Escape Rooms for Green Entrepreneurship

PEDAGOGICAL SEQUENCE

The circular journey of Martha



KEY TOPICS

Circular economy | eco-design

Target group: learners aged 16+
Duration: 4 sessions (approx. 45 - 60 minutes each)

Introduction

Many environmental challenges: waste accumulation, resource depletion and pollution are rooted in linear economic models based on “take-make-dispose.” In response, new approaches such as the circular economy, eco-design and sustainable entrepreneurship propose alternative ways of producing, consuming and creating value.
This preparatory pedagogical sequence introduces learners to the core principles of circular thinking and sustainable business creation. It prepares them to take part in the escape room “The Circular Journey of Martha”, in which players follow Martha’s journey, discovering how reuse, repair and eco-design can transform environmental or personal challenges into sustainable business opportunities.
As a result, learners will have a basic understanding of reuse principles and sustainable entrepreneurship, enabling them to collaborate effectively during gameplay.

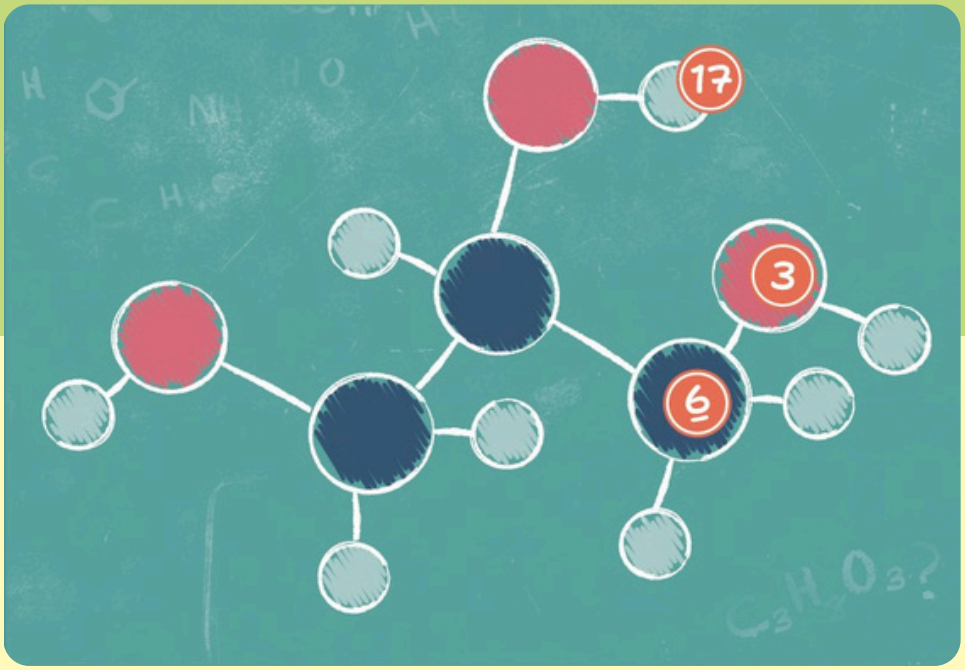
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Overview of the pedagogical sequence

SESSION	THEME	MAIN FOCUS	KEY METHODS
1	Circular economy basics	Linear vs circular models	Presentation, discussion, visual analysis
2	Reuse, repair & eco-design	Designing out waste	Case studies, object analysis
3	Sustainable entrepreneurship	From problem to solution	Group work, scenario analysis
4	Circular business models	Value creation & impact	Mapping, debate, synthesis



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SESSION 1: Understanding the circular economy

Focus

Introduce the concept of the circular economy and contrast it with the linear economic model.

Learning outcomes

Learners will be able to:

- Define the circular economy
- Explain the limits of the linear economy
- Identify everyday examples of circular practices

Key concepts, definitions and examples

Linear economy

An economic model based on extracting resources, producing goods, consuming them and disposing of them as waste.

Concrete example: Buying fast-fashion clothing that is worn a few times then thrown away.

Circular economy

An economic system designed to keep products, materials and resources in use for as long as possible through reuse, repair, refurbishment and recycling.

Concrete examples:

- Refillable bottles instead of single-use plastic
- Second-hand platforms extending product lifespans

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Waste as a resource

The idea that materials considered waste can become inputs for new products or services.

Concrete example: Textile scraps reused to produce insulation or accessories.

Activities

- Introduce the key concepts
- Brainstorm “Where does waste come from in everyday life?”
- Compare a linear product lifecycle vs a circular lifecycle
- Identify and discuss circular practices learners already know

Evaluation

Exit slip: illustrate a difference between a linear and a circular economy through your own example.

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SESSION 2: Reuse, repair & eco-design

Focus

Understand how products can be designed to reduce waste and environmental impact.

