

Digital Edu Skills Handbook

English

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Publication year 2023

"Yes, we could do something about climate change now, but if in 50 years we were to find that all scientists have lost their way and that there is no global warming at all, then we would have ensured for no reason at all that even in the cities you can breathe the air again, that the rivers are no longer toxic, that cars neither make noise nor stink and that we are no longer dependent on dictators and their oil reserves. We would be very annoyed."

Marc-Uwe Kling

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Education for Sustainable Development

The concept of Education for Sustainable Development describes a holistic and transformative educational process that serves sustainability issues such as climate protection and biodiversity while integrating learning content, learning outcomes, pedagogy and a digital learning environment in an interactive way in order to enable inquiry, actionoriented and transformative learning. Learners of all ages should be enabled to change themselves and the society in which they live.

The use of participatory methods will develop critical thinking, collaboration and leadership, teamwork and other skills. In addition, the international view enables users to behave as citizens of the world not limited to national borders.

Adult education is based on the concept of "lifelong learning". This concept includes "all learning throughout life, which is aimed at improving knowledge, qualifications and competences and within the framework of a personal, civic, social or employment-related perspective.

Especially in times of rapid social, ecological and economic changes, lifelong learning creates the prerequisites for this, competences of learners in the sense of a shaping society.

Knowledge

The transfer of knowledge aims at sustainable contents, ecological, economic and socio-cultural facts, decision-making in a global context and knowledge of current implementation strategies and technology.

Skills: In addition to the imparting of knowledge, the focus is on imparting competences that enable participants to become actively involved themselves.

Will: In order to actively participate in the social transformation, we need not only knowledge and skills, but also a corresponding attitude and the will to change. While knowledge and skills can be formulated, built up and reviewed, attitudes, values and aspirations often only manifest themselves in actions outside or after the course. However, the dimension of "will" is indispensable. The wanting to implement knowledge and skills cannot be tested in a course, but it can be stimulated by comparing attitudes and values with the participants.

Learning with Digital Media

Many educators have yet to experience digital media as tools to promote the success of learning and teaching, or they did it only to a limited extent. Moreover, educators often see the use of digital media as an additional effort while the didactic added value and the potential to improve their own teaching is not clear. In addition, university educators see themselves primarily as subject experts who do not want to invest much time and effort in the (media) didactic conception of their own teaching.¹ However, the aim should be to promote exchange and stimulate the further development of knowledge for action.

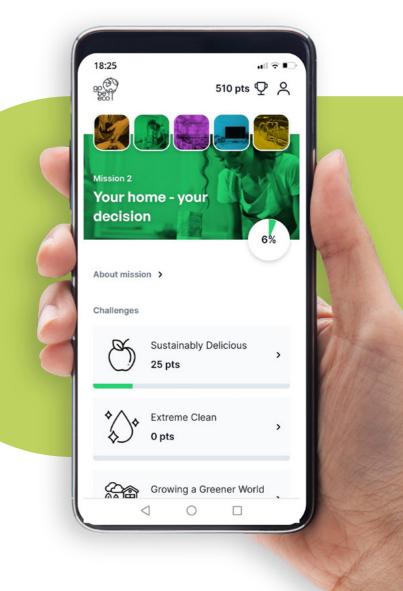
Project presentation

Every day, the news shows the impact of environmentally damaging lifestyles on the planet. And people still tend to do what they have always done. This is where the Erasmus project **GoBeEco** (www. gobeeco.eu) takes action. If change should be successful, old habits must be broken. Complex information on sustainability issues should be made understandable and old ways of thinking effectively replaced by new, more sustainable ones.

The project's research focuses on learners and teachers in adult education.

In addition to this handbook, which has been developed in 2022/2023, the project has launched a web app that aims to integrate sustainability into the everyday lives of users in a playful way. The WebApp is free for everyone to use - anyone who wants to take on their own personal sustainability challenge and make the world a little bit better in this way can download it here: www.game.gobeeco.eu

The WebApp's intuitive structure of thematic missions, challenges and corresponding tasks also makes it ideal for use in teaching adult education.





Mayrberger, K. (2008). Medienpädagogische Kompetenz im Wandel – Vorschlag zur Gestaltung des Übergangs in der Lehrerbildung am Beispiel mediendidaktischer Kompetenz.



HOW TO WORK WITH THE HANDBOOK





The preparation of educational curricula for GoBeEco follows the principles of the Rapid Instructional Design (RID) model, proposed by Dave Meier², that is based on the concept that people learn better from experiencing and acting rather than from following training materials and presentations. This new understanding of the learning process reportedly provides a better performance for all types of learners and is therefore oriented to activity based courses that put the learners in the center of (and being responsible for) the learning process. These courses that also incorporate collaborative and peer learning approaches expose the learners to diverse practices and activities from simple to complex, with each experience being followed by feedback and reflection. The activities are particularly beneficial when they allow learners to work with others in real world settings and problems.

The seven main principles of RID can be stated summarily as:

- 1. Design using the Four-Phase Learning Cycle
- Preparation, that is arousing the interest of the learner
- Presentation of information to allow the learner to • encounter new knowledge or skills
- Practice to allow the learner to integrate the new knowledge or skills
- Performance to allow the learner to apply the new knowledge or skills
- 2. Appeal to all Learning Styles
- Somatic: Learning by moving and doing •
- Auditory: Learning by talking and hearing
- Visual: Learning by observing and picturing
- · Intellectual: Learning by problem solving and reflecting

3. Design Activity Based Courses

- When designing a training program, start with new activities that the learners will need to en-gage in to be able to quickly pick up the new knowledge and skill.
- Learners gain far more from active experiences than they ever learn from presentations and materials, no matter how technologically sophisticated.

4. Create a Learning Community

- Rather than designing training programs for isolated individuals, create your programs for commu-• nities of learners.
- Create learning designs that let everyone in the community be a learner and teacher at the same time.

5. Alternate Between Physically Active and Passive Learning Activities

- Getting up, moving, and doing something physical improves circulation to the brain and learning. Designs are best when they do not keep people either physically passive or physically active for long stretches of time but alternate between the two.
- Physical learning activities: standing and talking, manipulating physical objects, acting out processes, creating models or pictograms, putting on demonstrations, or engaging in a hands-on activity.

- Physically passive learning activity: observing, thinking, reflecting, building mental models, lis-tening to presentations, or interacting with computers.
- The constant back and forth rhythm between the physically active and the physically passive modes tends to sustain people's energy and improve their learning.

6. Follow the 30/70 Rule

- Make sure you design so that 30 % of time or less is devoted to instructor or media presentations; and 70 % or more, to learner practice and integration activities.
- Learning is not a spectator sport; it is a highly participative one. A good design gets the ball in the learner's court as often and for as long as possible.

7. Create a Flexible, Open-ended Design

- Learning programs designed with the traditional Instructional Systems Design Model (ISD) model can cated over and over again. Because of this inflexibility, it is difficult to modify them.
- Rapid Instructional Design is a better fit for this ever-changing world because it is open-ended, responsive to change, flexible, always works in progress and is intended to continually evolve and improve.
- The guiding principle for Meier is, "Never do for learners what they can do for themselves and for each other." RID works because it doesn't try to do everything for the learner or totally control the learning process. It makes learners responsible for their own learning.

In the RID model the learners' needs, content and objectives are determined while the prototype is constructed as the active involvement of the users allows to have a very dynamic and immediate feedback process, rather testing stages near the completion of the project.

Assess needs and analyse content



The RID model starts with the analysis stage where training needs are identified. During the design stage a prototype of the course visualizes the user interface and provides a template of the course. The overlapping boxes are meant to represent the fact that the various processes do not occur in a linear fashion. In other words, the analysis of needs and content depends in part, on the knowledge that is gained by actually building and using a prototype of the course. This model allows all team members and also the users (or clients) to be involved in the design model of the solution. Early feedback is provided, reducing the time required in development and implementation.



be rigid, prescriptive, and set in stone. Packaged eLearning programs are often designed to be repli-

Set objectives

Construct protoype (design)

Utilize prototype (research)

Install and maintain system



² Meier, D. (2000). The Accelerated Learning Handbook. New York: McGraw-Hill.

Explain the work with the handbook:

If we look at the methods and tools from the point of view of pedagogical practice, both are important elements in designing the teaching-learning process to fit precisely. Special attention is given to the initial situations, which should motivate and invite. But also in the main and final part of an event, the use of methods and tools must be well considered.

When selecting the appropriate methods, the institutional framework, the participants, the goals and content, and the educators must be taken into account.

The following chapters of the handbook will assist educators in curriculum development. Three curricula are presented here as examples. Two are designed around available digital educational solutions for proeco skills development and one curriculum is for using gamification in pro-eco skills development. The educator can adapt the chosen curriculum to their individual teaching-learning goals. For this purpose, educators are welcome to use the tools presented in the libraries.

The first section of the curriculum describes the learning setting for which the teaching plan and the chosen tools and methods are most appropriate. The initial situation of the learners/the target group and also that of the teacher is particularly important in order to build a customised curriculum.

Level of Involvement: Both the educator and the learner may have different levels of digital and sustainability know-how. Our handbook shows examples of a specific curricula that are based on a certain level of digital know-how. Alternatives (simpler = beginner or more complex = advanced) are always shown in the libraries of eco-activities and digital tools at the end of the manual.

As already described, the manual is based on the 4 Phases Model of Rapid Instructional Design. Within this model, individual teaching elements that build on each other are presented in the curricula. A few examples for the structure follow:

Phase 1: Preparation, that is arousing the interest of the learner

- Pre-Test of Knowledge (in Phase 4 Knowledge test for comparison)
- Short Presentation from the educator
- Podcasts to get started with the topic
- Short film that arouses the interest of the learners
- Introductory task for the learning group

Phase 2: Presentation of information to allow the learner to encounter new knowledge or skills

- Content-related presentation from the educator
- Thematically more in-depth podcasts
- Thematically more in-depth movie
- Peer-to-peer-learning to gaining knowledge/skills (digital and sustainable)

Phase 3: Practice to allow the learner to integrate the new knowledge or skills

- Subject-based game (virtual or in presence)
- Practical exercise of the learned
- Learners develop a practical project

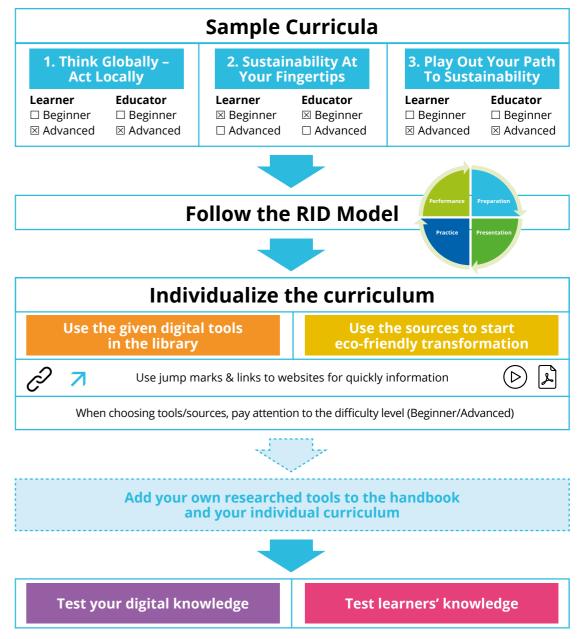
Phase 4: Performance to allow the learner to apply the new knowledge or skills

- Knowledge test
- Final discussion in the group

- · Evaluation of the practical project
- Self-assessment of the new level of knowledge

The two libraries offer a comprehensive overview of digital tools and sources to start eco-friendly transformation. The search function in the document can be used to search for specific content and applications. After downloading the handbook, users can also add digital tools and eco-transformation tools they have researched themselves. A bookmark mode helps to mark important entries. Jump marks and links to websites provide the user with a helpful function for quickly accessing information on tools. The different tools and resources are mostly available in several languages (European flag), but some of them are country-specific (German, Polish or Portuguese flag) and therefore only available in the respective national language. Feel free to use the small intro texts in the libraries to search for innovative tools and sources in your national language yourself via internet search engines.

HOW TO WORK WITH THE HANDBOOK





SAMPLE CURRICULA: THINK GLOBALLY -ACT LOCALLY

"We don't have to engage in grand, heroic actions to participate in change. Small acts, when multiplied by millions of people, can transform the world."

Howard Zinn, Political Scientist

DIGITAL EDU SKILLS HANDBOOK



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Learning situation

Description of the learning situation:

The learners have already dealt with the topic of sustainability and, with the help of this curriculum, they learn about the Sustainable Development Goals (SDG) and experience them in their own personal context. The educator has already gained first experience in the field of digital teaching. All content can be taught online.

Having successfully completed this course, the adult learners

know the relevance of the Sustainable Development Goals

understand the importance of sustainable action

· have acquired skills in media production

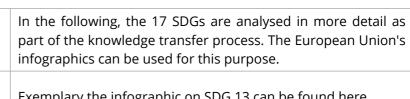
are able to reflect critically the global sustainable development

□ Group Activities

⊠ Primarily online

• • •

Digital background of learners and educators/
Level of Involvement:
Learner
Beginner
⊠ Advanced
Educator
Beginner
⊠ Advanced





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Exemplary the infographic on SDG 13 can be found here.



In the last step of preparation, the educator sets the SDGs in an overarching context. For this, the learners should classify the individual goals into the areas of biosphere, society and economy. The correct solution can be found beside.

Presentation

⊠ Group Activities ⊠ Primarily online □ Primarily in the class

2. Deeper thematic entry

Group work: The learners should divide into small groups. Each group deals with 3 SDGs, one from each of the areas: biosphere, society and economy. It is not mandatory that every SDG has be assigned, but care should be taken to ensure that none is worked on twice.

