student age range, bioeconomy themes, and sustainable development goals. A module has also been developed for a university programme for education students, so that future teachers can incorporate bioeconomy and sustainability in their teaching as a legacy of the project.

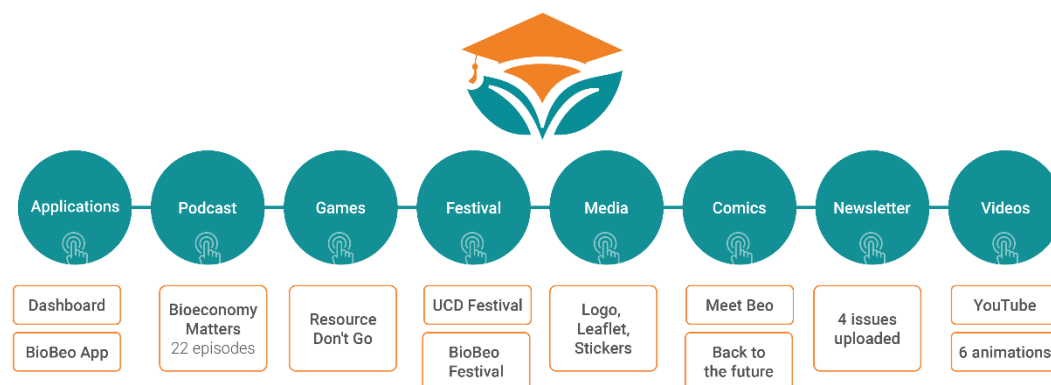


Figure 1. BioBeo bioeconomy education resources.

The BioBeo app can be downloaded and customised by teachers to highlight bioeconomy activities in the local area, e.g., composting, anaerobic digestion, biorefineries, etc. The Bioeconomy Matters podcast features interviews with many stakeholders from policy, research and business - it has been created by the EU Bioeconomy Youth Ambassadors with support from BioBeo. A board game ‘Resource Don’t Go’ is an interactive approach to learning about best use of resources. The project has been represented at several outreach events and arranged the BioBeo Festival in Brussels as part of the EU Bioeconomy Changemakers Festival in 2024 with a final festival event due to be held in April 2025. The BioBeo Buzz monthly newsletter features inspiring articles in an accessible format and it is intended to continue to publish it after the project concludes.

Two comic books, ‘Finding Beo’ and ‘Back to the Future with Beo and Raja – A Tale from the Early Bioeconomy’ have been published with a third due out in February 2025. The comics feature the adventures of a girl call Beo and her loyal dog Raja, where they learn about the bioeconomy, past and present. Six animated videos including a focus on single use plastic have been created using the comic characters and two songs have been composed to further emphasise the key messages with audiences.

The project has highlighted innovative governance approaches to overcome barriers such as curriculum changes and engagement with parents, teachers and policy makers. An evaluation of the education programme is currently being compiled. It is anticipated that the outcomes of the project may be incorporated into the upcoming EU Bioeconomy Strategy.

References

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