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GUIDE FOR TEACHERS AND TRAINERS



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Introducing CLAY

Project CLAY – Closing the Loop Along with the Youth – is an Erasmus+ co-funded international project. All information related to the project can be found on the [project website](#)¹.

Sustainability and circular economy are THE topics of the upcoming years. The transition to a circular economy is a vital prerequisite for achieving several of the Sustainable Development Goals (SDGs). With CLAY, we want to show you what circular economy is about, why it is absolutely necessary for achieving sustainability and how it affects your daily life and choices.

Digital training materials

The CLAY training program consists of digital training modules – each in a distinct colour scheme – on 5 selected core topics:



The Problem: Linear vs. Circular Economy

3 units cover the differences between our current “linear economy” and a circular economy, highlights the necessity to go circular and the needed transition to a new economic system.



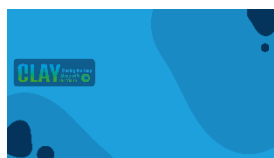
The Vision: Exploring circular economy and its potential benefits

4 units address the circulation of materials, the differences and overlaps between sustainability and circular economy, the importance of measuring circularity and “make it visible”, and the benefits offered by a circular economy.



The Goals: Starting to zoom in on circular economy from a global/international perspective

4 units zoom in from the SDGs to the EU’s Circular Economy Action Plan, financial initiatives aimed at financing circular economy on an international level, and other programs and initiatives committed to supporting circular economy.



The Strategies: Circular economy offers a set of strategies for companies as well as for you as a consumer

3 units provide an overview of the most common circular economy strategies: narrowing (by refuse, reduce, rethink), slowing (by reusing, repairing, refurbishing or remanufacturing) and closing (by repurposing, recycling and recovering) material and resource flows.



Implementation: Circular design

4 units finish to zoom in on concrete applications of circular economy through circular design: examples and best practices are presented to show how circular design can eliminate waste and other related negative effects for e-waste, plastics and packaging and the food industry.

¹ Link: www.clay-project.eu



Apart from the units, each module contains a quiz to check knowledge on the content of the units. In CLAY, we have also developed a “CLAY Score Calculator”, where learners can check how “circular” they are.

At the end of this guide, you will find **individual tasks** that you can assign to your students, for e.g. as home- or project work, presentations, reports etc. at the end of this guide. Also, you will find a set of questions for discussion in **group settings** for each unit. All individual tasks can also be used for group work, and the digital learning materials can be **downloaded for free for LMS integration** (so you can check, if your students have completed certain units or quizzes).

Access and navigation

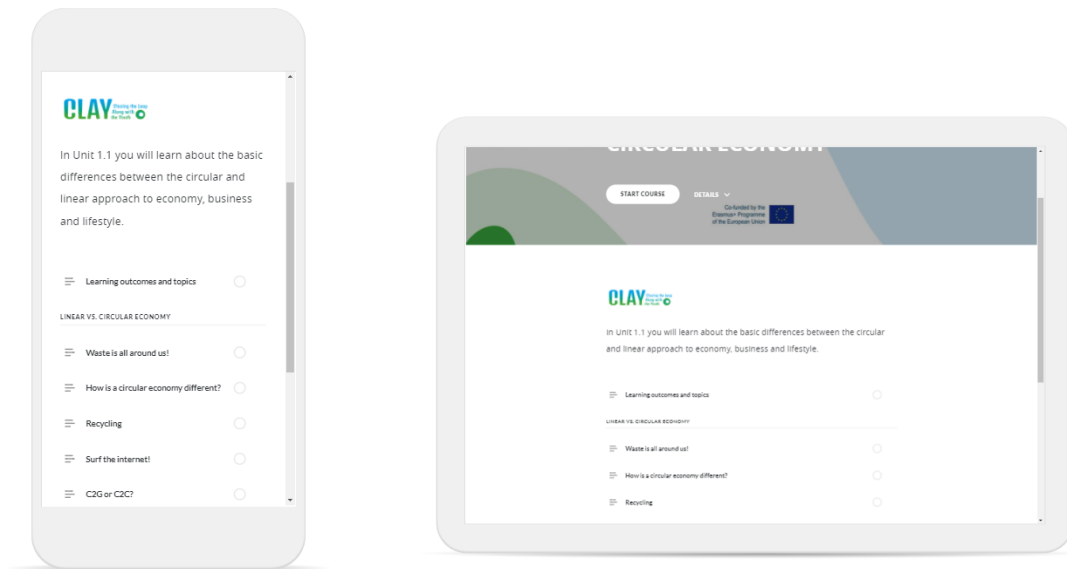
The digital training materials can be accessed via the project website under “OPEN EDUCATIONAL RESOURCES”.

