

Activity 2 Alternative: “Redesign for Circularity” (Product Innovation Challenge)

Duration: 45 minutes

Target Audience: Teachers (Medium difficulty, hands-on problem-solving)

Instructions:

Step 1: Introduction (5 min)

- Ask participants:
 “What if we could redesign everyday products to be fully circular?”
- Explain that they will work in groups to **redesign a common product** using circular economy principles.

Step 2: Group Formation & Product Selection (5 min)

- Divide participants into **small groups (3-4 people per team)**
- Each group selects **one product** from the list:
 - **Plastic packaging** (e.g., food wrapper)
 - **Disposable coffee cup**
 - **Fast-fashion t-shirt**
 - **Smartphone or electronic device**
- They must **redesign the product** so that it follows circular economy principles.

Step 3: Redesign Process (15 min)

- Groups **brainstorm and sketch** how their product could be redesigned to:
 - **Use sustainable materials** (e.g., biodegradable, recyclable, or reusable).
 - **Extend the product’s lifespan** (e.g., modular design, repairability).
 - **Reduce waste and pollution** (e.g., zero-waste production, upcycling).
 - **Encourage responsible consumer behaviour** (e.g., deposit-return schemes, leasing models).

Step 4: Presentation & Discussion (15 min)

- Each group presents their **redesigned product** to the class in 2

minutes. The facilitator asks reflection questions:

1. **How is your redesign different from the current product?**
2. **What challenges would arise in implementing this circular model?**
3. **How can schools incorporate similar redesign thinking into their education system?**

Step5: Final Reflections (5 min)

- Ask participants to **write one way they can apply circular economy thinking** in their teaching.

Emphasise how **design thinking and sustainability education** are key to future-ready learning.

Expected Learning Outcomes:

Teachers **apply circular economy principles** through hands-on product innovation. They **develop problem-solving and creative thinking skills**. They **connect sustainability education to real-world problem-solving**.
If I Were a Participant in the "Redesign for Circularity" Activity

Step1: Introduction (Thinking Stage – 5 min)

- I would listen to the facilitator's introduction and think about products I use daily.
- I would reflect on the question: **"How could everyday items be redesigned for circularity?"**

Step2: Group Formation & Product Selection (5 min)

- I would join a **group of 3-4 participants**.
- As a group, we would **discuss and vote on a product to redesign**.
- Let's say we choose a **disposable coffee cup** as our product.

Step 3: Brainstorming & Redesign Process (15 min)

1. **Identify Problems with the Current Product:**

- o Disposable coffee cups are **made of mixed materials** (paper + plastic), making them **hard to recycle**.
- o They **create a lot of waste** and **cannot be reused**.

2. Brainstorm Circular Design Solutions:

- o Use **biodegradable materials** (e.g., mushroom-based packaging).
- o Create a **returnable, reusable cups system** with a **depositscheme**.
- o Design cups with **modular parts**, so damaged parts can be replaced instead of discarding the whole cup.

3. Sketch the Redesign Idea:

- o I would draw a rough **concept sketch** of our circular coffee cup.
- o We would **label the materials, reuse cycle, and sustainable features**.

Step 4: Presentation & Discussion (15 min)

- Our group would **present our redesigned coffee cup in 2 minutes**
- We would explain:
 - o Why we chose this product.
 - o The sustainability issues with the current version.
 - o How our redesign follows **circular economy principles**.
- I would answer discussion questions:
 - o **"What obstacles might companies face in adopting this design?"** → (E.g., cost of new materials, consumer habits).
 - o **"How could schools encourage similar sustainable thinking in students?"** → (E.g., implementing a school-wide reusable cup system).

Step 5: Final Reflection (5 min)

- I would write down **one way I can integrate circular economy thinking into my daily life or teaching**.
- Example: **"I will encourage my students to design eco-friendly versions of common school supplies."**