The aim of this presentation phase is for the small groups to deal more intensively with their chosen SDGs. They continue to work on the mind map (created together in the preparation phase) by working out subdivisions on the questions: Definition "What's the goal here?", Knowledge "Why?" and Action options for each person "What can I do to help? Afterwards, the results are presented in the large group.

⊠ Group Activities

2	Group Activities
X	Primarily online
	Primarily in the class

3. Lear	ning by designing
K	In this practice pl with bundled medi should motivate pe one chosen SDG.
0	Fach group create





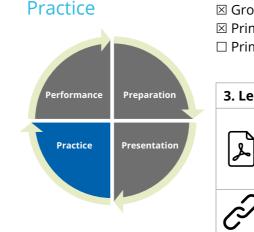


Preparation

can organize group work

🗆 Prima	rily in the classroom 🛛 includes excursions
1. Intro	oduction of the Sustainable Development goals
\bigcirc	Watch the global broadcast 'Nations United"
ଚ	Joint creation of a first Virtual Mind Map (one of the mindmap tools from the library category <u>Tools to support cooperative</u> <u>and collaborative work 7</u> can be selected) with associations and ideas for all 17 Goals.

Learning outcome: Knowledge, Skills, Competencies





Source: Crossman, N.; et al. (2018). Global socio-economic impacts of future changes in biodiversity and ecosystem services: State of play and approaches for new modelling. p. 16.

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□ Individual Activities □ Primarily in presence \Box includes excursions

□ Individual Activities

□ Primarily in presence

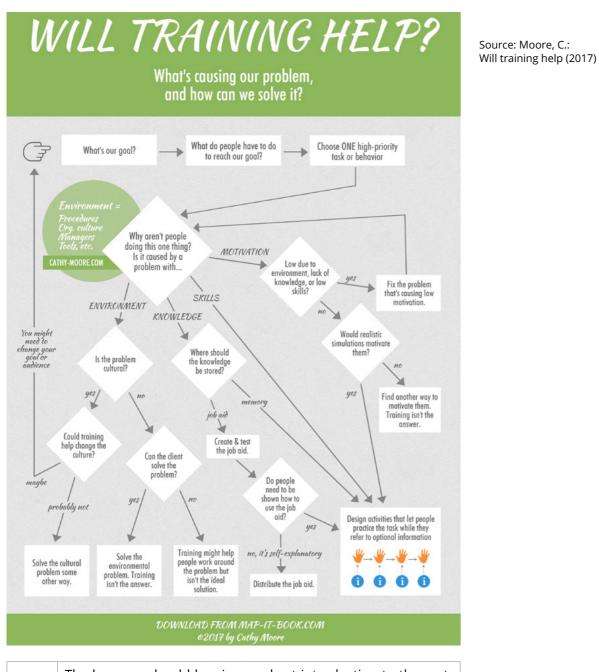
sroom

□ includes excursions

ce phase, the learners should create a product media content based on the previous work, which ate people to change their behaviour in relation to DG.

Each group creates an Action map 7 for one of their three SDGs. Here is an exemplary action map.





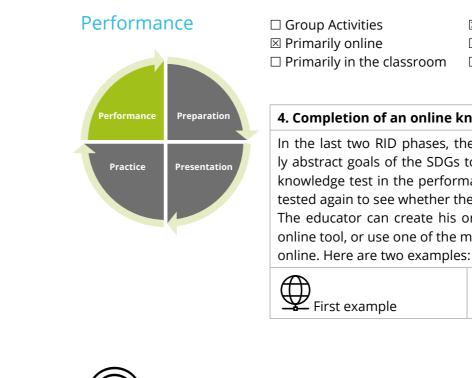
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The learners should be given a short introduction to the method of action mapping, but then they are on their own within their small group. They should independently explore action mapping in more depth and create an action map for their specific chosen SDG. On this basis, the group decides on a (possibly combined) media product (text, images, audio, video, screencast, website, podcast etc.) and creates it.

The aim of the **media product map** 7 should be to motivate people to change their behaviour in the sense of the Sustainable Development Goals (video, screencast, podcast, website etc.)

The created product will then be presented to the large group together with the action map.







Duration	1	2	3	4
Contact hours	4 h	4 h	8 h	1 h
(Online or in presence)				
Additional Self-study	2 h	2 h	3 h	1 h



Digital educational tools



Mindmap tool from Tools to support cooperative and collaborative work 7 Visual representation of ideas with direct links between the different items.

Action Mind map 7



Action mapping is an instructional design method to streamline and simplify the design process. The technique focuses on analyzing the problem at hand and defining an appropriate solution.



From an analytical point of view, media products consist of two elements: the immaterial cultural product (content) and the material carrier (medium). The choice of the right medium for a particular content is elementary in order to gain access to the recipient's attention and to be able to place the information.

🗵 Individual A	ctivities
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□ Primarily in presence

- □ includes excursions

4. Completion of an online knowledge test

In the last two RID phases, the learners have broken down the partly abstract goals of the SDGs to their own individual lives. In the final knowledge test in the performance phase, the content of the SDGs is tested again to see whether the knowledge has been consolidated. The educator can create his or her own knowledge test 7 using an online tool, or use one of the many tests on the SDGs already available



Second example





Online Knowledge test 7

Knowledge tests are methods for determining and assessing a person's level of knowledge with the help of standardised test procedures. A wide variety of tools can be found online for this purpose, which can be individually filled with questions.



Literature and links to sustainability contents

Basic literature:

- Trudel, R. (2018): Sustainable consumer behavior in consumer psychology review.
- Moore, C. (2017): Map It: The Hands-on Guide to Strategic Training Design, Montesa Press.
- United Nations Department of Economic and Social Affairs (2022): SDG Good Practices: A compilation of success stories and lessons learned in SDG Implementation-SECOND EDITION. UN DESA.
- United Nations Department of Economic and Social Affairs (2020): Exploring Youth Entrepreneurship, UN DESA.
- Eurostat (2017): Sustainable Development in the European Union. Monitoring Report on Progress Towards the SDGS in an EU Context, Publications office of the European Union.
- Karlsson, C.; Silander, D. (2020): Implementing Sustainable Development Goals in Europe. The Role of Political Entrepreneurship, Edward Elgar Publishing.
- Watts, S. (2020): Teaching Online. Online Teaching Survival Guide: The Best Teaching Strategies and Tools for Your Online Classroom, Wryting Ltd.



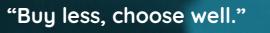
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SAMPLE CURRICULA: SUSTAINABILITY AT **YOUR FINGERTIPS**

Vivienne Westwood, Fashion Designer

SAMPLE CURRICULA: SUSTAINABILITY AT YOUR FINGERTIPS









Description of the learning situation:

The aim is to change the perception of ecofriendly behaviours and build positive motivation. This curriculum, built around a fun app, aims to prove that being pro-eco can not only be easy but also fun. It also aims to show environmental activists that using eco apps is fun and teach them how they can encourage people around them to use those apps actively.

Digital background of learners and educators/ Level of Involvement: Learner ⊠ Beginner □ Advanced Educator ⊠ Beginner □ Advanced

With this curriculum, also educators who run workshops and seminars at fairs and festivals have a ready-made structure for teaching pro ecological habits on the basis of eco apps - the value is that the learners will be able to continue habit development with the support of the app after the class.

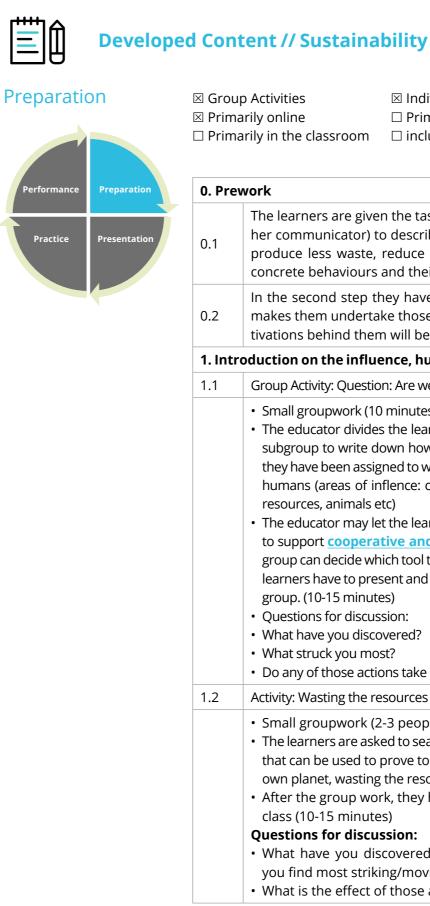
Pre knowledge on ecological topics related to those that are covered by the app is a bonus but not a requirement since there is suggested reading in the Handbook Library.



Learning outcome: Knowledge, Skills, Competencies

Having successfully completed this course, the adult learners will:

- understand the idea of sustainability,
- · be able to name areas where by changing their own behaviours they can become more sustainable,
- be willing to discover new behaviours that help being sustainable,
- be able to describe positive influence of single sustainability actions/behaviours on the environment but also on their family, neighbourhood,
- understand that everyday actions and behaviours matter and manage their usage of resources on a regular basis,
- become active OLIOers (or select another app that serves the same purpose i.e. helps in development of sustainable behaviors and habits, e.g. GoBeEco gamification)
- build community around sustainability (and maybe the OLIO app).



Practice

Developed Content // Sustainability at Your Fingertips //

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Individual Activities

Primarily in presence

□ includes excursions

The learners are given the task (distributed by e-mail or any other communicator) to describe what they are doing to recycle, produce less waste, reduce pollution, etc. They have to note concrete behaviours and their frequency.

In the second step they have to think of their motivation that makes them undertake those actions. The behaviours and motivations behind them will be discussed in class.

1. Introduction on the influence, humans have on the environment

Group Activity: Question: Are we guilty of harming the environment?

Small groupwork (10 minutes)

• The educator divides the learners into subgroups and asks each subgroup to write down how this specific area of influence, that they have been assigned to work on, is effected by activities of the humans (areas of inflence: climate, water resources, soil, green

• The educator may let the learners work in groups using the tools to support **cooperative and collaborative work** 7. Each subgroup can decide which tool they prefer. After the group work, the learners have to present and discuss their ideas in front of the big

Do any of those actions take place where you live?

Small groupwork (2-3 people) (10 minutes)

• The learners are asked to search the internet for more examples that can be used to prove to others people's wrongdoing to our own planet, wasting the resources being one of the examples. • After the group work, they have to present and discuss in the

· What have you discovered? Which of those discoveries did you find most striking/moving? Why?

What is the effect of those actions?



⊠ Group Activities

□ Primarily online

□ Primarily in the classroom

Presentation

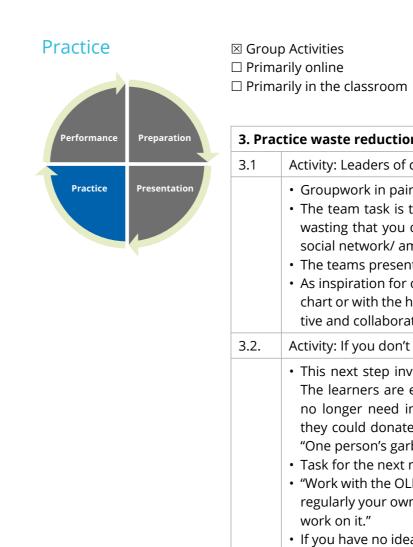
Performance	Preparation
Practice	Presentation

2. Was	ting food
2.1	Activity: Wasting food – can we still afford to do it?
	 The educator introduces the learning phase by focusing on one aspect of sustainability: Wasting food learners watch a video about foodwasting. Here are two examples: A general overview of the problem "Food wastage footprint" or A personal experience Tristram Stuart: Der Skandal der globalen Lebensmittelverschwendung The learners now have the opportunity to discuss what they have seen. Questions for discussion: Think of what you have just seen: where is the food being wasted? What are the reasons for that? Do you think the problem exists also in your city? What do you think of the "research" method described in the (longer) video? What are the things that you have learnt? Conclusion: "One of the actions we can take here and now is to start sharing abundance of food. There are may ways and I will challenge you to look for them but today we will start with the app, where you can share the food you cannot eat."
2.2	Activity: Time to act, now!
¢	 The educator introduces the OLIO App 7 and the website saying: "The OLIO App is a tool and a mechanism that can support individual walk towards sustainability. Your walk." The learners have the possibility to get information about the app and to download it for further work. "The website also provides you with more in-depth information about the idea and mission of the app olioex." The next step is for learners to click through the app and start working with it. The aim is to build up a network of contacts. The ecucator introduces the task for the next meeting (class): "Your task before our next meeting is to post in the app the food you would like to share – it may just happen that somebody from this group here will be interested in getting it from you, so stay in touch with one other in the app – you may have just found a way to reduce your grocery store bill."

□ Individual Activities

□ includes excursions

⊠ Primarily in presence



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Activity: Let's get inspired and see what others are doing Introduce the video "How Denmark is leading the food waste fight" with good and inspiring examples of food waste fight in a country and watch the video in class. **Discussion questions (5 minutes):** • What actions did the Danish take? • Who is involved in activities that stop food waste? · How do you feel about those initiatives?" General remark: • Throughout the programme use metaphors and numbers to make the point eg. between 33-50% of all food produced globally is never eaten, and the value of this wasted food is worth over \$1 trillion, what's more over 50% of food waste takes place in our homes. More on the olioex website.

- ⊠ Individual Activities
- ⊠ Primarily in presence

□ includes excursions

3. Practice waste reduction and set a good exmple

Activity: Leaders of constructive change

Groupwork in pairs (10 minutes)

• The team task is to think of an initiative/action against food wasting that you can start this week in the neighbourhood/ social network/ among your colleagues/family

• The teams present and share their ideas with the class.