You can access the units directly on the website.

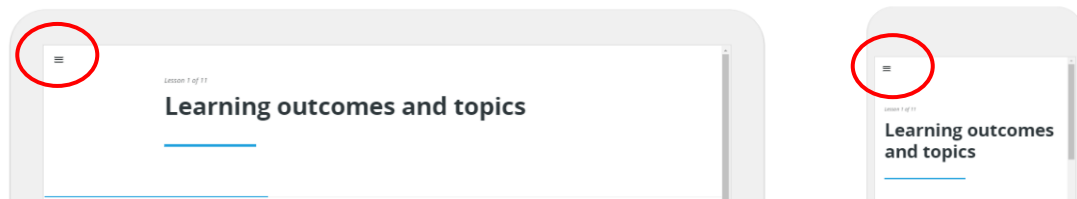
The screenshot shows a website interface for the CLAY project. At the top left is the CLAY logo with the tagline 'Closing the Loop Along with the Youth'. To its right is the heading 'MODULE 1'. Below this, a text box states: 'In this module, you will learn about the fundamental problems of our current economic system, that follows a “take-make-waste”-logic and is usually called “linear economy”.' Below the text box is a link: 'Click or tap on the units below to access the training materials!'. A horizontal blue line separates this section from the next. Below the line, a card for 'UNIT 1.1' is highlighted with a red oval. The card contains the CLAY logo, the text 'UNIT 1.1', and 'LINEAR VS. CIRCULAR ECONOMY'. Below the card, a caption reads: 'Unit 1.1 gives an overview of the major differences between linear economy and the circular economy approach.' Another horizontal blue line is below the caption. At the bottom, the start of another card for 'UNIT 1.2' is visible.



The units will play on your computer, but also on tablets and smartphones:



When clicking/tapping on “START COURSE”, the overview will collapse. You can always reopen the overview by clicking/tapping on the three bar icon on top of each page, to revisit previous pages or assess your progress.



Download for offline usage

All modules and units can also be downloaded for offline usage. Go to the “DOWNLOAD” sub-site of “OPEN EDUCATIONAL RESOURCES”, here you can download the modules as zip files.

- Each module-zip-file contains separate zip-files for all units and the quiz.
- Extract these zip files to separate folders on your computer.
- Go to the folder of the unit you want to open and double-click the “index”-file.
- The unit will play in the internet browser – but also without internet connection.



Unit structure

Each unit is following the same structure:



FOCUS

Sections marked with a pink dot set the focus for a specific topic in the unit.



DELVE INTO

Sections marked with a blue dot zoom-in on specific topics, examples and best practices for circular economy.



SURF TO FIND OUT MORE

In sections marked with this symbol, you will find links to related materials online, where you can find out more about circular economy on your own.



PRACTICE AND REVIEW

Each unit also contains short practice and review interactions, marked with a yellow dot.



Guide for teachers and trainers

In this guide, you will find important tips for using the CLAY training materials in workshops and training activities.

Important tips for teachers and trainers

Modules and units

Each Unit of each of the five Modules shows a specific item with the aid of images and key words. They are short and focused. You can use all of them or a part of them in your training courses, as preferred. They can be usable within specific training courses, but also as a preface in other different courses, as a support for motivating trainees to learn. They keep the information in your course focused and relevant, with a minimum of extraneous detail. The learning content is “chunked” into small, digestible bites of information.

Adapting

It is important to view this training tool as a resource and not as a must-do manual. Although all the sessions have been tried and tested in different contexts (locally and internationally) with a variety of learners, the materials will always need some level of adaptation to suit your specific audience or context. Additional case studies can be used – you will find a list of useful links with additional materials and case studies at the end of this guide. The training sessions and extent of content can also be lengthened or shortened depending on the level of training and expertise of participants.

Being flexible

It is important to have a flexible approach in using the materials. Be flexible in selecting the types of training tools and approaches you use according to your resources. The activities are designed for a wide variety of learners which also encourages them to share their experiences and to add their contribution to a successful training session.

