

Interreg VI – A Italia - Österreich
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Workshop Template – Fix it with Sawdust

Interreg
Italia – Österreich



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EDU-CIRC

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1. Introduction

The “Fix It with Sawdust!” workshop is a 3-hour program for pupils (12–14 years) to learn about sustainability, the circular economy (CE), and life cycle assessment (LCA) through a hands-on wood repair activity.

Instead of throwing away damaged wood, pupils will learn how to repair it using sawdust and glue, then reflect on how this action fits within CE and LCA principles.

The workshop combines theory (CE & LCA) with practical teamwork (wood repair + poster challenge) and group reflection.

1.1 Learning Objectives

By the end of the workshop, participants will be able to:

- Learn the principles of the Circular Economy (CE).
- Understand and apply Life Cycle Assessment (LCA).
- Create a simple wood filler from sawdust and glue.
- Repair a tagged wood part (e.g., chair leg, shelf panel) instead of discarding it.
- Present their work through a poster that connects repair to CE & LCA.
- Propose one idea to make wood use more sustainable.

1.2 Required Knowledge

No specialized background is required. However, participants will benefit from:

- Basic teamwork & presentation skills.
- General awareness of environmental issues (waste, recycling, climate change).

The workshop is designed to be accessible and engaging for pupils aged 12–15.

2. Workshop Structure

Table 1 Workshop Structure

Phase	Duration	Activities	Purpose	Materials
Opening	10 min	Welcome participants, introducing workshop themes + icebreaker quiz (Guess the Material)	Engage curiosity, set sustainability theme	Slides
Context Setting	TBD	CE & LCA intro (Linear vs Circular economy)	Build understanding of CE & LCA concepts	Slides
Main Content	TBD	Safety briefing, Teams receive tagged wood parts, Hands-on activity: make wood filler & repair, Task 1: Choose R for their wood part, Task 2: Draw 5 LCA steps	Apply CE & LCA through real repair activity	Slides Wood parts with tags, sawdust, bio glue, mixing tools, PPE

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		Teams create posters with their repaired product, CE & LCA ideas	Communicate sustainability reasoning	Poster paper, markers
Wrap-up	15 min	Team presentations & awards, feedback & closing.	Consolidate learning, celebrate achievements, gather feedback.	Certificates, feedback forms.

2.1 Workshop Agenda

Table 2 Workshop Agenda

Phase	Duration	Activities	Purpose	Materials
Opening	10 min	Welcome, icebreaker quiz: Which products contain sawdust?	Engage curiosity, set sustainability theme	Slides, wood & sawdust samples
Context Setting – Circular Economy (CE)	TBD	Circular economy introduction with real-world wood example	Build understanding of CE principles	Slides
Context Setting – Life Cycle Assessment (LCA)	TBD	Introduction to LCA and provide real world examples	Show how LCA measures environmental impacts across wood life stages. Improve understanding each stage with real world scenarios	Slides
Challenge Intro	TBD	Each team receives tagged wood part (chair leg, shelf, etc.)	Prepare pupils for main activity	Slides, Tagged wood parts
Safety Briefing	TBD	PPE demonstration	Ensure safe working practices.	Gloves, paper towels.
Hands-On Repair	TBD	Bio glue preparation, mix sawdust, fill holes/cracks, let dry	Apply CE in practice (Repair)	Sawdust, bio glue, mixing tools
Poster Challenge	TBD	While repair dries: 1. Draw repaired part 2. Circle R used 3. Show 5 LCA steps 4. Add 1 eco-idea 5. Team name + roles	Connect CE & LCA with repaired product; teamwork & communication	Poster paper, stationary items

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Team Presentations	TBD	Groups present repaired part + poster	Share ideas, practice public speaking, inspire peer learning.	Posters, repaired pieces
Review & Awards	TBD	Celebrate: Best CE Idea, Best LCA Story, Most Creative Poster, Teamwork	Celebrate achievement, encourage collaboration.	Certificates, small prizes.
Feedback & Wrap-Up	TBD	Reflection worksheets, group discussion, closing remarks.	Consolidate learning, gather improvement ideas, close the session.	Feedback forms

2.2 Required Equipment

Table 3 Required Equipment

Category	Item	Quantity	Purpose	Alternative Options
Technology	Projector & screen	1 set	Present slides and visuals	Large monitor, flip charts
	Laptop	1 unit	Run presentation and visuals	Tablet with HDMI adapter, shared desktop
	Speakers	1 set	Audio for videos or sound-supported content	Built-in laptop speakers, no-audio option
Materials	Tagged wood parts (chair leg, shelf panel, etc.)	1 piece/team	Real-world repair activity	Any scrap wood with cracks/holes
	Sawdust	~300–400 g per team	Main filler material	Wood shavings from local carpenter
	Milk	100 ml/team	Prepare bio glue	NA
	Vinegar	20ml/team	Prepare bio glue	NA
	Baking soda	100g/team	Prepare bio glue	NA
	Water	250 ml/team	Prepare bio glue	NA
	PPE gloves	1 set per participant	Safety when handling sharp tools	NA
Supplies	Markers, pens, pencils, erasers	1 set/team	Poster design, calculations, sketching, note-taking	N/A
	Scissors, glue, tape	1 set/team	Assembly of posters and model elements	N/A
	Poster paper	2 sheets/team	Visual presentation of team decisions, CE & LCA strategy	A3/A2 papers

