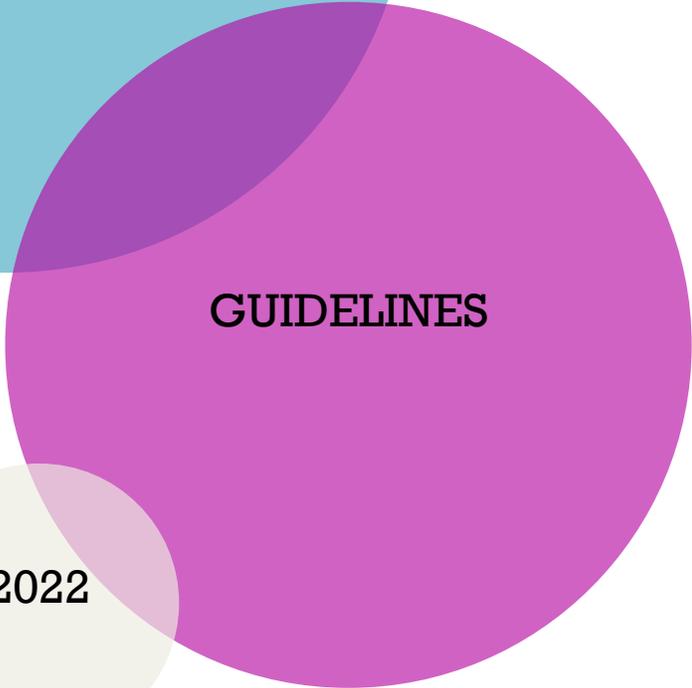




**TRAINING OF
TEACHERS
SPECIFICATIONS**



GUIDELINES



2022

The concept of circular economy – is the new approach to sustainability. This approach is based on the natural world, where everything is considered as a resource for the next link in the food chain without waste.

One of the most important goals of the EU's sustainable development strategy is to separate economic growth from the impact on the environment and to achieve that, as the economy grows, the use of natural resources and environmental pollution do not increase or grow much more slowly. This resonates with other policy areas such as carbon reduction/climate change and the widespread use of renewable energy sources.

The concept of circular economy challenges the current linear model of production and consumption. The linear model consists of the four following steps: →

the production is taken from nature → the product is produced → the product is used → the waste is disposed which often pollutes our resources.

This model has created the economy that is highly dependent on the use of energy and other resources in production, supply of products and provision of services. This harms the nature that we are a part of and depend on to satisfy our daily needs.

Developing awareness about the circular economy, the key is deepening the knowledge, fostering the values and shaping attitudes and behaviour that encourage positive actions and lead to a **“zero-waste“** lifestyle. Teaching about the circular economy can start with any environmental education initiative, such as energy saving, recycling, biodiversity studies, climate change, etc.

Sustainable development goals/circular economy must be integrated into all formal education programs, including care and education in kindergardens, primary and secondary education, technical and vocational education and training, and higher education. The circular economy is related to fundamentals of teaching and learning. Integration of sustainable development goals requires the inclusion of

sustainability topics in the education/training program and expected learning outcomes related to sustainability. Education/training programs must ensure that all children and youth acquire not only basic skills, but also transferable skills such as critical thinking, problem solving, advocacy and conflict management that will help them become responsible global mediators. Developing a sustainability curriculum is expected to improve the capacity of education systems to prepare people pursue sustainable development. (tab 1).

If sustainable actions are taught at school, the concept of circular economy helps to overcome current environmental changes. It opens the possibility to model the concepts and principles of the circular economy as “a school of the whole“, in order to strengthen the vision of the sustainable world. With a little creative thinking, any school can easily take steps to help promote circular economy. The aim is to replicate natural processes to create resources instead of waste. There is a need to critically evaluate and review all resources that enter the school and observe where they are used and what becomes when they are no longer used.

Recommendations on how to integrate the fundamentals of circular economy in educational institutions:

1. Simply change your consumption habits to avoid waste. This can be achieved by using products or services that are sustainable, recycling materials, “giving things a second life”.
2. Separate biological resources that can be naturally composted and elements that can be returned to their natural form from other resources that can be reused or recycled. Materials such as metals and plastics can be reused to produce other products.
3. Use renewable energy to reduce dependence on coal and other fossil fuels. Working with your hands and feet you also use renewable energy.

