



Training materials

STEP 5: CURRICULUM WORK

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Linking the Eco School Programme with the Curriculum



- Besides increasing the status of the programme, linking Eco-Schools activities to the curriculum ensures that Eco-Schools is truly integrated within the school community.
- Pupils from throughout the school should gain an understanding of how real life environmental and social issues are dealt with in a real life setting.
- The way the Eco Committee works also teaches students how to actively participate in a community. The meetings, suggestions, voting procedures, decision making, surveys, presentation on results and the collaboration among the committee members prepares the students for their adult life as professionals and world citizens

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Curriculum Integration



- Integrating the programme into the curriculum can be done, either directly through specific classes or indirectly innovative teaching.
- Introducing the Eco Schools principles in a school means that the twelve themes related to the methodology will be taught more through the schools subjects and less as stand-alone units of a subject. The reason behind this lies in the fact that environmental issues can only be addressed if various fields of expertise are used simultaneously.
- The same philosophy applies to Bioeconomy as well. To provide solutions, it may use knowledge from subjects like Biology, Chemistry, Physics, Environmental studies, Home Economics, Economics or Maths so Bioeconomy

Curriculum Integration - Directly

- The direct link between a Bioeconomy project through the lens of Eco schools themes and the school subjects gives the students a comprehensive understanding of the interconnectedness between biology, economics, technology, chemistry and society in creating a sustainable future. Furthermore, if those subjects offer the students hands-on activities and case studies from real-life environmental issues, they will enhance the students' interest and make them more engaged.

2. Curriculum Integration - Indirectly

- Teachers can indirectly integrate the Eco schools programme through:
 - Project-Based Learning (PBL).
 - Collaborative Work
 - Experiential Learning
 - Field Trips.
 - Internships and Mentorships:

Let's put the theory into practice

In the waste management project that we explored students had to access the information through various subjects.

- **Elementary school students** needed to learn how to form a table to monitor and register the amount of waste produced every day. (Math)
- **Middle School students** asked questions on the process of creating bio cotton from milk leftovers so they needed the subjects of Biology, Chemistry and Technology to explore topics and discover their role in creating renewable resources and minimizing waste.
- **High School students would be able to** see the direct connection between Chemistry and the bio-based materials, biofuels, and bioplastics. Teachers could use this knowledge as a springboard to conduct experiments that show the chemical processes involved in converting biomass into valuable products.

Let's put the theory into practice- Project based learning (PBL)



- Teachers can go one step further and ask the students to work on projects on real-life scenarios regarding the Eco Schools themes. Some of them would definitely need the solutions that Bioeconomy offers to be solved. For example, they can
 - design a sustainable school with zero waste
 - develop a business plan to promote the compost the school produces
 - organise a campaign regarding waste reduction methods in the school.

Let's put the theory into practice- Transdisciplinary Approach in Theme 11 – Waste Management



- **Environmental Science & Economics:** Students can learn that Bioeconomy can be the solution to the waste management as it can strike a balance between the promotion of economic growth (since the school earns money by selling the compost) and the preservation of natural resources and ecosystems. By making and selling the school's compost students learn how to reduce waste, preserve natural resources and make money at the same time. Teachers can provide examples of circular economy models and analyze real-world examples of companies which made a transition to more sustainable choices.
- **Social Studies - Politics:** Middle and High School students can investigate the role policy makers and governments in promoting sustainable practices, such as a zero food waste plan for schools or local farms and the impact of the cooperation between the two whenever it is possible.

Let's put the theory into practice- Collaborative Work



- Teachers can ask students to combine their knowledge from various subjects (Biology, Chemistry, Economics) and organise a debate competition on the issue of waste management at school. The students can propose solutions based on Bioeconomy or more linear ones and they can start debating.
- The Eco committee can decide to use this knowledge to undertake the project of creating a board game on Bioeconomy with possible challenges and solutions. In this case, teachers from various fields would have to collaborate (Homeroom teacher, IT teacher, Biologist, Home Economics Teacher etc)
- The cooperation among teachers of various subjects is deemed necessary in projects related to environmental issues and the curriculum integration of the Eco School methodology and themes should be a goal for the whole school community.



Let's put the theory into practice- Curriculum Integration through Experiential Learning

- **Field Trips:** Teachers can organize visits to farms, recycling plants, or companies that produce bio-based products. This will be an eye-opening experience for the students who will see how the problem of waste management at school can be solved when a basic bioeconomy principle is put into practice. Then they can share the experience with the rest of the school community.
- **Internships and Mentorships** with local businesses: Especially for teenagers, this type of programmes will help them realise whether they can pursue a career in the Bioeconomy field, as they will have access to data regarding a variety of professions. It is also a great opportunity for a school to cooperate with the wider community and create a network of people who can help the Eco Committee promote sustainability at school.

Educational Resources



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