Enhancing learning

The role of the trainer in the CLAY workshops is to enable learning. The trainer is responsible for ensuring that the training environment is conducive to learning, sharing knowledge and experience, and enhances the participation of all.

Open dialogue

The following elements are essential for establishing an open and engaging dialogue setting:

- *Ask questions.* Questions can open a learning conversation or shut it down.
- *Review statements.* By rephrasing what you have heard, you clarify your own understanding and encourage the adult learner to hear what it is she or he has stated.
- *Foster discussion.* Discussion extends learning and introduces other perspectives. It allows for reciprocity between learner and learner, and learner and trainer.



- *Active listening skills* are essential for effective discussion facilitation. It builds understanding and consensus in a group. Active listening skills include encouraging, paraphrasing, clarifying, reflecting, summarizing, and validating.
- *Provide consistent feedback*. Candid and compassionate feedback can be a powerful stimulus for learning. It addresses the learners need for immediate application.

Focus on the learners

Make sure to involve learners into the topic by:

- *Spell out the “WIIFM”* (What’s in it for me?) for your learners. All learners want to know why they are learning something, and how it will help them on the (future) job.
- *Individualize their learning*. Learners usually wish to learn things that appear relevant to them at the present time - for example in a situation that requires their action, for following a future plan or in a crisis, uncertainty moment.
- *Give value to personal experience*. The connection of this experience to the new learning demands represents a fundamental learning prerequisite for them.
- *Make it simple*. Put contents in relation to practical situations and phenomena of everyday life.

In short, understanding your learners’ needs, and applying common sense to meet them, will dramatically improve your training programs.

Individual and group tasks

The CLAY materials are designed to be either used by individual learners (a guide for learners is also available on the OER platform) or in group settings. The individual tasks are based on the content of the modules’ units and offer additional questions and research tasks. They can also be used as a pre-input for a group discussion or follow up tasks on group discussions. A separate set of group tasks, i.e. questions for discussion is also included at the end of this guide.



Set of individual tasks

You can use the following tasks for assigning tasks (e.g. homework, presentations, reports, etc.).



MODULE 1: LINEAR VS. CIRCULAR ECONOMY

UNIT 1.1 LINEAR VS. CIRCULAR ECONOMY

- Online research – Check if you can find answers and information on the following questions:
 - How much textiles end up as waste in landfills per person in your country?
 - What metals can be recovered from cell phones and e-waste through recycling?
 - How long does it take for conventional plastics to decompose?
 - How much energy can be saved by recycling a single plastic bottle?
- Watch this video on [“Re-Thinking Progress”](#), that explores how we can re-design the way our economy works through a change in perspective. It explores the question whether we can build a restorative economy through creativity and innovation. What do you think, can we?
- Pick a company/organization from your country and check if they are following a “take-make-waste” approach or circular economy principles. Do they address circular economy on their website?
- Research companies engaging in circular economy practices online. Are they truly working circular, or is it “green-washing” (pretend to be circular, but instead try to maximize sales and profits) in a different colour?
- The Ellen MacArthur Foundation develops and promotes the idea of a circular economy. Find out more about the [Foundation](#) and about their [Mission and Vision](#). What do you think about their approach towards accelerating the transition to a circular economy?
- Check out the [C2C certificate](#) and find out what it takes to get a product C2C certified. Can you find a product that you own, which is C2C certified?

UNIT 1.2 NECESSITY TO GO CIRCULAR

- In this [whiteboard explainer video](#) you will learn what is needed for a successful transition towards a circular economy. What part did you like the most (or has been most inspiring for you) and why?
- In this [report](#) from 2015 by the consulting company McKinsey, you can find information and data on economic benefits of circular economy for Europe. Check out the benefits for your country and see what has happened since 2015 in your country.
- The Ecological Footprint is the only metric that compares the resource demand of individuals, governments, and businesses against Earth's capacity for biological regeneration. [Check your own footprint and personal Overshoot Day](#) – what could be ways to reduce it?
- The paper [The Circular Economy: What, Why, How and Where](#) was prepared for an OECD/EC high-level expert workshop on “Managing the transition to a circular economy in regions and cities” in 2019. Use it as a basis for reflection, discussion and further research.

UNIT 1.3 THE TRANSITION TOWARDS CIRCULAR ECONOMY

- Cities play a major role on the circular economy agenda, to unlock economic, environmental, and social benefits. How can cities support the transition to a circular economy in line with their priorities, which include housing, mobility, and economic development? [Watch this video to find out](#) more on the role of cities and use it as a starting point for further online research.
- Read some of these [success stories](#) of companies that successfully implement circular principles in their processes. Choose one story to study in detail and then try to re-tell the story stressing out the most important point of the story: the innovative moment and the benefits for the society and nature.