These actions contribute to circular consumption:

1. Refuse things that are not necessary and non-recyclable.
2. Reduce consumption. Consider trading, renting or borrowing instead of buying.
3. Reuse and extend the useful life of items by repairing, refurbishing and repurposing them.
4. Recycle items made of metal, paper and plastic.

For example, students can take a closer look at one of the common and well-known products - paper. They can ask themselves the following questions to assess the extent to which their activities promote circular consumption:

1. Are the paper items made from recycled paper?
2. Where can the use of paper be reduced or completely eliminated?
3. Are the products marked with a sustainability label, for example, by the Forest Stewardship Council (FSC)?
4. Where are the used books stored, maybe they are passed on to another group of students?
5. How and where can used paper be reused or disposed of safely?

Teachers need to move away from the traditional model of lessons and adopt new, innovative and interesting teaching (learning) methods, such as problem-based teaching, case studies, research activities, etc. It requires competencies that describe the specific qualities that teachers need in order to function and organize their activities in a variety of complex contexts and situations. They include cognitive, emotional, will and motivational elements and are, therefore, the result of the interaction of knowledge, abilities, skills, motives and management of emotions.

Teacher competences:

1. *Systemic thinking competence:* abilities to recognize and understand relationships, analyze complex systems, think how systems are integrated into different areas and their different scales and deal with uncertainty. Ability to apply interdisciplinarity in various educational systems.

2. *Forecasting competence:* ability to perceive and evaluate several future – possible, expected and desired – things in order to create one's own visions of the future; application of the precautionary principle to the assessment of the consequences of actions and management of risks and changes.

3. *Normative competence:* ability to understand and evaluate norms and values that determine a person's actions and to convey the values, principles, tasks and goals of harmony in the context of conflicts of interests and compromises, uncertain knowledge and contradictions.

4. *Strategy competence:* abilities to co-create and implement new actions that extend coherence at the local level and the wider area.

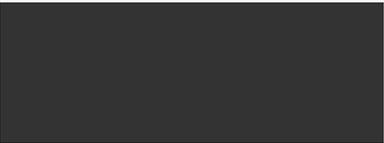
5. *Cooperation competence:* abilities to learn from others, understand and respect others' needs, attitudes and actions (empathy), understand and sympathize with others (empathic leadership), solve conflicts arising in the group and promote collective and active problem solving.

6. Critical thinking competence: ability to question norms, practices and opinions in order to evaluate one's own values, perceptions and actions and to take a position in the discourse of coherence.

7. Self-concept competence: ability to evaluate one's own actions in the local community and (global) society, as well as constantly evaluate and motivate oneself, manage one's feelings and desires.

8. Integrated problem-solving competence: comprehensive ability to apply different problem-solving systems to solve complex sustainability problems and to create possible, comprehensive and correct solution options promoting sustainable development, integrating the above-mentioned competences.

INTEGRATION OF CIRCULAR ECONOMY INTO THE EDUCATION PROCESS



1. AT THE POLITICAL LEVEL/SCHOOL ADMINISTRATIVE LEVEL;



2. AT SCHOOL TEACHERS'/PUPILS' LEVEL;



3. EXAMPLES OF LIVE PRACTICE;

**AT THE POLITICAL
LEVEL/ SCHOOL
ADMINISTRATIVE
LEVEL**

IN THIS STEP

The circular economy is seen as a panacea for saving the planet's finite resources since the current linear economy, which is based on the principle of "take-make-dispose", creates large amounts of waste that are burnt or sent to landfills, thereby losing valuable materials that can be useful to people and the environment. It is especially important for the administrative staff of the educational institution to prepare a strategy for integrating aspects of the circular economy in the activities of the educational institution. Suggestions for administration:

- 1. To prepare a strategic educational plan, the purpose and objectives of which must include the context of the circular economy (then the topics of the legal basis of the circular economy can be integrated into the content of various subjects).*
- 2. To organize seminars/trainings/courses on the topic of sustainable development goals for the school community.*
- 3. To establish/initiate the "Green Team" – a proactive coordination group that will administer/coordinate all activities related to the circular economy in the educational institution (issue the director's order on the organization of the group).*
- 4. To motivate teachers to participate in local, national, republican, international projects on this topic.*
- 5. To enable teachers to use new learning methods, to work creatively with students, to use a non-traditional teaching model.*
- 6. To establish educational zones/spaces in educational institutions for organizing non-traditional lessons/activities on the topic of sustainability (e.g. planting a mini-garden, establishing beehives, classrooms without walls – tents, gazebos, wellness tracks, etc.)*

AT SCHOOL TEACHERS’/ PUPILS’ LEVEL

IN THIS STEP

In order for teachers to be ready to contribute to the circular economy, they must develop key sustainability competencies: including knowledge, skills, attitudes, values, motivation and commitment. However, in addition to general sustainability competencies, they also need sustainable development goals competencies, which can be described as the teacher’s ability to help people improve sustainability competencies by means of various new teaching and learning practices especially the widespread self-study practices. Suggestions for teachers:

1. To integrate circular economy topics into the content of the thematic plans of various subjects.
2. To actively participate in trainings/courses/seminars/projects on this topic attracting students and their parents.
3. To disseminate information (in methodological, group meetings and gatherings, giving presentations at conferences, etc.) about the circular economy in their institution and beyond, in order to increase the number of interested teachers.
4. To apply new teaching methods (problem-based teaching, case study, team work, research/project activities, excursions, experiments, etc.).
5. To organize non-traditional model lessons using various educational zones (“the outdoor classroom“, educational lessons outside the school: in nature, museums, companies, students’ internships in companies, factories that intensively apply renewable energy resources and new sustainable work methods).
6. During training/teaching, use electronic platforms to expand and coordinate the circular economy.

EXAMPLES OF LIVE PRACTICE:

Examples of Lithuanian educational institutions:

Educational institution	Examples:
<p><i>Vilnius Lazdynai Secondary School</i></p>	<ol style="list-style-type: none"> 1. The school has established a 'Green Team' – a proactive group of teachers, students and parents that coordinates activities related to the circular economy. 2. The school community (teachers, administration, students, parents) actively participates in various environmental projects ('Sustainable School', 'We – Part of Nature', which contribute to the implementation of sustainable development goals, encourages, informs and motivates as many community members as possible to get involved in ongoing activities). Cooperates with other institutions (Vilnius City Municipality, St. John Bosco Church Vilnius College of Technologies and Design). 3. Teachers participate in international projects (leap towards a sustainable lifestyle, where they have created an electronic platform that provides questionnaires for various groups of respondents on sustainability topics. The purpose of the platform is for schools to assess what is the percentage of community members that are informed about what is the circular economy, what is sustainability, how many students, teachers, parents and administrative staff contribute to the implementation of the relevant activities). 4. The school administration initiates a non-traditional teaching model: there have been established various educational zones in the school territory, such as: hazelnut grove, tea herb corner, mini-garden, fitness track, outdoor classes), where teachers are encouraged to organize lessons, events and other activities. 5. Farmers supply the school with organic vegetables and fruit (apples, carrots). 'Vegetable Days', 'Healthy Food Lessons', 'Carrot Days' are organized. 6. To save electricity at school, during the warm season lessons are organized in 'outdoor classrooms'.
<p><i>Vilnius Grigiškės Municipality Gymnasium</i></p>	<ol style="list-style-type: none"> 1. Actively organizes and participates in various city, republican, local conferences, where information about sustainable development/circular economy is also disseminated ('Discoveries in Nature: Science and Art', 'Creation of Educational Zones. Creation of Ecological Educational Classroom Outside', 'Sustainable School'). 2. Use of secondary raw materials and used paper during lessons – drafts are distributed to students, containers for used paper are set up in each classroom. 3. Curtains were changed in the classrooms – old material was used during technology lessons – students made cards during various festive days, took them to old people homes and gave them to lonely people. 4. Installation of bicycle parking spaces near the institution. Initiatives promoting sustainable mobility have been implemented (maximum number of people per car walking, cycling). 5. Use of environmentally and health-friendly cleaning products at school – an audit has been carried out.