• As inspiration for others, the ideas are written down on a flip chart or with the help of a digital tool supporting 7 cooperative and collaborative work.

Activity: If you don't use it – share it (15 minutes)

• This next step involves actively working with the OLIO App. The learners are encouraged to think about 1-2 things they no longer need in their room/apartment/house and which they could donate. These should then be added to the app. "One person's garbage can be somebody else's treasure". • Task for the next meeting(s):

• "Work with the OLIO App via the Goals tab or alternatively set regularly your own goals towards a more sustainable life and

• If you have no ideas for your own goals, download the GoBe-**Eco gamification** 7 and you will have a program for several weeks to develop your eco habits.



3.3 Invite the crowd to follow you (1h)

- In the pre work, the learners reflected on what makes them act more "green" in their daily behaviours. In this second step, these things are to be abstracted.
- The aim is to work together in class to create a list of motivational phrases and messages that resonate with them but also may resonate with people they know.
- Use a flipchart or an adequate digital tool to support cooperative and collaborative work 7 for this activity.
- Ask the learners: How can we transform those motives to sentences and messages that will appeal to the people you know. The educator can encourage the learners to use the knowledge of specific motivation factors (for example listed on the link) to build messages that would encourage their friends, maybe followers in social media to start applying green behaviours.
- The educator can motivate the learners to send some of these developed sentences or messages to people learners know or post them on their social media profiles

Performance

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- Group Activities ⊠ Primarily online □ Primarily in the classroom
- ⊠ Individual Activities □ Primarily in presence \Box includes excursions

4.1 Leaders of constructive change revisited (1h)

 The learners have recently set themselves tasks for a more sustainable life (see content 3.2 in this curriculum).

The educator may now lead the discussion asking questions:

- What projects have you started?
- Why these ones?
- Why not?
- What obstacles have you encountered?
- Now that the learners know so much more about the green behaviours and made progress in OLIO, plan together solid strategies for putting the individual projects in place. Each one of the projects will be reviewed in the large group.
- For the projects that were successful, it will be discussed whether they can be upgraded in any way.
- And for the projects that were not successful, the potential reasons for the failure will be analysed and a successful restart will be planned.

Additional examples:

- When considering a new purchase, a steam cleaner for example, think a while if you are going to use it on a regular basis. If not, check the SHARE section in the app to see if anyone is offering this item to share.
- Cooking too much on a regular basis? Offer in the app the surplus of the food for the price of ingredients (or deliberately cook more to share with others).
- Do you need a coat/ a slicer/ a screw driver? Does it have to be new or would a used but renovated one do the job? Give the app a chance, before you start searching online or in surface stores.

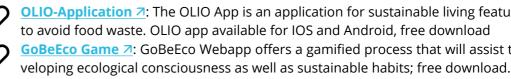


Timeline

Duration	1	2	3	4
Contact hours	3 h	2 h	3 h	2 h
Additional Self-study	1 h	2 h	3 h	0 h



Digital educational tools





Literature and links to sustainability contents

Basic literature:

- <u>www.interestingengineering.com</u>
- www.ubwp.buffalo.edu



Space for comments

- Make sure you have downloaded the app beforehand and are active in it to master the app but more importantly to share good example
- If individual learners do not wish to downlad the app the educator suggests that they follow the OLIO decide what you want to do with the app.
- If they still object, pair them with the learners that have downloaded the app so they can also participate and possibly get encouraged to change their behaviours without the app.
- You can also work with GoBeEco web based app that is built to support similar habits development.

OLIO-Application 7: The OLIO App is an application for sustainable living featured for its efforts **GoBeEco Game** 7: GoBeEco Webapp offers a gamified process that will assist the players in de-

- <u>www.fao.org</u>
- www.wdo.org

project and read about its mission and ideas on the webpage: https://olioex.com saying. Please get familiar with the project and then we will have time to talk about your objections. After that you will



SAMPLE CURRICULA: **PLAY OUT YOUR PATH TO SUSTAINABILITY**

"Climate change is real. It is happening right now, it is the most urgent threat facing our entire species and we need to work collectively together and stop procrastinating."

Leonardo DiCaprio, actor, in his acceptance speech for Best Actor at the 2016 Oscars

SAMPLE CURRICULA: PLAY OUT YOUR PATH TO SUSTAINABILITY





Learning situation

Description of the learning situation:

The learners/target group for this course/module are the educators themselves. The use of games and gamification processes in educational processes is still frowned upon and not understood well by many educators. This course/module will allow them to understand the concepts and mechanics that make games so immersive and motivating and will provide them the skills to use those mechanics in their educational processes to motivate and engage their learners while teaching and learning proeco skills and behaviors.

Digital background of learners and educators/ Level of Involvement: Learner Beginner ⊠ Advanced Educator Beginner ⊠ Advanced



Learning outcome: Knowledge, Skills, Competencies

Having successfully completed this course, the adult learners will:

- know the basic concepts of games and gamification
- · understand why the game mechanics and characteristics create such immersive and motivating environments
- understand how game mechanics and characteristics can be applied in other contexts, like educational setups
- be able to apply that knowledge into the design and implementation of their own gamified teaching towards the development of pro-eco skills



- \mathcal{O} where everything they do affects the environment \mathcal{O} both gameplay and the future. \mathcal{O} building new infrastructures to meet the increased demand. \mathcal{C}
 - restoration of a ravaged environment.
- P what are those mechanics and features and their impact on the players.



- can use in the local commerce shops.
- · Learners will view all the produced video-reports.
- · Class discussion on game mechanics and features.
- sion on the other games.

Developed Content // Play out your path to Sustainability //

⊠ Individual Activities

□ Primarily in presence □ includes excursions

Different games will be provided to the learners (organized in groups) focusing on sustainability and pro-eco skills. A template for the analysis of the games will be provided so that learners can identify the most important aspects of those games that make them attractive and motivating. Examples of games and gamified apps are potentially the following:

• Eco 7: Eco is an online game where players must collaborate to build a civilization in a world

Plasticity 7: Plasticity is a puzzle-platformer where players explore a plastic-ridden world. They traverse flooded cities and ravaged lands as they make choices that profoundly change

Working with water 7: Working with Water is a turn-based strategy web game helping teach students about developing and maintaining a sustainable water supply system. The game takes place in the Central Coast of New South Wales, Australia, where the need for clean drinking water increases as the community grows, and the player is responsible for

Terra nil 7: Terra Nil is a reverse city builder about ecosystem reconstruction. Turn a barren wasteland into an ecological paradise complete with different flora and fauna. Then clean up, leaving the environment pristine. Subverting the builder genre, Terra Nil is about the

JouleBug ↗: JouleBug is an app to make everyday habits more sustainable, at home, work, and play. JouleBug organizes sustainability tips into Actions that you Buzz in the app when you do them in real-life. Users can join local Communities for the latest sustainable news, limited-edition Actions and Badges, plus get access to local Challenges. Track your impact with career stats and fill the Trophy Case. Each group will produce a video-report explaining

• Biklio 7 : Biklio is an app that rewards users when they use a bike with coupons that they

· Learners will get access to the GoBeEco gamified app www.gobeeco.eu. They will be introduced to the app mechanics and functionality. Class will relate it with the previous discus-



Presentation



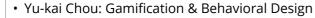
Group Activities	
🗵 Primarily online	
oxtimes Primarily in the classroom	

⊠ Individual Activities ⊠ Primarily in presence □ includes excursions

2. Concepts of games and gamification

- The educator presents the most important basics of games and gamification via the following thematic aspects:
- Why games are important: games and play
- Stuart Brown: Play is more than just fun
- · Game dynamics, mechanics and features
- 5 principles of game design (watch the video)
- The motivation to play and its relation to the game mechanics
- Nick Yee. CyberPsychology & Behavior.Dec 2006.772-775
- How to use game mechanics and characteristics in other contexts

Octalysis framework:



Gamification tools:

- Gamipress
- Kahoot

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Practice



⊠ Group Activities □ Individual Activities \boxtimes Primarily online ☑ Primarily in presence ⊠ Primarily in the classroom □ includes excursions

3. Design of a gamification strategy for a standard situation

- The aim of this learning phase is to get to know the underlying Ċ strategies of games with the help of the Octalysis framework. Learners will be grouped and each group will be given a standard educational situation that they need to gamify.
 - How to introduce gamification in basic education classrooms considering the ethics and difficulties of dealing with younger children
 - · How to use gamification to motivate students to learn difficult subjects like Physics and Mathematics in secondary education
 - How to use gamification to foster inclusion in different levels of school education

• How to address bullying in schools through gamified approaches Groups will propose a gamification strategy for the educational situation using the Octalysis framework. Class discussion on the proposed strategies.





□ Group Activities ⊠ Primarily online ⊠ Primarily in the classroom

own situation

- teristics, specific difficulties, etc.
- cluded in the strategy.
- tools needed to implement that strategy.



Timeline

Duration	1	2	3	4
Contact hours (Online or in presence)	4 h	2 h	4 h	4 h
Additional Self-study	0 h	2 h	4 h	4 h



Digital educational tools

Different digital games

A set of digital games focusing on sustainability and pro-eco skills

Octalysis framework

Octalysis framework tools, to understand how to design a gamification strategy

Kahoot

Kahoot as an example of a gamified tool

Gamipress

Gamipress, as an example of a tool to support a complete gamification strategy

⊠ Primarily in presence

□ includes excursions

4. Design and implementation of a gamification process for their

• Each learner (educator) will contextualize and analyse their own educational practice: level of education, taught subject, students' charac-

• Educators will propose a strategy to gamify that practice starting with the process of identifying the motivation drives of the students (tools and application process) and identifying the game elements to be in-

• Following a discussion with the trainer, the learners will identify the

• Educators will implementing the necessary mechanisms for the gamification strategy and the tools to evaluate the achieved impact.





Literature and links to sustainability contents

BASIC LITERATURE:

- The Art of Game Design, A Book of Lenses, Third Edition, By Jesse Schell, Published August 20, 2019 by A K Peters/CRC Press
- Actionable Gamification: Beyond Points, Badges, and Leaderboards Audible Logo Audible Audiobook
 Unabridged, Yu-kai Chou (Author, Publisher)
- The Gamification of Learning and Instruction: Game-based Methods and Strategies for Training and Education 1st Edition by Karl M. Kapp (Author), ISBN-13: 978-1118096345, ISBN-10: 1118096347

FURTHER READING:

- Theory of Fun for Game Design Second Edition, by Raph Koster (Author), ISBN-13: 978-1449363215, ISBN-10: 1449363210
- Rules of Play: Game Design Fundamentals (The MIT Press) Hardcover September 25, 2003 by Katie Salen Tekinbas (Author), Eric Zimmerman (Author),

OTHER RESOURCES:

Games

- <u>Eco 7</u>
- Plasticity 7
- Working with water 7
- Terra nil 7
- JouleBug ↗
- Biklio 7

Tools

- Yu-kai Chou: Gamification & Behavioral Design 7
- Gamipress 7
- Kahoot 7

Articles and videos

- Stuart Brown: Play is more than just fun 7
- 5 principles of game design 7
- Nick Yee 7: CyberPsychology & Behavior.Dec 2006.772-775.



Space for comments

SAMPLE CURRICULA: PLAY OUT YOUR PATH TO SUSTAINABILITY

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DIGITAL TOOLS LIBRARY

DIGITAL TOOLS LIBRARY





The education process shouldn't be boring. Learning through fun and joy is always more effective, and this solution works not only in childrens', but also adults' education process. It is extremely important to keep your learners' attention and surprise them constantly, which makes it easier to learn "naturally". Below you will find a compilation of tools that will facilitate your work in the organization of the teaching process, help in creating interesting and attention-grabbing educational materials, facilitate communication with students, and the verification of learning outcomes.

TOOLS CLASSIFICATION



Tools for designing queries and surveys

Digital Tool: AnswerGarden

Description: Enables the collection of feedback or impulses on a single, specific question. Answer options (single/multiple answers) can be set. Given answers are clustered in real time and visualised as an exportable word cloud.

Didactic purpose: Collaboration, Brainstorming, Information compilation, Answer collection

Digital Tool: Interankiety

Description: Easy program for creating surveys and forms, tests, votes and quizzes. A super simple editor and a lot of sharing options will allow you to easily collect valuable data.

Didactic purpose: Surveys, Opinion Collection

Digital Tool: Particify

Description: A digital feedback room is opened in which the educator can ask questions that are answered by the learners.

Didactic purpose: Surveys, Opinion Collection

Digital level:	⊠B	eginner	□ Advanced		
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Educator not		required			
Learner	not required				
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Learner	not required				
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Digital Tool: Puzzlemaker

Description: A puzzle generation tool for teachers, students and parents. Create and print customized word search, criss-cross, math puzzles, and more-using your own word lists. **Didactic purpose:** Performance test

Digital Tool: Skills-base

Description: A skills assessment platform with a self assessment feature included. It helps educators gather data needed to create better workforce strategies. It allows to figure out the skills and interests of the learners and is a great way to monitor the progress that can ultimately affect learning outcomes. **Didactic purpose:** Performance test, Collection

Digital Tool: Socrative

Description: It is an app for effective classroom engagement. The educator can check student's understanding with prepared activities or on-the-fly questions, and get realtime reports to visualize learning. With the app the lecture can be turned into a two-way exchange that gives immediate insights about teaching. Includes quizzes, surveys, team activities, and content from educators, easy-to-use assessment tool.

Didactic purpose: Performance test Collection

Digital Tool: Survey Monkey

Description: Cloud-based software in brand insights, market insights, product experience, employee experience, customer experience, online survey development, and a suite of paid back-end programs.