MODULE 2: EXPLORING CIRCULAR ECONOMY

UNIT 2.1 CIRCULATION OF MATERIALS

- Within the biological cycle, orange peels are a good example. The company [PeelPioneers](#) collects orange peels from catering establishments and extracts essential oils from them. Check out these two videos [here](#) and [here](#) to find out more about this project. What similar projects and initiatives are there in your country/region?
- Pick a biological product/material and describe its potential circles of reuse, repair, and other elements from the butterfly diagram.
- Pick a technological product/material and describe its potential circles of reuse, repair, and other elements from the butterfly diagram.

UNIT 2.2 CIRCULARITY AND SUSTAINABILITY

- Packaging and single-use plastic bags are a major source of waste. If you want to reduce your impact on the planet, you can switch to inexpensive, re-useable bags. Check out the example of [Jutebag](#), used by [several famous brands](#) – what needs to be considered to make them truly circular/sustainable?
- Research your city's engagement for sustainability: What initiatives and organizations (public and private) are engaged for sustainability and circular economy in your home-town/city?
- Research companies in your country that circularly design products, imitating natural processes. What are the key differences to conventional products?
- Research 2-3 different approaches to circular economy (other related theories from Unit 2.2) and analyse: where do they overlap, where are the differences?
- Read about the sustainable business strategy of [Coca-Cola](#). Reflect on the content in a critical way: How is sustainability defined? What shortcomings can you identify (also by additional research)?

UNIT 2.3 CIRCULARITY MEASUREMENT

- Research 2-3 circularity metrics from Unit 2.3, lesson "Measuring Circularity". Analyse their differences regarding approach and report what these metrics have found/are used for.
- What do different metrics measure in your country? Research the different approaches and find out, whether they are applied to/in your country.
- [Here](#) you can find a more scientific approach describing possible indicators for the various measurement strategies: What are the key findings of the article?

UNIT 2.4 BENEFITS OF CIRCULAR ECONOMY

- Research on the various disadvantages of the linear economic model.
- Research studies and information highlighting economic, ecological and social benefits of circular economy in your country.



MODULE 3: GLOBAL AND INTERNATIONAL CIRCULAR ECONOMY

UNIT 3.1 SUSTAINABLE DEVELOPMENT GOALS (SDGs)

- Pick one of the “Circular SDGs” and research the connections to the others.
- Check out the SDGs in your country – how are they part of political programs and strategies?
- Research the conferences in “The origins of the SDGs” and analyse how the goals and targets have changed over time. Which targets have been met?

UNIT 3.2 CIRCULAR ECONOMY ACTION PLAN

- Research which implications the European Green Deal offers for your country. Is it influencing national policies?
- Review the Circular Economy Action Plan (latest version 2020). What key activities and policies are included?
- Check out circular economy in your country. Eurostat offers a very useful tool, the Monitoring Framework, to measure progress concerning circular economy. This online interactive tool allows to display both the EU level or the national levels according to the following 4 specific indicators:
 - Production and consumption: EU self-efficiency for raw materials, green public procurement, waste generation, food waste
 - Waste management: recycling rates, recycling / recovery for specific waste streams
 - Secondary raw materials: contribution of recycled materials to raw materials demand, trade in recyclable raw materials
 - Competitiveness and innovation: private investments, jobs and gross value added related to circular economy sectors, number of patents related to recycling and secondary raw materials

[Click here](#) to explore the Eurostat online tool or check out this [interactive tool](#) on voluntary national reviews provided by each country concerning the SDGs.

UNIT 3.3 FINANCIAL TOOLS AND SUPPORT

- Focus on the “Just transition mechanism” – is it relevant for your country? What programs and activities are linked to it in your country?
- Analyse and compare the objectives and priorities of the different European financing programs for circular economy.
- Research the circular economy package. How does it apply to your country? Are there projects and initiatives that were submitted for funding/circular awards in your country?

