

MODULE: "ECO DESIGN"

Brief explanation of the module

Through the module "Eco design", the basic types of knowledge get closer together: term and principles of eco design, analysis of the lifecycle of materials and their influence on the environment, as well as recognizing the basic eco properties of the materials in manufacturing.

The module offers:

- Article;
- Introduction;
- Lesson plan that contains description of the subgoals and ways for realization of the recommended learning and teaching aspects; Learning material, media and tool;
- Powerpoint presentations through which the method of lecturing of the educators is simplified and illustrated with photographs, graphs, and similar.
- Videos – through which in an interactive way are presented the significant information for the given topic;
- Activities and tools intended for a school environment, training spaces, however online platform environment as well. They are developed with the goal of practical ensuring of the shared materials and their relevance, recognizing the ecologically designed products, as well as encouraging of singular and independent developing of concepts for realizations;
- Exercises as quizzes in regards to check the engaged knowledge;
- Suggestion resources for further research.

Aim of the module

The goal of the module is to educate the youth in regard to the following points:

- ✓ Knowing the term and need for eco design
- ✓ Analysis for the lifecycle of the materials and their influence on the environment – key characteristics and steps.
- ✓ Learning about the basic tools for analysis of the lifecycle of materials;
- ✓ Eco-properties of the materials in manufacturing
- ✓ Usage of eco-data

- ✓ Recognizing the basic principles and phases of eco design (for example, frame of resources – manufacturing-design-consumer)

At the same time, through implementation of the activities within the module:

- ❖ Developing a discussion for the influence of certain products on the environment
- ❖ Encouragement about research skills and recognizing the key competences and characteristics of eco-designed products
- ❖ Encouragement for the entrepreneurship spirit in sense of creating eco designed products
- ❖ Developing discussions and at the same time, skills for making concepts for eco designed products

General instructions:

- ✓ Educators, teachers can choose which resources they would like to share with the target groups of the offered curriculum. Presentations and videos can serve as an initial introduction to the topic.

However, if they want to realize an activity, the video and the presentation are incorporated in it, due to the simpler implementation and approach of the topic to the target groups.

That is why the module is divided into three sections:

- Introductory part (presentation and video)
- Activity details - If the "Introductory part" has been realized before, continue with the next step of the document "description of the activity";
- Exercise.

The activities can be done as a team, but also will not be an obstacle to be realized individually.

They can also be realized online and in physical conditions.

The exercises are in the form of quizzes and are in order to determine the acquired knowledge.

The time frame given is indicative and depends on the way the educator works, the structure of the target group (prior knowledge, age, number of participants), the goal he wants to achieve and the like.

It is desirable for the educator to have experience working with young people, as well as knowledge and skills related to topics such as: entrepreneurship, climate change, eco design, etc.

Details of the module: "title"

Lesson 1: Term and need of eco design

The introductory gives a view and knowledge to students/ participants about terms of eco design, main principles and phases of eco design through PowerPoint presentation, video and working in groups to recognize good or bad product practices.

Lesson 2: Analysis of the lifespan of materials and their influence over the environment

Lesson 2 gives an overview about analysis of the life cycle of materials and their influence on the environment, what are the key characteristics, phases, tools steps and examples.

The goal of implementing the activity in the frame of the module is to encourage research skills and recognizing key competences and characteristics of the eco-designed products.

Activities connected to the module (title)

Activity 2 connected to lesson 2: Exploration- circle analysis/ Filling out the matrix

Activity 3 connected to lesson 3: Check list for making a concept of eco designed product

Exercises connected to the module (title)

Exercise 1 connected to lesson 1: Quiz

Exercise 2 connected to lesson 2: Quiz

Exercise 3 connected to lesson 3: Quiz

Target groups

Youths between 15-29

Youth workers and volunteers working with youths looking for materials to work with them.

Teachers/educators

The modules can be realized by all the mentioned target groups and ages without restrictions, by proposing the most appropriate age category for the separate activities. For example:

- Activity 1 connected to lesson 1:

Recognizing good and bad product practices ("Product cards")/ Recommended age: 15-17

- Activity 2 connected to lesson 2: Exploration- circle analysis/ Filling out the matrix/ recommended age/ Recommended age: 15-24

- Activity 3 connected to lesson 3: Checklist for making a concept of eco designed product/ Recommended age: 15-29

Tips and tricks (with solutions to exercises and activities)

- ✓ Use many more digital tools for realization of the activities such as jam board, Miro board, google forms, videos, interesting visual view etc.

Example, for using a jam board the templates of the activities will be given as jpg format as well to be inserted in the frames.

<https://www.youtube.com/watch?v=S9m4HCjOkcA>

- ✓ Effective teachers need to be able to work in a constantly evolving environment and adjust their teaching methods based on the age of their students, the resources available and changing practices and requirements.
- ✓ To treat each student as an individual, by being empathetic and understanding to what may be going on in their lives.
- ✓ Focus on Collaboration, communication, creative and critical thinking. These skills should be an integral part of teaching and learning to ensure highly effective teaching and to make learning more rigorous and relevant in the 21st century.
- ✓ Encourage students/ participants to actively participate and involve in decisions.
- ✓ Remember that you can't help students unless you build a trusting, friendly relationship first.
- ✓ In the frame of implementing activities use more Designing Thinking Methodology
- ✓ Sharing your findings and best practices with others in the field.

References with videos and other useful literature connected to the module

References and videos are available in description of the activities.



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and Ecological**