Didactic purpose: Collaboration, Brainstorming, Information compilation, Keyword collection

Digital level:	⊠B	eginner	□ Advanced	
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Learner	not required	
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Digital Tool: The Company Gym

Description: The Company Gym is a digital service available through several platforms, and especially designed for companies. It is a paid service, offering 3 pricing plans (and the possibility of a free trial).It offers a wide range of features of knowledge sharing in companies to its users. One feature is the creation of surveys.

Didactic purpose: Surveys, Opinion Collection

Digital Tool: Typeform

Description: Typeform is a user-friendly quiz, form and survey builder that allows you to ask your audience questions in different formats, including image-based, multiple choice, short answer, yes or no, and more.

Didactic purpose: Surveys, Opinion Collection

Digital Tool: Xwords Generator

Description: A crossword puzzle can be generated quickly and easily. The educator enters questions and answers and, if necessary, a desired solution word. The system then generates a crossword puzzle!

Didactic purpose: Performance test

Research own tools

Digital level:	🗆 Beginner	oxtimes Advanced	
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Digital level:	🗵 Beginner 🛛 Advance			
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Educator	not	not required				
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Tools to support cooperative and collaborative work

Digital Tool: Action mapping via creately

Description: Action mapping is a popular design process used by learning designers. Action mapping encourages learning designers to identify a measurable business goal as the first step in learning design.

Didactic purpose: Task management, Project management, Lesson planning, Competence assessment, Brainstorming, Information compilation

Digital Tool: Asana

Description: An online workplace featuring task and project management.

Didactic purpose: Project management, Task management, Assessment, Collaborative work

Digital Tool: Bitrix24

Description: An online workplace featuring task and project management and CRM features – chatting, video chat, website builder, CRM, marketing and analytics.

Didactic purpose: Task management, Assessment, Collaborative work

Digital Tool: Doodle

Description: A tool for scheduling and organising meetings.

Didactic purpose: Task management, Project management, Lesson planning

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Digital Tool: Etherpad

Description: Several people can create texts collaboratively and in real time (text editor as a web application). When editing, each person is assigned their own font colour. In addition to editing in the text, a live chat with all participants is also possible. **Didactic purpose:** Collaboration, Text creation, Text editing, Brainstorming

Digital level:	□B	eginner	\boxtimes Advanced	
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Educator	not	t required		
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Digital Tool: Google Jam-board

Description: Tool to visualize your ideas in a new and collaborative way.

Didactic purpose: Collaboration, Brainstorming, Information compilation, Keyword collection

Digital level:	⊠B	eginner	\Box Advanced		
Registration:					
Educator requ		uired			
Learner	not required				
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Digital Tool: Grammarly

Description: Grammarly is an all-in-one spellcheck and grammar tool. It helps users write error-free copy on Gmail, Facebook, Twitter, LinkedIn, and almost anywhere else on the web. **Didactic purpose:** Text generation

Digital level:	⊠B	🗵 Beginner 🛛 Advance					
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Digital Tool: Mentimeter

Description: It enables the creation of surveys in which realtime responses can be collected and evaluated. Also for collecting short statements, highlights or ideas displayed as speech bubbles, word clouds or pinboards.

Didactic purpose: Surveys, Brainstorming

Digital level:	⊠Β	eginner	□ Advanced			
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Digital Tool: Microsoft Forms

Description: Tool to visualize your ideas in a new and collaborative way.

Didactic purpose: Collaboration, Brainstorming, Information compilation, Keyword collection

Digital Tool: Microsoft Whiteboard

Description: Tool for collaboration and brainstorming in the work environment. Makes it easy for teams to conduct effective meetings, visualize ideas, and work creatively with notes, shapes, templates, and more.

Didactic purpose: Collaboration, Brainstorming, Information compilation, Keyword collection

Digital Tool: Mindmup

Description: A tool to brainstorm, create presentations and document outlines with mind maps, and publish one's ideas online and to social networks. **Didactic purpose:** Task management, Project management, Lesson planning, Competence assessment, Brainstorming, Information compilation

Digital Tool: Mindomo

Description: A tool for collaborative mind maps, concept maps, outlines, and Gantt charts. **Didactic purpose:** Task management, Project management, Lesson planning, Competence assessment, Brainstorming, Information compilation

Digital level:	⊠B	□ Advanced			
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Digital level:	🗵 Beginner 🛛 Adva		□ Advanced
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Learner	required		
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Digital Tool: Miro

Description: The tool allows to give ideas structure, share them across teams. The quickest, easiest way for teams to capture, organize, and map out their ideas.

Didactic purpose: Task management, Project management, Lesson planning, Competence assessment, Brainstorming, Information compilation

Description: The Company Gym is a digital service available through several platforms, and especially designed for companies. It is a paid service, offering 3 pricing plans (and the possibility of a free trial). It offers a wide range of features to its users, e.g. the existence of a community and collaborative space where users can develop their work and simultaneously share it with colleagues.

Didactic purpose: Task management, Assessment, Collaborative work

Digital level:	⊠B	eginner	\Box Advanced	
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Digital level:	□B	eginner	⊠ Advanced
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Digital Tool: Wortwolke

Description: Educators and learners can easily create their own word clouds.

Didactic purpose: Collection of Terms, Keyword Collection, Information Compilation, Material Creation, Brainstorming

Research own tools

Digital Tool: Trello

Description: Trello is a flexible and free way to organize plans and tasks and manage projects. Didactic purpose: Task management, Project management, Lesson planning

Digital level:	🗵 Beginner 🛛 Advan		
Registration :			
Educator	required		
Learner	required		
Link to tools:		Country	/ specific:
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Digital Tool: Wordart

Description: Individualised word clouds/tag clouds can be created from texts or collections of terms with your own colouring, font, shape, etc. Didactic purpose: Collaboration, Brainstorming, Information compilation, Keyword collection

Digital level:	⊠B	eginner	□ Advanced	
Registration:				
Educator	not	required	d	
Learner	not required			
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Tools for organising lessons

Digital Tool: Classroomscreen

Description: Digital, interactive (online) board with digital offers such as timer, clock, traffic light, random generator, several work symbols for silent work, group work and whispering as well as a volume meter on a large, interactive surface. The website can be used with a beamer, but is also optionally compatible with white-boards. Didactic purpose: Teaching organisation

Digital level:	🗵 Beginner 🛛 Advanced		
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Educator	not required		
Learner	not required		
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Digital level:	⊠B	eginner	□ Advanced	
Registration:				
Educator	not required			
Learner	-	-		
Link to tools:		Country	specific:	
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Digital Tool: DreamShaper

Description: DreamShaper is an online tool that helps teachers embed a motivational component in their lessons by developing themed entrepreneurial projects. Adaptable to any subject, students apply entrepreneurial techniques through a team experience. The teacher/educator has access to all his/her class projects, and can accompany the students' answers and progresses, as well as add new challenges and unlock new stages. The platform already has a set of content and tools that can be adapted to the teacher and student needs.

Didactic purpose: Collaboration, Lesson planning, Active learning

Digital	Tool: F	inga
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Description: The platform provides educators with an online whiteboard and bulletin board that the learners may also add to.

Didactic purpose: Keyword Collection, Answer Collection, Brainstorming, Collaboration

Digital level:	⊠B	eginner	□ Advanced
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Educator	req	required	
Learner	not	not required	
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⊠ Beginner □ Advanced

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Digital level:

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Educator

Learner

Digital Tool: Genialy

Description: The website lets educators create presentations, infographics, gamifications, interactive images and training material.

Didactic purpose: Material Creation, Explainer Video Production, Explainer Graphic Production, Explainer Presentation Production

Digital Tool: Google Jam-board

Description: Tool to visualize one's ideas in a new and collaborative way

Didactic purpose: Collaboration, Brainstorming, Information compilation, Keyword collection

Digital level:	□B	eginner	\boxtimes Advanced
Registration:			
Educator	req	uired	
Learner	not required		
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Digital level:	⊠B	🗵 Beginner 🛛 Advance		
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Educator	requ	required		
Learner	requ	required		
Link to tools:		Country specific:		
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Digital Tool: Microsoft Forms

Description: Tool to visualize your ideas in a new and collaborative way.Didactic purpose: Collaboration, Brainstorming,

Information compilation, Keyword collection

Digital Tool: Microsoft Whiteboard

Description: Collaboration and brainstorming in the work environment. Make it easy for teams to conduct effective meetings, visualize ideas, and work creatively with notes, shapes, templates, and more. **Didactic purpose:** Collaboration, Brainstorming, Information compilation, Keyword collection

Digital Tool: Nozbe

Description: Free app for making lists of tasks in projects from the most important to the least important; putting all one's ideas, concepts, tasks and reminders in the inbox; adding comments and attachments to tasks; creating categories and assigning to them various tasks and projects according to one's own concept; creating templates, checklists of tasks in projects that are repeated or similar to each other; sharing tasks in projects with other people or delegating them to many people at the same time. Could be sync with the Google calendar, Evernote, Google Drive or Dropbox.

Didactic purpose: Collaboration, Task management, Assessment, Teaching organisation, Project management

Digital Tool: QR Code Monkey

Description: QR codes can be generated and individualised (customisation: colours, layout, logo insertion, etc.).

Didactic purpose: Material creation

Digital level:	🗵 Beginner 🛛 🗆 Advance			
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Educator	required			
Learner	req	required		
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Digital level:	🗵 Beginner 🛛 Advance			
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Educator	not required			
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Digital Tool: Taskcards

Research own tools

Description: Educators are able to start bulletin boards, called "Task Cards". They can be made up of different forms of media such as texts, pictures or links and be accessed by the learners. While the website explains a lot it still takes some time to get into it. **Didactic purpose:** Collection of terms, Information compilation, Teaching Organisation

Digital level:	⊠B	eginner	□ Advanced			
Registration:						
Educator	required					
Learner	not required					
Link to tools:		Country specific:				
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Digital Tool: Cacoo

Description: App for multiuser creating, editing, comments on, and chating about diagrams. **Didactic purpose:** Collaboration, Brainstorming, Information compilation, Keyword collection

Digital Tool: Canva

Description: One of the most popular tools for creating social media graphics, Canva allows users to create high-quality images quickly using layouts, templates and design elements.

Didactic purpose: Explainer graphic production



Tools for media and material design

Digital Tool: Anchor

Description: Anchor is a platform for creating, distributing and monetizing one's podcast. **Didactic purpose:** Explainer podcast production

Digital level:	⊠B	Beginner	□ Advanced	
Registration:				
Educator	req	uired		
Learner	-			
Link to tools:		Country	specific:	
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Digital Tool: Animoto

Description: Animoto is a video platform that allows non-experts to create captivating multimedia. Animoto allows to turn existing video clips and images into video slideshows with little effort. One can either use one of their existing storyboard templates or build a video from scratch depending on how much time and ambition they have! **Didactic purpose:** Explainer video production

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Educator	requ	uired	
Registration:			
Digital level:	⊠B	eginner	\Box Advanced

Digital Tool: EDpuzzle

Description: A convenient tool for personalizing movies (from our database or EDpuzzle data-base) by cutting the appropriate fragment, adding one's own soundtrack, notes or quiz questions. **Didactic purpose:** Video production

Digital Tool: Lywi

Description: A website that allows learners to create their own comics, it is geared towards adults **Didactic purpose:** Explainer Comic Production, Material Creation

Digital level:	🗵 Beginner 🛛 Advance			
Registration:				
Educator	required			
Learner	not required			
Link to tools:		Country specific:		
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Digital level:	🗵 Beginner 🛛 Advanced			
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Educator	required			
Learner	not required			
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Educator	required			
Learner	not required			
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Digital level:	🗵 Beginner 🛛 Advance		
Registration:			
Educator	not required		
Learner	not required		
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Digital Tool: simpleshow

Description: It is an online interface that can be used to produce short videos in laying style. On the basis of a script text to be entered, the tool automatically selects prefabricated icons contained in the tool, divides sequences and produces a video proposal. This can be edited manually afterwards and optionally enriched with your own graphics. The final videos can be downloaded and saved locally. **Didactic purpose:** Explanatory video production

Digital level:		leginner	oxtimes Advanced				
Registration:							
Educator	not required						
Learner	required for access to full functionality						
Link to tools:		Country specific:					
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Digital Tool: Placeit

Description: This image and video tool allows brands to showcase their products and digital designs in realistic web/video environments. It can save hundreds or even thousands of dollars on externally sourced product videos and images.

Didactic purpose: Explainer video, graphics production

Digital Tool: Piktochart

Description: Visual content creator (infographics, presentations, reports, and prints), video recorder, & video editor in one intuitive platform. **Didactic purpose:** Graphic and infographic produc-

tion, Video production

Digital level:	⊠Be	🗵 Beginner 🛛 Advanc			
Registration:					
Educator	requ	required			
Learner	not	not required			
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Digital Tool: Pixlr Editor

Description: A free online photo editor for beginners. Tool for creating content by using professionally prepared templates. User can create photo collages with ready-made layouts and adding artistic effects.

Didactic purpose: Photo editor

Digital level:	⊠B	🗵 Beginner 🛛 Advance			
Registration:					
Educator	req	uired			
Learner	-	-			
Link to tools:		Country	specific:		

Digital Tool: Pixton

Description: A chargeable programme to discover, create and share comics. All imaginable learning scenarios can be created, as the characters, back-grounds and image content can be freely created and modified.