UNIT 3.4 CIRCULAR ECONOMY INITIATIVES AND STRATEGIES

Based on what you have learned in Unit 3.4, research and critically compare the following initiatives regarding objective/mission, field of action, target group, size and impact:

- EU Circular Economy Stakeholder Platform (EUCESP)
- World Circular Economy Forum (WCEF)
- Fridays for Future (FFF)
- Be the change initiative
- ecopreneur.eu



MODULE 4: STRATEGIES FOR CIRCULAR ECONOMY

UNIT 4.1 NARROW FLOWS: REFUSE, REDUCE, RETHINK

- Rethinking Plastic Packaging - Unilever declares that “There’s a lot of plastic pollution in the environment, some with our name on it – and that’s not okay with us. We’re completely rethinking the role of plastic in our business.” According to the CEO of Unilever “despite challenging conditions, we must not turn our backs on plastic pollution. It is vital for us, and for the rest of the industry, to stay the course, cut the amount of plastic we use and rapidly transition to a circular economy.” Research Unilever’s sustainability targets and strategies regarding plastic packaging and critically review their implementation.
- Check your trash! When looking through your “waste”, try to answer the following questions:
 - How many of the items could be recycled? How much goes into the trash?
 - Is there anything that surprises you about what you collected?
 - What items could have been used longer or replaced with items that last longer?
 - What items are necessary and what could be replaced with another environmentally friendly option? Did you really need to buy/use that “thing”?
 - Besides recycling, what options do you have for disposal rather than it going in the trash can?
 - How much of your waste is from packaging? Are there alternatives?
 - What could be upcycled?

UNIT 4.2 SLOW FLOWS: REUSE, REPAIR, REFURBISH, REMANUFACTURE

- Research companies and organizations offering reuse or reusable products in your city, region or country.
- Research companies and organizations offering repair services or products with extended warranty or repair services in your city, region or country.
- Research companies and organizations who have included refurbishing or remanufacturing in their operations and services in your city, region or country.

UNIT 4.3 CLOSE FLOWS: REPURPOSE, RECYCLE, RECOVER

- Check out [Precious Plastic](#), an open source project that provides tools and guidance on creating local, small scale recycling shops for the processing and manufacturing of new products. Based on this information, try to develop a concept for a similar organization in your city/region.
- In 2007, Fiat and Microsoft announced their collaboration on a system that enables drivers to minimize their impact on the environment: EcoDrive. Research and check out the current state of the collaboration!
- Research companies and organizations in your country/region that offer repurpose, recycling or recovery activities.
- Check out the website of [Recycling Counts](#) and find out how they encourage recycling plastics.



MODULE 5: CIRCULAR DESIGN

UNIT 5.1 THE ROLE OF CIRCULAR DESIGN

- How could we create products and services that fit into our (eco)-systems, and become 'nutritious' rather than waste and pollution? Research best practices from your country/region!
- How can circular design be a force for positive change and address the big challenges of this century, such as climate change and the loss in biodiversity?
- Research on [planned obsolescence](#), choose a product (e.g. a smartphone) and find out more!

UNIT 5.2 CIRCULAR DESIGN VS. E-WASTE

- Bundles is a dutch company that offers washing machines as product as a service. Check out their [homepage](#) and find out:
 - What possibilities does Bundles offer regarding product-oriented service systems?
 - Why would you/should a customer choose Bundles, what are the opportunities?
 - What is the difference to renting?
 - How does Bundles apply the C2C approach?
- Have a look at the [Fairphone 2 recyclability study](#)! What are they doing to prevent huge amounts of e-waste?
- Have a look at [this paper](#) which was published in 2021 "Modelling of different circular end of use scenarios for smartphones".
 - What have you learned about e-waste caused by smartphones and what do the authors say?
 - Reflect critically on the content! What questions would you have for the authors?
- A linear smartphone is designed in a way that it „gets old“ quickly and it is hard to repair. Check out the design differences between these three smartphones and focus on their design regarding circular economy: [iPhone](#), [Fairphone](#), [Samsung Galaxy S21](#)

UNIT 5.3 PLASTICS AND PACKAGING: DESIGN FOR THE FUTURE

- Check out the [Upstream Innovation Guide](#) provided by the Ellen MacArthur Foundation. What exactly is an upstream innovation?
- Do a research on how much packaging waste is generated per person per year in your country. Compare it to other countries and check whether your country is above or below average and why?
- Which main problems will arise from the huge amount of packaging waste and which design concept is the most useful to fight these problems?
- Compare these three detergent companies: [MyReplenish](#), [Splosh](#), [Everdrop](#). Which design technology would you choose and why? What problems do you see?
- Do a research on in the impacts of (single-use & reusable) bags made of paper, conventional plastic, recycled plastic and fabric such as cotton. Which would you choose and why?

