



Module 1 – Foundations of Sustainable Agri-Food Systems & Circular Economy

Think, Pair, Share: Loop Rescue Plan

Lesson B

Grouping: Pairs or small groups (3–4)

Time: 25-30 minutes

Materials:

- Pens/markers for diagramming
- Optional: large chart paper for group sharing

Objective:

Apply feedback-loop thinking to identify where a resource cycle is broken in a linear system and design a practical plan to restore it, creating a closed-loop outcome.

Instructions:

1. Read the “problem brief”:

- a. **Problem Brief:**

Title: “Bottled Water Blues”

A mid-sized city has recently shut down its public drinking fountain maintenance program due to budget cuts. As a result, many fountains in parks, community centers, and public spaces no longer work. This has led to a major increase in single-use plastic water bottle purchases.

Current Situation:

- Visitors and residents have fewer places to refill reusable bottles.
 - Litter from plastic bottles has increased, especially in parks and rivers.
 - The city’s recycling program is already struggling to keep up with the added waste.
- Local plastic bottle manufacturing and transport now produce more greenhouse gas emissions.

Your Challenge:

Identify where the feedback loop is broken, and design a practical “Loop Rescue Plan” that reconnects it—reducing waste and moving the system toward circularity.

2. On your own, list 2–3 quick ideas to restore or replace the broken loop.
3. In your group:
 - a. Identify where the feedback loop is broken
 - b. Brainstorm how to reconnect it
 - c. List the benefits of closing the loop again
4. Present your plan to the class in the format: Break → Fix → Outcome

Your Task:

Use the graphic organizer below to design your Loop Rescue Plan. Fill in each section clearly, then draw a before-and-after diagram showing how the system changes when your plan is applied.

Step 1: Where is the Loop Broken?
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- ☐ Production
- ☐ Processing
- ☐ Distribution / Retail
- ☐ Consumption
- ☐ Waste Management

Details:

Step 2: Proposed Fix

Describe how you would reconnect the loop.

Step 3: Outcomes & Benefits

List at least 3 benefits: Environmental, Economic, and Social.

Before – Linear System (Current)

Draw arrows showing “take → make → waste”. Mark where the leak happens.

After – Circular System (Your Solution)

Draw arrows showing your feedback loop / closed loop. Show how waste cycles back in.

Summary (Break → Fix → Outcome):

Break:

Fix:

Outcome:

Reflection:

1. How did thinking in terms of loops (rather than lines) change the solutions you came up with?
2. Which part of your plan would be easiest to implement in real life, and which part would be the hardest? Why?
3. How could your Loop Rescue Plan be scaled up to serve an entire city or region?

Skills You'll Use:

- Systems thinking
- Problem-solving and creative design
- Understanding of feedback loops and circular economy principles
- Communication and collaboration

Example:

- Problem Brief: School cafeteria waste → landfill
- Where is the Loop Broken? Waste not recovered for reuse or recycling
- Proposed Fix: Install an on-site biodigester
- Outcome & Benefits: Biogas for the kitchen; compost for the school garden; reduced landfill waste and methane emissions