Didactic purpose: Comic production

Digital level:	⊠B	eginner	□ Advanced			
Registration:						
Educator requ		uired (cha	rgeable)			
Learner	not required					
Link to tools:		Country specific:				
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Digital Tool: Playmobil Comic Creator

Description: Website that allows learners to design their own Comics, it is easy to understand and use but does not offer a lot of different designs, thus, limiting the lerners' possibilities. Comics can be downloaded. **Didactic purpose:** Explainer Comic Production, Material Creationment, Brainstorming, Information compilation

Digital Tool: Powtoon

Description: Tool for creating engaging videos, especially for presentation purposes. The platform allows to choose from several templates and customize them according to one's needs. **Didactic purpose:** Explainer video production

Digital Tool: Prezi

Description: Prezi allows to create stand-alone presentations, appear alongside a presentation, and design awesome interactive graphics and charts. Prezi can be integrated with Zoom, Microsoft Teams, and Webdex and has an 'Inspiration' section where you can see what other brands have done to engage their audiences.

Didactic purpose: Explainer presentation production

Digital level:	⊠B	eginner	□ Advanced		
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Digital Tool: Stopmotionstudio

Description: An app for making stopmotion movies. **Didactic purpose:** Explainer Comic Production, Material Creation

Digital level:		eginner	oxtimes Advanced			
Registration:						
Educator	not	t required				
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Digital Tool: Action bound Description: The app allows educators to create scavenger hunts Didactic purpose: Material Creation

Digital Tool: TED-Ed

Description: TED-Ed allows to create personalized lessons using educational videos available on YouTube. "Flip your lesson" consists of 4 parts – Watch, Think, Dig Deeper, Discuss. First, the learners watch a film chosen by the educator, then answer the prepared questions, discuss, and if they like the topic, they get links to further materials to broaden their knowledge. On the TED-Ed website the educator can create his/her own lessons (or use the already created ones) and monitor the progress of learners after logging in. **Didactic purpose:** Video production

Digital Tool: VistaCreate

Description: VistaCreate is a graphic design tool that makes it easy for certified social media marketers to create stunning graphics without a lot of design knowledge.

Didactic purpose: Explain graphic production

Digital level:	⊠B	eginner	□ Advanced
Registration:			
Educator	req	uired	
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Digital level: ⊠ Beginner □ Advanced Registration: Educator required Educator Learner Country specific: Image: Country specific:

Digital Tool: ActionTrack (for designer)

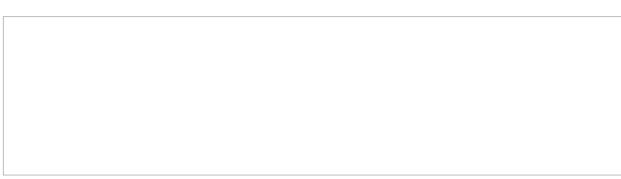
Description: ActionTrack (paid app) enables making mobile team games on your own. It gives engagement, collaboration, physical action, mobile learning, and fun team competitions. TAZ Action-Track platform is available worldwide in segments as diverse as education and training, travel and resorts, event companies and advertising agencies. **Didactic purpose:** Competence assessment, Project management

Digital Tool: ActionTrack (for user)

Description: ActionTrack brings digital world to physical environments. ActionTrack allows to experience different location-based activities all over the world. An activity may be for example a treasure hunt, a real-time team competition, a school test, an engaging and interactive school lesson, a corporate training event, a guided walk or drive, a marketing campaign or an interactive story. ActionTrack brings in interactive maps with checkpoints that can contain multimedia, information, interactive challenges, questions, route choices and much more.

Didactic purpose: Gamification of lessons, events

Research own tools



Digital level:	□B	⊠ Advanced		
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Digital Tool: GamiPress

Description: GamiPress is a free WordPress gamification plugin. It enables you to incorporate features common in gameplay into your website, such as point systems and competition between users. **Didactic purpose:** Competence assessment, Project management

Digital level:	□ Beginner 🛛 Advance				
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Educator	required				
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Digital Tool: Octalysis framework

Description: Tool for Learning how to use Gamification to make a positive impact on your work and life. **Didactic purpose:** Competence assessment, Project management

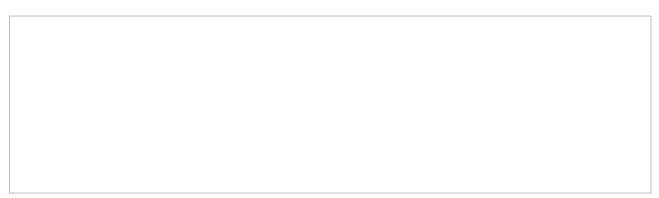
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Educator	not required			
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Digital Tool: One2tribe

Description: An advanced, paid platform for managing the effectiveness of teams' work through gamification, preformance and incentive programs. **Didactic purpose:** Competence assessment, Project management

Digital level:	🗆 Beginner 🛛 Advance		
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Educator	required		
Learner	required		
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Research own tools



Quizz Tools

Digital Tool: Action bound

Description: It is a Rapid Refresh quiz maker tool with a spread sheet format. The delivery can be split into chunks. With the free basic plan one can see the results of the learners stand in terms of knowledge, skills, and compliance training in the tool. One can create training and other strategies to improve the standing of one's learners. **Didactic purpose:** Surveys, Opinion Collection, Performance test

Digital Tool: Interankiety

Description: Easy program for creating surveys and forms, tests, votes and quizzes. A super simple editor with a lot of sharing options that allow to easily collect valuable data.

Didactic purpose: Surveys, Opinion Collection

Digital Tool: Kahoot

Description: To create gamified quizzes, lessons, presentations, and flashcards for students, employees, and everyone else.

Didactic purpose: Collaboration, Brainstorming, Information compilation, Keyword collection

Digital Tool: Proprofs

Description: A cloud-based Learning Management System that can be used as a skills assessment tool with over 100,000 readily available questions you can use when creating your online assessments. Test types: multiple choice, matching, fill in the blank, essay. System offers customizable quiz templates, quiz branding, completion Certificate, reports, **Didactic purpose:** Performance test, Digital testing Survey

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Digital Tool: Quizizz

Description: To create gamified quizzes, lessons, presentations, and flashcards for students, employees, and everyone else.

Didactic purpose: Performance test, Digital attractive lessons, Digital testing, Teaching and learning by playing

Digital level:	🗵 Beginner 🛛 Advance		
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Digital Tool: Slido

Description: Tool with live polls, Q&A, quizzes and word clouds. Tool can be used in the lesson, online or in-between.

Didactic purpose: Performance test, Digital attractive lessons, Digital testing, Teaching and learning by playing

Digital level:	🗵 Beginner 🛛 Advanced			
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Digital Tool: Typeform

Description: Typeform is a user-friendly quiz, form and survey builder that allows you to ask your audience questions in different formats, including image-based, multiple choice, short answer, yes or no, and more.

Didactic purpose: Performance test, Digital attractive lessons, Digital testing, Teaching and learning by playing

Digital level:	⊠B	🗵 Beginner 🛛 Advanc	
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Tools for selflearning

Digital Tool: DreamShaper

Description: DreamShaper is an online tool that helps teachers embed a motivational component in their lessons by developing themed entrepreneurial projects. Adaptable to any subject, students apply entrepreneurial techniques through a team experience. The students have access to a set of challenges and content prepared by their teachers, which promotes autonomy and self-learning. **Didactic purpose:** Collaboration, Lesson planning, Active learning, Project-based learning

Digital Tool: Kahoot

Description: Tool to create gamified quizzes, lessons, presentations, and flashcards for students, employees, and everyone else.

Didactic purpose: Performance test, Digital attractive lessons, Digital testing, Teaching and learning by playing

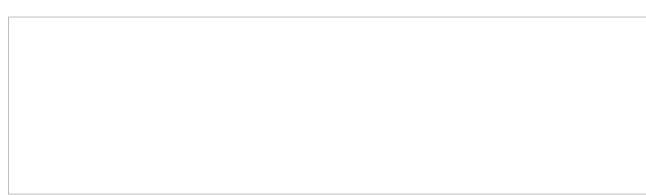
Digital Tool: Slido

Description: Tool with live polls, Q&A, quizzes and word clouds. Tool can be used in the lesson, online or in-between.

Didactic purpose: Performance test, Digital attractive lessons, Digital testing, Teaching and learning by playing

Research own tools

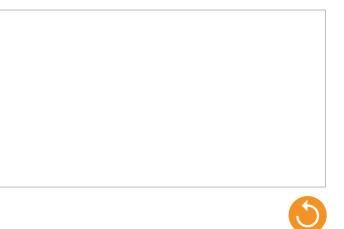
Research own tools



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SOURCES TO START ECO-FRIENDLY TRANSFORMATION



In 2015 all members of the United Nations (193 in 2022) declared 17 global goals for sustainable development (Sustainable Development Goals; SDG's) for all human beings, to be fulfilled by 2030. From these 17 goals, GoBeEco derived 7 goals for this Digital Edu Skills Handbook:







SDG 6: Clean Water & SDG 14: Life below water



SDG 12: Responsible Consumption and Production





SDG 13: Climate Action



SDG 9: Industry, Innovation and Infrastructure



SDG 11: Sustainable Cities and Communities



Overarching Sustainable Activities

In this library you will find various links to "Knowledge", "Guides" and "Tools" on the specific SDGS. The category Knowledge refers to websites, podcasts, videos etc. that provide information on the SDG topic. The guides category refers to resources that provide tips and tricks and specific inspiration. The links to the tools help the user, for example, to make concrete calculations on individual CO2 emissions or provide the opportunity to approach the topic via gamification.



SDG 7: Activities for affordable and Clean Energy



Knowledge

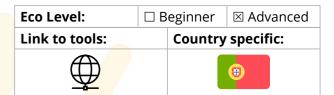
Eco-friendly activity: Associação Lusófona de **Energias Reno-váveis**

Description: Associação Lusófona de Energias Renováveis is an NGOD (Non-Governmental Organization for Development) whose mission is to promote renewable energy in Portuguese-speaking countries. The Association works as a facilitator of business opportunities by supporting the private sector and attracting investment and creating a cooperation platform and constituting the common voice of renewable energies in Portuguese-speaking countries. However, their website also works as a repository for information and useful resources related to energy and renewable sources. **Category:** Renewable and clean energy

Eco-friendly activity: Conversas Energéticas Description: A podcast created by students enrolled in the Energy and Environmental Engineering degree of the University of Lisbon. In each episode, they welcome a specialist on the topic and talk about energy transition, renewable options, decarbonisation, and the respective existing challenges. **Category:** Renewable and clean energy

Eco-friendly activity: Make your home green

Description: Here are listed the best ways to power your home with renewable energy. Category: Renewable and clean energy



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Eco-friendly activity: Pensamento Renovável

Description: A podcast where João Salgado, CEO of the company "Enbiente" (in the field of renewable energies) together with other guests, address various topics related to the theme of the energy transition, sustainable energy production, decarbonization, the social and economic impact of this innovation and among other related topics. **Category:** Renewable and clean energy

Eco Level:	🗵 Begin	ner 🗆 Advanced	
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Eco-friendly activity: Reduce your Household Energy Use

Description: Short introduction how high the U.S. energy consumption is on the rise and 40 ways to reduce the household energy use. **Category:** Reduce energy

Eco-friendly activity: Sposoby na oszczędzanie prądu

Description: An article about simple way for saving energy.

Category: Saving energy, Renevable energy

Eco-friendly activity: Woran kann man saubere Energie erkennen

Description: The website lists features of clean energy. **Category:** Clean energy

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Eco-friendly activity: 5 dicas para poupar energia elétrica

Description: An article published by Endesa, one of the largest electricity providers in Europe, which presents some tips on how we can save electricity in our homes.

Category: Saving energy

Eco-friendly activity: Capital Verde

Description: It is a section of the "Sapo" website dedicated to environment-related topics. This article entitled "Oito dicas – além das óbvias – para pou-par energia em casa" presents less obvious tips on how we can save energy at home, such as changing electricity tariffs or investing in a self-consumption system. **Category:** Saving energy

Eco-friendly activity: Eco Tips for Sustainable Living

Description: Different tips categorized in Reduce, Reuse, Recycle, Refuse, Rot and many more. **Category:** Responsible consumption, conserving energy and conserving water

Eco-friendly activity: Umstieg auf sauberen Strom

Description: The article gives tips on how to change the provider type of energy being used in a household. **Category:** Clean energy

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Eco-friendly activity: Być jak Ignacy

Tools

Description: Gamified web application for school teachers/trainers/students. **Category:** Clean Energy, Clean Transport

Eco-friendly activity: Earnest App begleitet in ein nachhaltigeres Leben

Description: This app tracks the energy consumption and gives tips/"challenges" to reduce this amount. **Category:** Reduce energy

Eco-friendly activity: Kalkulator oszczędności
energii
Description: Tool for calculat <mark>e how to sav</mark> e energy
at home.

Category: Saving energy

Eco-friendly activity: Milo

Description: App that functions as a GPS device but helps users plan journeys taking into account charging stations for their electric cars along the way. **Category:** Clean transport

Eco-friendly activity: Reduce the energy use Description: Website with 45 things you can do at home that don't involve energy (in most cases). Category: Reduce energy

Eco-friendly activity: Save Electricity

Description: Website with free ways to save electricity everyday. Category: Clean Energy

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Eco-friendly activity: Águas de Portugal

Description: A YouTube channel by the company which controls the Portuguese water supply and treatment. They post several videos about the origin, the distribution, the responsible use and preservation of water, but also about the wide range of existing professions related to water, the national projects and actions currently taking place, and, in particular, what is being done to meet the sustainability goals for the decade.

Category: Responsible use and preservation of water

Eco-friendly activity: Environmentally friendly water sports

Description: To reduce carbon emission and not to hurt the life below water; at the website there are some activities to still enjoy water sports. Category: Life below water and clean water

Eco-friendly activity: Help the water supplies

Description: Website with ways to save the water supplies and to don't fund water-grabbers so that everyone has access to water.