UNIT 5.4 DESIGNING CIRCULAR FOOD

- Apply the DISRUPT framework from Circle Economy to the technology of aquaponics! What are possibilities and threats? What are possible future problems with Aqua- or Hydroponics? Can aquaponics replace conventional agriculture in the future?
- Do a research on in the impacts of conventional, regional and organic food production. What design differences can you identify and what is their impact?



- Find out information about the following companies and how they apply circular design principles: [Toastale](#), [Agriprotein](#), [Ostara](#)
- With soda machines you can carbonate tap water at home. Often more than 50 liters can be carbonated with one cartridge. This reduces CO2 emissions by drastically reducing transport weight of full water bottles and less packaging waste.
 - Do you think this is good concept regarding circular design? How much waste produces one cartridge, and can it be compared with single use plastic bottles?
 - Find out more about the company [Sodastream](#) and discuss its (circular?) design concept!



Set of group tasks

You can use the questions as a basis for group discussions.

MODULE 1: LINEAR VS. CIRCULAR ECONOMY

UNIT 1.1 LINEAR VS. CIRCULAR ECONOMY

- What is your current understanding of circular economy and would you wish to engage in it?
- Who within your family, friends, schoolmates, or colleagues should play a role in engaging and practicing circular behaviour?
- Are you already taking action for circular economy and what further steps could you take?
- How are the Ellen MacArthur Foundation and C2C related? Are they just two versions of the same? Where are differences and overlaps?
- Check out the 7 elements of the DISRUPT framework by Circle Economy! Discuss which ones are most relevant for you – but also for companies and organizations.

UNIT 1.2 NECESSITY TO GO CIRCULAR

- How will the transition to a circular economy reduce costs and create jobs?
- What are the challenges and barriers in applying circularity in the infrastructure?
- Can you name inspiring examples of materials or products that are reused or recycled in your community, region or country?
- Calculate your footprint and personal overshoot day. Are they similar to your peers'? Are there large differences? What factors increase your footprint?

UNIT 1.3 THE TRANSITION TOWARDS CIRCULAR ECONOMY

- Do you know a family, a household, a community or a company in your nearest environment that has gone fully circular? What obstacles you think they had to overcome?
- In the previous units we talked about the first steps to take towards circular behaviour. Can you imagine an entirely circular lifestyle? What would you have to change? What benefits and obstacles do you see? Explain your reasons.



MODULE 2: EXPLORING CIRCULAR ECONOMY

UNIT 2.1 CIRCULATION OF MATERIALS

- How can the private and public sectors work together with academia to form circular innovation partnerships?
- What role can utility companies play in the energy and material transitions necessary to become “circular”?

UNIT 2.2 CIRCULARITY AND SUSTAINABILITY

- What is going on in your city regarding sustainability and circular economy? Can you engage in any of these activities?
- What role can sustainable, circular businesses play in addressing the environmental challenges?
- What are the limits of sustainable, circular business in addressing environmental challenges?
- Discuss the various related theories from the digital content. Where do they overlap? Where are core differences?
- Fashion is another “waste-driver”. How can you dress more ecologically and support a more responsible fashion? Check these [3 simple tips](#) and discuss your thoughts!

UNIT 2.3 CIRCULARITY MEASUREMENT

- How is circularity measurable in social, industrial and cultural environments? How are these environments connected?
- Why is it important to measure circularity? Discuss and share your thoughts.
- Discuss the different approaches of EMF Circulytics and Circle Economy CGRI.

UNIT 2.4 BENEFITS OF CIRCULAR ECONOMY

- Remember the different disadvantages of the linear model: Why do you think there is still so little action towards sustainability and circularity?
- Discuss how different companies in your country could profit from going circular.
- Discuss the various benefits of circular economy. What could they mean for your country?
- Which barriers for circular economy can you identify?
- Four key benefits of circular economy are:
 - creation of new green industries and jobs
 - reduced dependence on import of raw materials
 - avoidance of environmental damage caused by resource extraction
 - less pollution and waste entering the ecosystem

Discuss these benefits and provide examples for each of them from your country.