Learning outcomes

Learners will be able to:

- Define reuse, repair and eco-design
- Identify eco-design features in everyday products
- Explain why design choices matter

Key concepts, definitions and examples

Reuse

Using a product again for the same or a new purpose instead of discarding it.

Concrete example: Glass jars reused for storage.

Repair

Fixing a broken product to extend its lifespan.

Concrete example: Repairing a smartphone screen instead of replacing the phone.

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Eco-design

Designing products with minimal environmental impact throughout their lifecycle, from production to end-of-life.

Concrete example:

- Modular furniture that can be repaired
- Shoes designed for easy disassembly and recycling

Activities

- Introduction of key concepts with concrete product examples
- Object or image analysis: identifying reuse, repair or eco-design features
- Short case study of a product designed for durability or repair. For instance, Fairphone designs modular smartphones whose components can be replaced more easily. This extends the phone's lifespan and helps reduce electronic waste. Learners identify which design features make the product more repairable and circular.
- Mini redesign task: propose one improvement to make a product more circular

Evaluation

Short written response on a card to be displayed to the group: one eco-design feature and its environmental benefit.

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SESSION 3: Sustainable entrepreneurship

Focus

Explore how environmental or personal challenges can lead to sustainable business ideas.

Learning outcomes

Learners will be able to:

- Define sustainable entrepreneurship
- Identify problems that can inspire circular business ideas
- Understand the social and environmental goals of sustainable businesses

Key concepts, definitions and examples

Sustainable entrepreneurship

Creating a business that aims to generate economic value while solving environmental or social problems.

Concrete example: Too Good To Go Initiative: The company's app allows shops and restaurants to sell surplus food at a reduced price instead of discarding it. The model addresses food waste while creating value for businesses and customers.

Problem-driven innovation

Innovation that starts from identifying a concrete problem rather than seeking profit alone.

Concrete example: A repair service created in response to electronic waste.

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Triple bottom line

A business approach measuring success through environmental, social and economic impact.

Concrete example: A cooperative employing local people while reducing waste.

Activities

- Introduction of key concepts with real-world business examples
- Scenario analysis: matching environmental problems with possible business solutions
- Group discussion on how reuse and eco-design can create value

Evaluation

Oral sharing: one sustainable business idea and the problem it addresses.

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SESSION 4: Circular business models

Focus

Understand how circular businesses create value and prepare for game-play.

Learning outcomes

Learners will be able to:

- Identify basic circular business models
- Link reuse and eco-design to entrepreneurship
- Apply concepts during the escape room

Key concepts, definitions and examples

Circular business model

A way a business creates value by keeping resources in circulation.

Concrete examples:

- Product-as-a-service (renting instead of owning)
- Take-back and repair programs

Value creation in circular economy

Creating value by reducing waste, extending product life and meeting social needs.

Concrete example: Clothing brands offering repair services. Like Patagonia, that provides repair guidance, repair services and opportunities to trade in or buy used clothing. This keeps garments in use for longer and reduces the need for new products. Learners identify how repair and resale create environmental and economic value.

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Activities

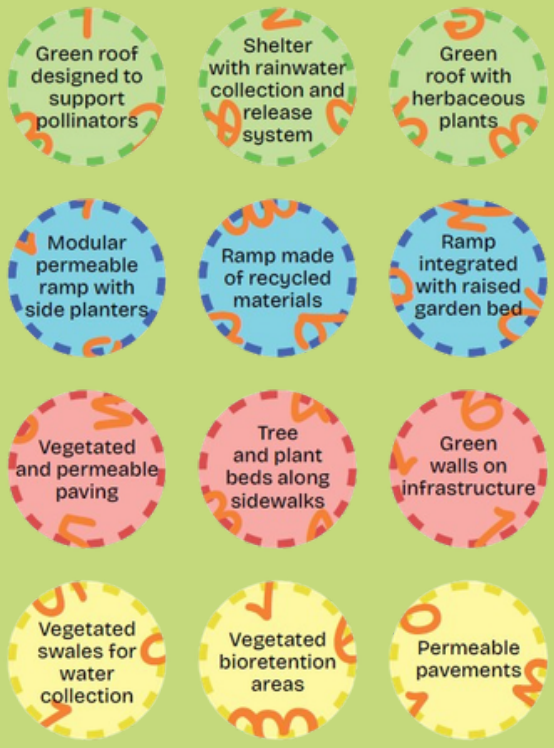
- Introduction of circular business models (repair services, rental, take-back systems)
- Group mapping of a simple circular business model
- Synthesis discussion linking circular economy, eco-design and entrepreneurship
- Review of key vocabulary and explanation of how concepts appear in the escape room

Evaluation

Short checklist quiz covering core concepts and terms.

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