Category: Reduce water and clean water

Eco-friendly activity: Origem da Água

Description: A Portuguese series with multiple episodes shot along the main water lines/streams of Madeira Island, giving information about the fauna and flora, as well as the human activities carried out related to the water on the island. Category: Water cycle, use and preservation

SDG 6: Activities for clean water & SDG 14: life below water



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Eco-friendly activity: Podcast zum Schutz des Trinkwassers

Description: A podcast episode on polluted and unsanitary water, specifically focused on the SDG 6. **Category:** Clean Water

Eco Level:	🗵 Beginner		□ Advanced
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Eco-friendly activity: Safe Water

Description: Website with everyday tips for responsible water usage. **Category:** Clean Water

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Guides

Eco-friendly activity: 10 Formas de Contribuir para Salvar os Oceanos

Description: A publication from the National Geographic Portugal website that presents ten suggestions on how we can help to save the oceans. In this sense, some of the main examples to be adopted are: consuming less plastic to limit its impact and pollution of the oceans; taking care of the beaches, making sure we always leave them clean; or, for example, not buying goods that exploit marine life. **Category:** Life below water, ocean protection

Eco-friendly activity: Água em Portugal: porquê, quando e como poupar água

Description: An article which explains why, when and how we can save water in Portugal. The purpose of the article is to alert readers that saving and conserving water is a responsibility of everyone and that on a daily basis there are several changes we can adopt to reduce water consumption. **Category:** Responsible consumption

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Eco-friendly activity: Eco Tips for Sustainable Living

Description: Different tips categorized in Reduce, Reuse, Recycle, Refuse, Rot and many more. **Category:** Responsible consumption, conserving energy and conserving water

Eco-friendly activity: Hábitos para reduzir o consumo de água em casa_

Description: An article explaining how we can change our behavior, reducing water consumption. The article calls attention to the urgency of becoming aware of the problem, in a period when Portugal uses more than 40% of the water that it has available and which puts the country at a high risk of severe water shortage. **Category:** Responsible consumption

Eco-friendly activity: Schutz der Flüsse

Description: The article gives easy tips on how to help rivers. **Category:** Life below water

Eco-friendly activity: Schutz der Ozeane

Description: The article gives easy tips on how to protect the ocean when near one. **Category:** Clean Water and Life below Water



Eco-friendly activity: Ecowaters

Description: A website and a movement which promotes the use of reusable bottles and aims to reduce plastic production. People can buy their bottles and then use the website to search for the nearest water filling stations (they are located inside the establishments belonging to a famous supermarket chain in Portugal, so they are easy to find). **Category:** Promote the consumption of safe tap water, avoid bottled water

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Eco-friendly activity: Garden rainwater calculator

The calculator allows you to calculate the need for water intended for watering the garden, the amount of which depends on many factors (type of planting, location of the garden, season of the year and many others).

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Category: Promote saving consumption and rain water

Eco-friendly activity: H2O Quality

Description: An app promoting the safe consumption of tap water, by allowing the user to introduce its address in the app, and know the quality of the water being distributed in that specific location. Users can also search on the map for the location of drinking fountains near them, so they can refill their reusable bottles.

Category: Promote the consumption of safe tap water, avoid bottled water

Eco-friendly activity: Kalkulator oszczędności w wyniku spożywania wody kranowej

Description: Comparison of the costs of consuming tap water in relation to the costs of drinking water from bottled water.

Category: Promote drinking tap water

Eco-friendly activity: Kalkulator oszczędności wody

Description: Calculator of consumption and costs of drinking water. The calculator allows you to calculate the cost of drinking water used in the household for various purposes. Additionally, it shows the costs of drinking water and sewage disposal for many locations in Poland.

Category: Promote saving consumption and rain water

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Eco-friendly activity: Kalkulator oszczędności wody poprzez zastosowanie odpowiedniej armatury

Description: Comparison of water consumption through the use of traditional fittings and intelligent fittings that reduce water consumption. **Category:** Saving consumtion water

Eco-friendly activity: Saving water

Description: Website shows different ways to save water and to check sanitary facilities. **Category:** Reducing water consumption and better sanitation

Eco-friendly activity: Working With Water

Description: A turn-based strategy web game helping teach learners about developing and maintaining a sustainable water supply system. The game takes place in the Central Coast of New South Wales, Australia, where the need for clean drinking water increases as the community grows, and the player is responsible for building new infrastructures to meet the increased demand.

Category: Sustainable water management, clean water

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SDG 12: Activities for responsible consumption and production



Knowledge

Eco-friendly activity: Do Zero

Description: Podcast about several themes related to the environment and sustainability, ranging from the circular economy, consumption practices, no waste habits, water and energy usage and pollution. The host and other specialists approach the relationship between sustainability and many areas of our lives, such as physical and mental health, food, beauty and well-being, politics and our relationships.

Category: Sustainable consumption and production, Pollution, Waste, Eco-friendly lifestyle

Eco-friendly activity: How to spot greenwashing? Description: Website shows how to live a greener lifestyle and check firms if they are really as green as they make out.

Category: Sustainable consumption

Eco-friendly activity: Podcast #EkoPoRadio

Description: Podcast thematizes what does it mean to be and live eco and if helping the planet really costs us a lot. Every Wednesday it is presented a new episode of #EKOpoRADIO ecological podcast series in Wrocław. **Category:** Sustainable consumption

Eco-friendly activity: Podcast Co w tym koszu? Description: Podcast about zero waste lifestyle, responsible purchasing. **Category:** Sustainable consumption

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Eco-friendly activity: Podcast Jest zielono

Description: Podcast is Green is the first program in Poland about ecology, zero waste life, limiting consumption and a green lifestyle. Category: Sustainable consumption

Eco-friendly activity: Positive examples you can promote

Description: Here there are listed examples of carbon finance project activities that aim to promote sustainable production and consumption.

Category: Sustainable consumption and production

Eco-friendly activity: Secondhand Einkauf

Description: The website gives information on Secondhand shopping and its advantages. **Category:** Responsible Consumption

Eco-friendly activity: Sustainable fashion Zrównoważona moda

Description: Article about textile industry environmental impact and sustainable fashion trends. Category: Sustainable consumption and production, Pollution, Waste, Eco-friendly lifestyle

Eco-friendly activity: Tips for a more responsible shopping

Description: The presented steps will help people to shop more responsible. Category: Sustainable consumption

Eco-friendly activity: Wissenswertes zu Müll und Recycling

Description: It is an introduction to recycling in Germany and features a quiz on whether the user knows how to recycle.

Category: Respons ible Consumption, Waste

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Guides

Eco-friendly activity: 6 ideias a pôr em prática para um consumo sustentável

Description: An article published in ekonomista, an online publisher, presenting some tips about how we can adopt a more sustainable behaviour in our daily lives. Consuming less plastic, moving in a sustainable way or repairing instead of buying are some of the suggestions presented. **Category:** Ecofriendly lifestyle

Eco-friendly activity: 6 razões para fazer compras em segunda mão

Description: An article that aims to present some of the advantages of shopping second-hand, highlighting the need to buy in a more responsible way, and also benefiting from the attractive prices of these products.

Category: Eco-friendly lifestyle, responsible consumption

Eco-friendly activity: 7 dicas susten-táveis para ir ao supermercado

Description: An article published on the Noctula Channel, a portal focused on sharing knowledge, especially in the environmental area. In this publication there are some tips presented for us to follow when we are shopping, so that these purchases can be more ecological and sustainable. Among the main tips are, for example, buying glass products or products with refill options, avoiding packaging or using reusable bags.

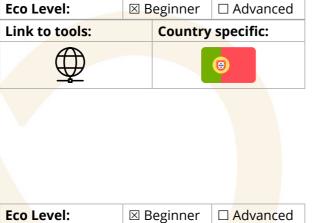
Category: Eco-friendly, no waste lifestyle

Eco-friendly activity: 7 Dicas Zero Waste

Description: Mafalda Pinto Leite is the author of the MPL' daily blog, which aims to share tools that contribute to changes in habits that improve health. She shares tips on how we can consume more vegetables or use natural beauty products. This article presents 7 zero waste tips, which include using biodegradable products, composting, buying durable items, among other tips on how to live with less waste.

Category: Ecofriendly, no waste lifestyle

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Eco-friendly activity: Eco Tips for Sustainable Living

Description: Different tips categorized in Reduce, Reuse, Recycle, Refuse, Rot and many more. **Category:** Responsible Consumption, Conserving Energy and Conserving Water

Eco-friendly activity: Green online shops

Description: Instead of supporting big online shops here is a website with some green alternatives.

Category: Sustainable consumption

Eco-friendly activity: Podcast Klimatyczne rozmowy

Description: A podcast about responsible consumer choices, about changing everyday habits to more environmentally friendly. Category: Ecofriendly lifestyle

Eco-friendly activity: Sustainable clothing brands Description: There are many different sustainable clothing brands but here is a link to a small collection. **Category:** Sustainable consumption

Eco-friendly activity: Zero waste Description: Website shows tips on a better waste behavior.

Category: Responsible consumption

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Tools

Eco-friendly activity: Ekoquiz o segregacji odpadów

Description: A quiz on the segregation of troublesome waste.

Category: Waste segregation

Eco-friendly activity: Lebensmittelverschwendung bekämpfen, TooGoodToGo App

Description: The app sells food that is about to be thrown away at a lower price.

Category: Responsible Consumption, Food waste

Eco-friendly activity: Lebensmittelverschwendung bekämpfen und regionalere/saisonalere Ernährung

Description: The App proposes recipes with what is left in the fridge once the user logs in and, furthermore, shows them what seasonal fruits and veggies can currently be found in their region. Category: Responsible Consumption

Eco-friendly activity: Plasticity

Description: Plasticity is a puzzle-platformer where players explore a plastic-ridden world. They traverse flooded cities and ravaged lands as they make choices that profoundly change both gameplay and the future.

Category: Responsible consumption and production, plastic waste

Eco-friendly activity: Waste App

Description: An app that intends to help people know what they should do with the waste and residues they produce, ranging from the simplest types (paper boxes, plastic and glass bottles) to the most complex ones (credit cards, wood, teeth brushes, furniture, expired medicine, etc.). It also provides a national map showing where citizens can donate and offer several products (food, clothes, books, sports apparel, technological equipment, etc.) near them.

Category: Sustainable consumption, waste disposal

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13 CLIMATE

SDG 13: Activities on climate action



Eco-friendly activity: Bom Ambiente

Description: A podcast from the Portuguese Association of Geologists, focusing on what is happening to our planet in a geologically point of view. It explores aspects related to, for the example, the connection between environmental and the soils, energy exploration, and the consequences of global warming.

Category: Climate action, global warming, protecting nature, sustainable city

Eco-friendly activity: Dolnośląski Ekopotencjał w obliczu zmian klimatu - mini serial edukacyjny Description: An educational mini-series about climate change and ways to mitigate the effects of climate change in Wrocław. Provides examples of local initiatives undertaken by residents. Category: Climate Change

Eco-friendly activity: Podcast – Raport z przyszłości

Description: "Future report. How to save our planet?" a podcast of Audioteka and Greenpeace Polska, in which Marek Józefiak from Greenpeace talks with his guests about the key environmental challenges that lie ahead. How to move away from fossil fuels, how to save bees, how to break with plastic, what each of us can do for the planet - these are just some of the questions we will try to answer.

Category: Protecting nature, climate action, clean water and sustainable city

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Eco-friendly activity: Podcast zu Klimaschutz

Description: On this weekly podcast listeners get informed about current events in relation to climate change and they get discussed. **Category:** Climate Change

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Eco-friendly activity: Podcasts Klimawandel/schutz

Description: On this podcast Claudia Kemfert informs about current events in relation to climate change.

Category: Climate Change

Eco-friendly activity: The climate is cl	hanging-
but are you?	

Description: Website gives tips how peoples voice as a consumer, customer, active citizen make a change and which things can be done. **Category:** Climate action

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Eco-friendly activity: What can be done to protect nature?

Description: Website shows ways to impact the health and quality of natural spaces in local areas. **Category:** Protecting nature, climate action, clean water and sustainable city

Eco-friendly activity: Zielony Podcast

Description: Podcast thematises about climate actions and how to avoid a climate disaster with for example new technologies.

Category: Protecting nature, climate action, clean water and sustainable city

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Guides

Eco-friendly activity: 10 ideias para combater as alterações climáticas

Description: An article published by Endesa, an electricity and gas supplier in Portugal. The article seeks to give some tips on what is the most effective way to combat climate change and enhance the transition to a sustainable energy model. This publication is inserted in the news section of the company's website, dedicated to sustainability and energy efficiency topics.

Category: Climate action, climate change

Eco-friendly activity: Alterações climáticas: como combatê-las

Description: An article providing examples of how cities can be more attractive while reducing pollution and improving ageing infrastructures. Some examples of smart streets, green buildings, and sustainable water management are presented as the best practices to follow.

Category: Climate action, climate change, sustainable cities

Eco-friendly activity: Cinco medidas que pode tomar em Portugal para combater as alterações climáticas

Description: An article which presents five measures that can be adopted in Portugal to tackle climate change. Some of the main consequences of climate change are presented, such as its threat to biodiversity, but also the responsibility that companies and governments have in adopting more environmentally and sustainable behaviors.

Category: Climate action, climate change

Eco-friendly activity: Eco-activities

Description: Website presents different things to do for not only earth-lovers but for people who want to do lower their carbon footprint. **Category:** Climate action and responsible consumption

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Eco-friendly activity: Klimaschutz

Description: The article gives easy tips on how to protect the climate in all areas of day-to-day life. **Category:** Climate action

Eco-friendly activity: Klimatyczna edukacja – materiały szkoleniowe

Description: Website gives training and educational materials, curriculum for environmental educators and activists fighting to mitigate the effects of climate change.

Category: Climate action, climate change, sustainable cities

Eco-friendly activity: List to help fight the climate change

Description: Website presents things which can be done right now on climate change to make a difference.