MODULE 3: GLOBAL AND INTERNATIONAL CIRCULAR ECONOMY

UNIT 3.1 SUSTAINABLE DEVELOPMENT GOALS (SDGs)

- Discuss the SDGs:
 - Which ones are most relevant and best adopted in your country?
 - Which ones do you think are the most relevant?
- Discuss the importance of the SDGs connected to circular economy

UNIT 3.2 CIRCULAR ECONOMY ACTION PLAN

- The CEAP specifically addresses different sectors. Discuss the differences and common grounds of the different sectors' policies and programs, based on what you have learned in Unit 3.2.
- Discuss similarities and differences between the European Green Deal, CEAP and "smaller" programs like the Mediterranean forum or the US Green New Deal, based on what you have learned in Unit 3.2.

UNIT 3.3 FINANCIAL TOOLS AND SUPPORT

- Are there similar/additional competitions like "Start to be circular" in your country?
- Circular city funding guide – would a similar program be possible for your hometown/city? Which organizations or institutions should be included and why?

UNIT 3.4 CIRCULAR ECONOMY INITIATIVES AND STRATEGIES

- Find out about CE in your country on the EUCESP. Discuss different projects!
- Discuss the contents of the most recent WCEF. What topics were on the agenda? Which organizations participated?
- Discuss FFF's activities and their relation to circular economy.



MODULE 4: STRATEGIES FOR CIRCULAR ECONOMY

UNIT 4.1 NARROW FLOWS: REFUSE, REDUCE, RETHINK

- How can you apply the principle of “Refuse” in your daily life? What options can you identify? Discuss!
- How can you apply the principle of “Reduce” in your daily life? What options can you identify? Discuss!
- How can you apply the principle of “Rethink” in your daily life? What options can you identify? Discuss!

UNIT 4.2 SLOW FLOWS: REUSE, REPAIR, REFURBISH, REMANUFACTURE

- Are you reusing products or do you check for reused products before purchasing a new product? What are your reasons to do/not to do so?
- Have you ever repaired a product yourself or used repair services instead of buying a new product?
- Pick a product and discuss potential refurbishing/remanufacturing actions that could extend the products lifetime and make it reusable instead of depositing it as waste.

UNIT 4.3 CLOSE FLOWS: REPURPOSE, RECYCLE, RECOVER

- Have you ever repurposed a product instead of depositing it as waste?
- How is recycling a part of your daily life (e.g. in school or at home)?
- What is your understanding of recovery and why is it an important issue?



MODULE 5: CIRCULAR DESIGN

UNIT 5.1 THE ROLE OF CIRCULAR DESIGN

- Where/How does circular design affect you and your (future) choices?
- How can you support circular design?
- How could products be designed in a way that addresses 'user needs' AND that can work in the long term?

UNIT 5.2 CIRCULAR DESIGN VS. E-WASTE

- Carsharing is a model where several people can rent the same car for short periods of time.
 - What are the differences (and advantages) to traditional car renting?
 - Which carsharing platforms exist in your area?
- Since streaming services no longer require physical devices, DVDs, CDs, cassettes and equipment for playing them became obsolete, so all these materials and products turned to waste "overnight". All materials, energy etc. that was used in the production is completely wasted – in the truest sense of the word.
 - How many materials could have been reused, if these items would have been designed circularly?
 - What possibilities and negative impacts are created by streaming services? Consider the internet's environmental impact!

UNIT 5.3 PLASTICS AND PACKAGING: DESIGN FOR THE FUTURE

- What material is your bottle made of? Is it a single use bottle? What would it mean for you to use circularly designed bottles?
- Did you recently order something online? What about the packaging?
- How often do you order food from restaurants in take away packaging? What do you do with the packaging after use?

UNIT 5.4 DESIGNING CIRCULAR FOOD

- Are you consciously choosing food products that apply circular design? Why/Why not?
- How much food waste is generated in your household and can you think of ways to reduce it by choosing circularly designed food products?
- Which ideas or solutions regarding design come to your mind when thinking about circular food?



Additional sources

There are a lot of other websites/projects offering training materials and case studies on circular economy. For example:

- The Ellen MacArthur Foundation offers a [large collection of case studies](#) and best practices from different sectors. Also, [materials for schools](#) are freely available.
- The [Circle Economy Knowledge Hub](#) also provides numerous examples of circular economy in action, that can be used for further research and tasks.
- The website [Circularity](#) also hosts a large number of best practices from different sectors.
- BE-Rural focuses on bioeconomy in action and also offers [additional materials](#) for teaching and training activities.