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	Paper towels & cleaning materials	1 set/team	Clean-up during and after activity	Reusable cloths
Documentation	LCA reflection sheets	1 per participant	Recording environmental impact analysis	Digital form (Google Sheets/Forms)
	Evaluation sheets	1 per team	Peer review & judging of final products	Tablet, online survey
Other	Full Slide Deck	1 master set (digital)	Guide participants through the entire workshop visually and clearly	Available via shared drive, USB stick, or printout handouts

2.3 Evaluation Framework

Table 4 Workshop Evaluation

Evaluation Type	Timing	Method	Key Metrics	Follow-up Actions
Immediate	End of workshop	Feedback forms	Satisfaction, objective achievement	Immediate improvements
Short-term	1-2 weeks later	Email survey	Knowledge retention, initial application	Provide additional resources
Long-term	3-6 months later	Interview/survey	Behaviour change, performance impact	Plan follow-up sessions

3. Detailed Explanation

3. Workshop Layout Explanation

3.1. Opening

Activity: Welcome & Icebreaker Quiz

Description:

The facilitator welcomes participants, introduces the theme “Fix It with Sawdust!”, and provides an overview of the day’s structure. Pupils take part in a short quiz: “Which products contain sawdust or wood fibers?” followed by handling real wood and sawdust samples. This creates curiosity and sets the sustainability theme.

Purpose: Create an engaging start, spark curiosity, create a positive atmosphere, and introduce sustainability concepts in a relatable way.

Materials: Slides, wood & sawdust samples

3.2. Context Setting – Circular Economy (CE)

Activity: Introduction to CE and the 4Rs

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Description:

The facilitator explains the concept of a Circular Economy in contrast with the Linear Economy (Take–Use–Throw). Pupils are introduced to the 4Rs (Reduce, Repair, Reuse, Recycle) with simple real-world wood examples (e.g., repairing a chair leg).

Purpose: Build a clear foundation of CE principles and explain why it is important.

Materials: Slides

3.3. Context Setting – Life Cycle Assessment (LCA)

Activity: Introduction to LCA

Description:

The facilitator introduces Life Cycle Thinking (LCA) in 5 simple stages: Start (Raw materials), Make, Move, Use, End (Recycle or Waste). Pupils map an everyday object (e.g., MDF furniture) across the stages to see where impact occurs.

Purpose: Show how products affect the environment at each stage and why repair or reuse matters.

Materials: Slides.

3.4. Challenge Intro

Activity: Teams receive tagged wood parts

Description:

Each team is given a piece of wood from an old product (e.g., chair leg, shelf panel, boat plank, picture frame). The tag explains its “past life.” The facilitator explains that the challenge is to repair it with sawdust filler and then reflect using CE and LCA.

Purpose: Prepare teams for hands-on activity with a real-world product story.

Materials: Slides, Tagged wood parts with cracks

3.5. Safety Briefing

Activity: PPE and Handling Demonstration

Description:

Facilitator demonstrates how to wear gloves, handle sawdust + bio glue safely, wipe spills, and wash hands. Pupils check each other’s PPE before starting.

Purpose: To ensure the safety of all participants during hands-on activity.

Materials: Gloves, paper towels, cleaning wipes.

3.6. Hands-On Repair Activity

Activity: Making wood fillers and repairing cracks

Description:

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Teams mix sawdust with previously prepared bio glue to create a natural filler paste. They use it to fill cracks or holes in their tagged wood piece. After smoothing the surface, the piece is left to dry. Pupils rotate roles (Mixer, Filler, Cleaner, Recorder) to encourage teamwork.

Purpose: Apply CE (Repair) in practice and demonstrate how waste can be turned into a resource.

Materials: Sawdust, bio glue, mixing tools, scrapers, PPE

3.7. Poster Challenge

Activity: Answer for Tasks, CE & LCA Poster Creation

Description:

While their repair dries, teams create a poster showing:

- Drawing of their repaired piece (before & after).
- The “R” they used (Repair, Reuse, Recycle, Reduce).
- The 5 LCA stages, with a mark showing where their repair made a difference.
- One eco-idea to improve further.
- Team name and roles.

Purpose: Connect practical activity to CE and LCA concepts, encourage teamwork and communication.

Materials: Poster paper, markers, worksheets.

3.8. Team Presentations

Activity: Present repaired piece & poster

Description:

Each group presents their repaired product and poster in 2–3 minutes. They explain which R they chose, how their wood part’s life cycle changed, and share their eco-idea. Short Q&A follows.

Purpose: Share knowledge, encourage peer learning, and inspire innovative thinking.

Materials: Presentation aids and repaired pieces

3.9. Review & Awards

Activity: Awards

Description:

Facilitators select Best Circular Idea, Best LCA Story, Most Creative Poster, and Best Teamwork. Small prizes or certificates are given to encourage participation.

Purpose: Celebrate achievements, motivate pupils, encourage collaboration.

Materials: Awards and certificates.

3.10. Feedback & Wrap-Up

Activity: Reflection and Closing Session

Description:



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Pupils complete a short reflection sheet (“One thing I learned, one thing I’ll do differently”). Group discussion highlights key takeaways. Facilitator thanks participants and encourages them to apply CE ideas at home/school.

Purpose: Consolidate learning, gather feedback, and close the session positively.

Materials: Feedback forms

Equipment & Purchasing Links

1. Materials to prepare bio glue
 - Milk
 - Vinegar
 - Baking soda
2. Saw dust
3. Mixing Bowls
4. Scraper
 - [LUX painter's spatula 50 mm](#)
5. Safety Equipment (PPE)
 - Safety Gloves
 - Cleaning tissues