Category: Climate action

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Eco-friendly activity: Carbon Foot-print

Tools

Description: The website calculates people's carbon footprint and gives tips on how to reduce emissions. **Category:** Climate action

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Eco-friendly activity: Game "Świat na rozdrożu" – "World at Cross-roads"

Description: Strategic game – a highly playable Windows computer game simulating the rise of the industrial civilization, from 1900 to 2200. **Category:** Climate action

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Eco-friendly activity: JouleBug

Description: JouleBug is an app that helps users form green habits by rewarding you for doing good. The app encourages users to be more sustainable by awarding them with various badges and points every step of the way. Users can complete different challenges, share the steps they're taking to go green with your social networks, join local communities, like and comment on others' sustainability efforts, and earn points and score achievements to see how green they are compared to their community.

Category: Climate action, sustainable and ecological lifestyle

Eco-friendly activity: Kalkulator śladu węglowego

Description: The website calculates people's carbon footprint and gives tips on how to reduce emissions. **Category:** Climate action

Eco-friendly activity: Messung individueller

CO2-Ausstoß

Description: The website tracks a users carbon footprint and challenges them to not go above their CO2 limit.

Category: Climate Change

Eco-friendly activity: Recycle BinGo

Description: A game that intends to promote recycling habits. It challenges people to separate the trash they produce and to take it to the nearest recycling point. Every time they go, they'll have to check-in in the app and collect some points and rewards, that will contribute to their progression in the game. The game also presents users with several other challenges they have to resolve. **Category:** Climate action, waste, sustainable cities

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SDG 9: Activities for industry, innovation, and infrastructure



Knowledge

Eco-friendly activity: Environmentally friendly warehouse

Description: Website presents ways supply chain managers can make their warehouses environmentally friendly.

Category: Sustainable warehouse

Eco-friendly activity: Falar em Sustentabilidade

Description: A podcast from Deco Proteste, the Portuguese Association for Consumer Protection. Each episode aims to gather representatives from companies, consumers and organizations to share best practices and raise awareness of the impact of human behaviour on the sustainable future of the planet. **Category:** Sustainable production, sustainable economies

Eco-friendly activity: Green logistic

Description: Website gives best practice tips for a sustainable warehouse. **Category:** Sustainable warehouse

Eco-friendly activity: Minuto Azul – Edifícios + sustentáveis

Description: A Portuguese podcast that in each episode presents tips and content about sustainability, circular economy, and construction. **Category:** Sustainable food production

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Eco-friendly activity: Podcast Przyszłość. Żywność. Planeta

Description: The article describes ways how today's industry becomes more sustainable and why this is an important development that is beneficial to everyone.

Category: Sustainable food production

Eco-friendly activity: Wie können Unternehmen nachhaltiger werden

Description: Podcast discusses the topics of hunger and malnutrition, as well as wasting and overconsuming food and it talks about zero waste and excess plastic packaging, and more plant-based diets.

Category: Industry and Innovation



Eco-friendly activity: Como tornar o seu negócio sustentável a nível social e ambiental

Description: An article explaining how to make business practices more sustainable, giving information which ranges from how to turn routines into more ecological ones, how to implement a residues management system, promote the good quality of air, and buy more consciously. **Category:** Sustainable businesses, work environment

Eco-friendly activity: Empresas e Sustentabilidade

Description: A good practices guidebook which comprises a list of practical suggestions, aimed at entrepreneurs and collaborators. The book also reunites examples of other companies that have decided to take a more sustainable path. Moreover, it also includes a selection of institutions providing goods and services that have a positive impact on sustainability.

Category: Sustainable businesses and companies, work environment

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Eco-friendly activity: Improving the work environment

Description: Website presents tips how to improve work environment and why working comfortably is not only good for the well-being but also for the quality of the work.

Category: Work environment, good health and well-being

Eco-friendly activity: Responsible travel

Description: Website give tips for more responsi-

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ble travelling.

Category: Infrastructure

Tools

Eco-friendly activity: Go green in the office

Description: The website shows different ideas to make the office greener, which often saves money in the process.

Category: Sustainable office

Eco-friendly activity: Zero Desperdício

Description: An WebApp that is the first Portuguese platform dedicated to contributing to the implementation of a circular economy system in the country. As a management platform for cities, it can be applied to the management of various waste circuits, such as food, plastic, medicines, textiles and many others. Through this, it promotes sustainability and a policy of no waste, and it offers free access and proximity to food, any clothing and home textiles, by a household with little or no consumption capacity.

Category: Sustainable food production

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SDG 11: Activities for Sustainable Cities and Communities



Knowledge

Eco-friendly activity: 1 Minuto pela Terra Description: A podcast that belongs to a known Portuguese radio station, Antena 1. Its aim is to provide, in each episode, families and individuals with practical tips and suggestions that they can implement in order to become eco-friendlier and more sustainable, namely in the area of energy conservation and energy efficiency, but also in other areas such as water, air, waste, noise or nature protection.

Category: Eco-friendly lifestyle, sustainable cities and communities

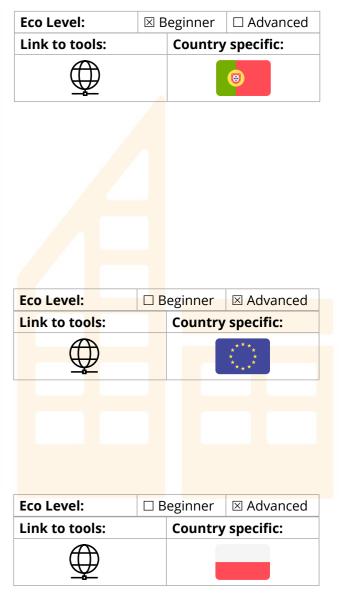
Eco-friendly activity: Gender Equality in the workplace

Description: Here are different ways to enhance a diverse and inclusive workplace allows different ideas and creativity which will improve performance, processes and productivity.

Category: Gender Equality and sustainable community

Eco-friendly activity: Podcast Muda Talks

Description: A podcast about sustainability in all aspects of our lives. About the possibility of a different approach to natural resources, cities, architecture, way of working, education, clothes and other policies. Our world is reemerging, and we are redefining our values, so the answers so far are no longer adequate. So what and how do we want to keep and what must be new? **Category:** Sustainable community





Eco-friendly activity: Podcast über den Aufbau nachhaltiger Städte

Description: In this podcast about the development of society and industry in regards to sustainability experts on the fields of economy, politics and science get interviewed.

Category: Industry, Innovation and Sustainable Cities

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Eco-friendly activity: Podcast zu Nachhaltigen Städten

Description: A podcast episode on a project about researching ways to make a city more sustainable under the guidance of Oliver Parodi.

Category: Sustainable Cities and Communities

Eco-friendly activity: Sustainable city plans

Description: Website shows the impact of cities on the climate crisis and good examples of green measures in cities.

Category: Sustainable city

Eco-friendly activity: Traits of a sustainable city Description: Website shows different characteristics and examples of sustainable cities in the world and why we need them. Category: Sustainable city

Eco-friendly activity: Was macht eine Stadt zu einer Nachhaltigen Stadt

Description: Website gives info on sustainable cities written for educators. It also features teaching material that could be used by them.

Category: Sustainable cities

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Eco-friendly activity: Eco Telhado

Description: This website website provides tips to make cities more sustainable, as well as examples of the most eco-friendly cities in the world, as well as their good practices.

Category: Sustainable cities

Eco-friendly activity: Eine nachhaltige Stadt entstehen lassen

Description: The article gives the reader tips on what they can do to ensure that their city becomes more sustainable. **Category:** Sustainable cities

Eco-friendly activity: NooCity

Description: This website offers tips and information on how to turn cities into more sustainable places. They also provide access to corporative vegetable gardens, present lists of local plantations and farmers and allow people to buy kits to build their own private vegetable gardens at home. **Category:** Sustainable cities

Eco-friendly activity: Summer Activities

Description: Website presents 15 green summer activities which can be done in a range from a day to over a course of a few days. **Category:** Sustainable community

Eco-friendly activity: Transition Initiative

Description: Website gives tips to a transition ini-tative for the community. **Category:** Sustainable community

Eco-friendly activity: **#GenerationEquality**

Description: Website gives simple everyday actions listed to help to form a generation of equality. **Category:** Reducing inequalities and form healthy community

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Tools



Eco-friendly activity: Biklio App – Go green in the office

Description: An app developed with the objective of promoting sustainable ways of moving, and, specifically, encouraging people cycling, while also promoting the local development of cities and other regions. Biklio has an agreement with several places, such as local businesses, shops, restaurants, cafes, florists, hairdressers, grocery stores and grocery stores. The user only has to choose in the app where he wants to go, and cycle there – through the app's mechanism, the device used detects if the user is actually cycling. Once he arrives, by proving to the shopkeeper (showing the result on the app) that we cycled there, the user will enjoy several benefits and discounts in the place.

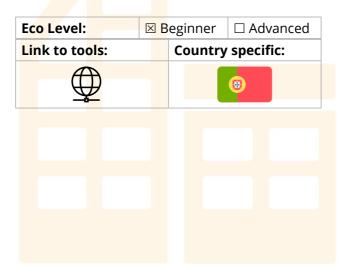
Category: Sustainable cities and communities, sustainable transportation

Eco-friendly activity: CityPoints Cascais

Description: An app that aims to promote citizenship and sustainable practices on a local level. The app has a list of predefined actions (constantly updated), such as recycling beverage packaging (plastic, glass and tin) in one of the 10 machines installed in supermarkets in the county; using public transport; exchanging goods (such as school books), etc. Each completed action allows the user to gather points, which can later be exchanged for vouchers for goods or services provided by different organizations or municipality services (such as organic products, tickets for cultural events, and activities in nature).

Category: Sustainable cities and communities, sustainable transportation

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Eco-friendly activity: Eco

Description: Eco is an online game where players must collaborate to build a civilization in a world where everything they do affects the environment. It works as an ecosystem simulation, with thousands of plants and animals. Users have to build the technology to stop a meteor on a collision course with the planet, without polluting the world and killing it off in the process before that even happens.

Category: Ecosystems protection, sustainable cities and communities

Eco-friendly activity: Terra Nil

Description: Terra Nil is a reverse city builder about ecosystem reconstruction. User should turn a barren wasteland into an ecological paradise complete with different flora and fauna, and then clean up, leaving the environment pristine. Subverting the builder genre, Terra Nil is about the restoration of a ravaged environment.

Category: Ecosystems protection, sustainable cities and communities

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Overarching Sustainable Activities



Knowledge

Eco-friendly activity: Be the Story

Description: A podcast and website which reunite conversations with experts where they clarify myths and doubts about sustainability topics: environment, food waste, plastic, healthy eating and community.

Category: Sustainable lifestyle, environmental education

Eco-friendly activity: EcoPodes

Description: A podcast about ecology and sustainability. In each episode, Sara, the hostess of this podcast, gives examples of how we can adopt more conscious behaviours in our daily lives in a simple and practical way.

Category: Sustainable lifestyle, environmental education

Eco-friendly activity: Generativity and selfenhancement values in eco-friendly behavioral intentions and environmentally responsible consumption behavior

Description: This article investigates the correlation between generativity, eco-friendly intentions, and responsible consumption. The results indicate that generativity and self-enhancement affect ecofriendly behavior intentions. Specifically, if self-enhancement is low, then generativity does not matter. Both low- and high-generativity groups have high levels of eco-friendly intentions. For those with high self-enhancement values, generativity matters. **Category:** Environmental behavior and consumption behavior

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Eco-friendly activity: Nachhaltigkeitspodcast Description: Podcast about all 17 SDGs. Category: All 17 SDGs

Eco-friendly activity: Nurturing Environmental Education at the Tertiary Education Level in China: Can Mobile Augmented Reality and Gamification Help?

Description: Geolocation-based mobile scavenger hunt was embedded in the language learning process. The results show that this approach was positively perceived, for it could not only enrich the language learning experience but also promote the awareness of the environment.

Category: Gamification, Environmental education and environmental behavior

Eco-friendly activity: Planeta Civi-Co Description: A podcast dedicated to socio-environmental issues, and, in particular, to the United Nations Sustainable Development Goals. Each episode dwells on one of the objectives, explaining it and discussing ways to achieve them. Category: All 17 SDGs

Eco-friendly activity: Reciclagem: 6 mitos que têm de ser esclarecidos

Description: An article which clarifies myths associated with the recycling process, clarifying it, and tries to engage people in it.

Category: Environmental education, recycling

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Eco-friendly activity: Revista Sustentável Description: A Portuguese online magazine exclusively dedicated to sustainability matters. It publishes daily or every couple of days news and articles on several topics related to the environment (both happening on a national or international level). The magazine has with 5 main sections: ethical consumption, decarbonisation, plastic production and waste, circular economy and society. They also share future events related to these topics. Category: Sustainable lifestyle, environmental education, waste, energy, circular economy, responsible consumption

Eco-friendly activity: The Game with Impact: Gamification in Environmental, Education and Entrepreneurship

Description: This article describes the research of applying gamification to learning on the topic of sustainable development and supporting them in starting their green business.

Category: Gamification, environmental education, entrepreneurship and environmental behavior

Eco-friendly activity: Zona Zero

Description: A podcast about sustainability that seeks to debunk myths and help listeners to understand the facts. The episodes are published every two weeks and aim to create a positive impact on the audience, as well as contribute to a change in their behaviours.

Category: Sustainable lifestyle, environmental education

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Guides

Eco-friendly activity: 10 estratégias para ser mais sustentável em casa

Description: An article sharing 10 tips on how to be more sustainable at home, addressing the use of energy, the storage and usage of food and the cleaning processes, among other activities. **Category:** Environmental education and environmental behavior, ecofriendly lifestyle

Eco-friendly activity: A competence model for environmental education

Description: First, three forms of environmental knowledge are discussed, then it gets predicted that people's attitude toward nature represents the force that drives their ecological behavioral engagement. Later on, they calibrated previously established instruments to measure ecological behavior, environmental knowledge, and attitude towards nature. **Category:** Environmental education and environmental behavior

Eco-friendly activity: Do Zero

Description: A blog owned by Catarina Barreiros, a Portuguese environmental activist and entrepreneur. Although she also has a podcast and an Instagram page, all related to sustainability matters and a no-waste and sustainable store, the blog is a space where she shares more frequently tips to lead a more eco-friendly life. There, tips on how to cook with less waste, have a more ecological bathroom, build a vegetable garden, or even information on how to be more sustainable parents can be found. **Category:** Environmental education and environmental behavior

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Eco-friendly activity: EDP Sustainability Tips Description: A section dedicated to tips and guides on how to lead an overall more sustainable and ecofriendly life. The guides are separated into several categories: Zero Waste, Sustainable Consumption, Reduce CO2, Food efficiency and biodiversity, and each one of the sections counts with several informative and practical articles.

Category: Environmental education and environmental behavior, eco-friendly lifestyle

Eco-friendly activity: Edukacja ekologiczna dla dorosłych - poradnik

Description: A collection of links, sources and materials helpful in environmental education of adults. **Category:** Environmental education for adults



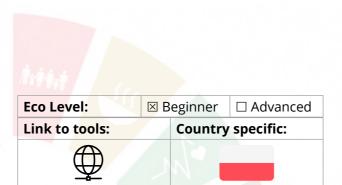
Eco-friendly activity: Carpooling apps Description: Website gives a list of apps for instead of driving alone, share a care with other people. Category: Less emissions, sharing and responsible consumption

Eco-friendly activity: Do It Yourself Apps Description: Website gives some DIY apps for the next self-made project instead of buying new. Category: Responsible consumption

Eco-friendly activity: Eco-friendly world Description: These sites and apps will help you to reduce waste and maybe even adopt a zero waste lifestyle.

Category: Zero waste

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Eco-friendly activity: EDP Sustainability Challenges Description: A webapp developed by EDP, a Portuguese energy company, which presents users with several challenges they can take in order to become more eco-friendly. The challenges are related to several areas – water, energy, consumption – and the users can mark them as completed whenever they are finished, and watch their progress towards a more sustainable life.

Category: Sustainable lifestyle

Eco-friendly activity: Energy Data Tools Description: These tools help you track the amount of energy you use and how to manage it. Category: Energy reduction

Eco-friendly activity: Energy saving apps Description: In this article 10 climate change-fighting energy apps are listed. Category: Energy saving

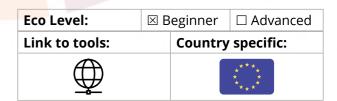
Eco-friendly activity: GoBeEco Game Description: The GoBeEco Game is a web app that helps to become more aware of the ecological impact of our everyday life and to change our habits towards more sustainability. The web app offers the user in 5 different missions tasks and information about different aspects of sustainability, which the user should fulfill to make his life more sustainable long-term. The game can be excellently integrated in lessons as well. Category: Environmental education and environmental behavior, responsible consumption, less food waste, energy saving

Eco-friendly activity: Green economy toolbox Description: The toolbox offers numerous UNECE tools, such as guidelines and policy recommendations, from the areas of environmental protection, energy, education, finance, housing, innovation, standards or transport to support the transformation to the green economy.

Category: Innovation, clean energy, clean water, responsible consumption and production, climate action and sustainable cities

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Eco-friendly activity: OLIO-Application

Description: The OLIO App is an application for sustainable living featured for its efforts to avoid food waste. OLIO app available for IOS and Andriod, free download. With the app neighbors or local shops nearby can be connected so that they can share surplus food items.

Category: Less food waste, sharing and responsible consumption

Eco-friendly activity: Prevent food waste Description: Website lists apps to minimize the food waste problem.

Category: Reduce hunger, responsible consumption, sharing

Eco-friendly activity: Reducing energy consumption Description: Different apps, tools and platforms and web-sites will help to monitor the individual energy usage.

Category: Responsible consumption

Eco-friendly activity: Spielerisch über Geschichten mit Entscheidungsoptionen Nachhaltigkeitsthemen beleuchten

Description: This game is made to be used especially by students and provides teachers with sustainability "challenges" and information material for their classes.

Category: Sustainable Cities, Consumption, Water

Eco-friendly activity: Sustainability Toolbox Description: The Sustainability Toolbox is a collection of strategies and resources for Arizona State University departments that are interested in sponsoring "green" offices and hosting sustainable events. **Category:** Green office and sustainable events

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Eco-friendly activity: Sustainable and gamified apps, Lifestyle Apps

Description: A variety of apps that will help you improve your sustainable life. Whether you want to reduce your carbon footprint, minimize plastic usage or need help in making cleaner, ethical and eco-friendlier lifestyle choices, these sustainable lifestyle apps will help you do just that.

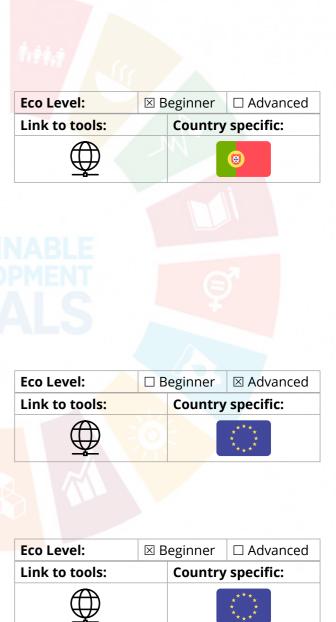
Category: Responsible consumption, sharing, zero food waste and climate action, climate action and clean water action

Eco-friendly activity: The GoodBag Description: An app which allows users to buy a recycled and reusable bag (they can choose from a wide range of options), and, in turn, help plant a tree and rescue plastic from the oceans. They have established a partnership with One Earth – One Ocean, and the shop sponsors the collection of plastic waste out of the sea. Similarly, users of the app can scan the code in their bag and by doing so, they will contribute to the planting of a tree. Category: Sustainable production and consumption, water

Eco-friendly activity: Tools for Sustainable Product and Business Model Innovation Description: Taking sustainability seriously in business is not only good for the planet, it can also be a strong value driver and promote innovation. Category: Innovation and sustainable products

Eco-friendly activity: Water conservation Description: Useful water conservation apps to download. Category: Water reduction and conservation

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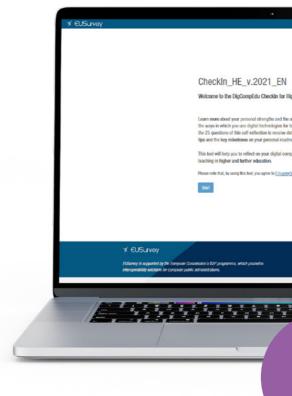
TEST YOUR DIGITAL KNOWLEDGE

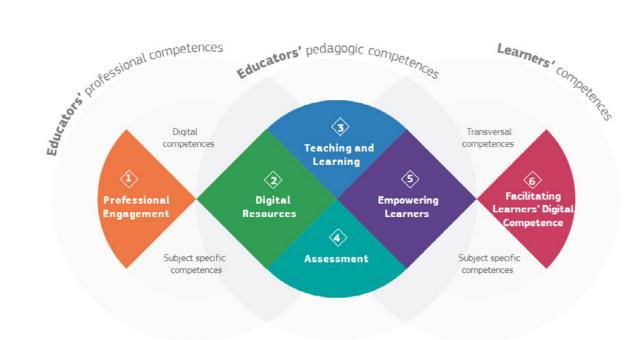




Digitisation will increasingly change the professional image of educators, their competences and their role. Digitally competent teachers are the most important requirement for the appropriate use of digital media in the classroom. Learners need diverse competences in a digital world. These are skills in searching, processing and storing, communicating and cooperating, producing and presenting, protecting and acting safely, problem solving and acting, analysing and reflecting. Of course, educators should also have these competences in order to be able to teach them appropriately. And educators also need to know how to promote them in learners and how to use digital media didactically and pedagogically in lessons and reflect on their use. In the area of individualisation, for example with digital media, it is also very important to be able to create teaching and learning materials, but also to be able to select them sensibly and justifiably.

At the European level, there is a European Framework for the Digital Competence of Educators (**DigCompEdu**), which covers six areas, including digital resources, learner orientation, teaching and learning as well as evaluation as components of the pedagogical and didactic competences of educators, but also the promotion of the digital competences of learners. It is a scientifically sound framework describing what it means for educators to be digitally competent. DigCompEdu is directed towards educators at all levels of education, from early childhood to higher and adult education, including general and vocational education and training, special needs education, and non-formal learning contexts.





An important basis for purposeful digital teaching is for educators to take a look at their own personal strengths and the areas where they can improve their use of digital technologies for teaching and learning.

At **the following link**, educators can self-reflect in order to receive detailed feedback with useful tips and the most important milestones on their personal roadmap for innovative teaching. The CheckIn Higher Education tool has been revised

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Click here: DigCompEdu CheckIn for Higher Education

through a revision of the progression levels based on Bloom's Digital Taxonomy (adapted), an increase in answer options, modification of some terminology, and also the addition of a 7th area, Open Education, based on the **OpenEdu Framework**. This tool thus helps optimal educators from the field of adult education to reflect on their digital competences.













Methods

Good practice says that one should design skills and knowledge assessment tools at the same time they start developing the training curriculum. This way one can be sure that important knowledge and skills are developed and practiced and the progress verified. The most efficient way to monitor the progress is to spread out the measuring tools and activities throughout the training program. Below are several methods we can assess learners' skills and competencies:

→ Give your learners a test or a quiz

An efficient way to assess technical and theoretical knowledge (not the ability to use the knowledge in practice)

→ Ask to fill in a self-assessment questionnaire

Send out a self - assessment form to get learners' perspective on the progress of learning, increased abilities and selfesteem; since the evaluation will be either too optimistic or too pessimistic, this method should be used in combination with another, more objective one.

→ Organize a simulation of a real situation

The most efficient (and closes to reality) way to assess the skills, motivation and attitude in the classroom; the facilitator and other learners observe their colleagues implementing newly acquired skills and knowledge (even the way of thinking) in practice during an exercise e.g., a role play; to make the feedback valuable the trainer needs to prepare a list of behaviours to practice and observe with the rest of the group to provide feedback; to do that empathy and a good set of facilitation skills are needed.

Good practice says that one should design skills → Invite the learners to a case study, a business and knowledge assessment tools at the same time game, a branching story or a gamification

Many games do not only have entertainment role, but also serve professional goals; the method can be very efficient since it combines learning and fun, hence reducing the anxiety connected with doing the test.

➔ Observe learner's behaviour

in a real – life situation

The most efficient way to assess the skills, motivation and attitude; the concept is a bit uncomfortable since it requires from the trainer or the facilitator to observe learners in real-life situations e.g., in the bank, negoting lowering the interest rate, at a family reunion etc where they wiil be trying to implement newly acquired skills into practice; to make the feedback valuable you need a good set of questions (or an observers' form) and good observation skills.

→ Ask for the other party's feedback

A type of the real-life situation testing. The difference is that you assess the actions after they have been performed. It is a good way not only to see how your learner manages in everyday situations allying new skills, but also to communicate with him/her and learn more about their needs. Of course, you need to inform your learners about this form of evaluation and the criteria.

Assessment tools

edapp.com

BETTER MICROLEARNING

Digital Tool: Ed App Description:

- Rapid Refresh quiz maker tool;
- a spread sheet format;
- delivery can be split into chunks;
- free basic plan

Purpose: You can see the results of your learners stand in terms of knowledge, skills, and compliance training in the tool. You can create training and other strategies to improve the standing of your learners.

Digital level: ⊠ Beginner □ Advanced

K!

Digital Tool: Kahoot Description:

- a game-based online quiz maker that also works as a good skills assessment tool, using colorful visuals and gamification elements to boost engagement;
- Test types: multiple-choice quiz type, a "type answer";
- Quizzes can be answered by a group of "players", all at the same time which is usually used in synchronous learning where active participation of learners is highly encouraged. The self-paced asynchronous session is also available
- free

Purpose: Use this tool, when you want to include open questions

Digital level:	🗵 Beginner	□ Advanced
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© Kahoot





Digital Tool: ProProfs Description:

- a cloud-based Learning Management System that can be used as a skills assessment tool
- over 100,000 readily available questions you can use when creating your online assessments
- test types: multiple choice, matching, fill in the blank, essay
- Customizable quiz templates
- Quiz branding
- Completion Certificate
- Reports
- free basic plan

Purpose:

- to design and run assessments
- you can access reports and analytics to assess your team

Digital level:

🗵 Beginner 🛛 🗆 Advanced



Digital Tool: Skills-base

Description:

- skills assessment platform with a self assessment feature included;
- free

Purpose:

- helps educators gather data needed to create better workforce strategies.
- allows to figure out the skills and interests of your learners.
- a great way to monitor the progress that can ultimately affect learning outcomes.

Digital level: □ Beginner ⊠ Advanced



© Screenshot: www.proprofs.com/quiz-school



Digital Tool: Socrative Description:

- app for effective classroom engagement.
- check student understanding with prepared activities or on-the-fly questions, and get realtime reports to visualize learning.

Purpose:

- Turn lecture into a two-way exchange with the app that gives immediate insights about teaching.
- Quizzes, surveys, team activities, and content from educators – easy-to-use assessment tool

Digital level:	🗵 Beginner	□ Advanced



© Screenshot: www.skills-base.com



© Screenshot: www.socrative.com





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