

Teacher's guide: Wood - a Brilliant Material

Theme

- Academic content about wood - both in the circular and linear economy

Recommended Duration in Hours:

- 60 min + 30 min (Quiz)



WOOD

Introduction

The module is introductory and aims to provide participants with insights into why increasing the circularity of wood is crucial. Supported by facts about wood consumption and recycling, potentials in different types of wood, and the handling of wood, participants will explore potential actions to contribute positively. An overview of existing policies and goals to enhance wood recycling compared to the current status will be provided, indicating that the market is just getting started.

Participants are encouraged to reflect on how to design, build, and act on construction sites/in workshops, including considerations for deconstruction (handling, sorting, health aspects) and assessing wood for its circular potential. Different types of wood have varying circular potential based on species, availability, shape, size, composition with other materials, environmental impact, and infrastructural and economic factors.

Preparation

The teacher should be familiar with the journey of wood in both the linear and circular economic models. The teacher should be acquainted with concepts related to the journey of wood in linear and circular economies. Refer to the glossary if needed.

• Learning Objectives

- Present key subject-specific concepts.
- Choose appropriate technical terms to describe recycling and reuse in specific contexts.
- Describe the wood components in historical construction from the last 60 years.
- Explain the connection between wood production and the shortage of wood products.
- Describe basic legislation on responsible forestry (European Timber Regulations).
- Reference wood resources in existing building stock.



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- Explain the potential recycling rate of wood resources in existing building stock.
- Describe the journey of wood products from a life cycle perspective.
- Understand the value creation through recycling and reuse and explain the benefits.

Content and Purpose

- Describe the pros and cons of wood and its path through both the traditional linear economic system and the circular economic system.
- The argument for circularity involves understanding the potential and challenges of wood - from the forest to the final product - and how increased circularity can support aspects related to forests, nature, climate, and social conditions.
- Content is based on knowledge of wood materials, their building properties, and their impact on climate, environment, and resource quantities.
- Apprentices follow the traditional journey of wood from the forest into the economy (construction industry) and back out (e.g., incineration). Then, apprentices explore wood's new journey into the circular loop, focusing on recycling and reuse.
- The website facilitates this journey with facts, interactive models, and short video clips, etc.
- Quiz task about wood as a material, its origin, its usage options, and its recycling potential.

Suggested Lesson Plan

Teacher Presentation (5 min.)

- Overall objectives - what should apprentices gain from exploring a website for half an hour?
- Showcase of the "WOOD" subsection and a quick overview of its structure.
- Explanation of the task for apprentices to list the three "most important" technical terms.

Self-Study (30 min.)

- Apprentices explore the website independently.
- Apprentices list the three "most important" technical terms they encountered on the website and prepare to argue for their choices.

Plenary Recap (25 min.)

- Apprentices' answers are displayed on the big screen.
- Apprentices are allowed to argue for their choices, and knowledge is shared and discussed in the plenary.
- Pair work to develop concept clarifications for a common glossary on wood in the Circular Economy (CE).
- Any questions?



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Quiz (30 min.)

- The teacher introduces the quiz.
- Apprentices complete the quiz on the website.
- Results from the quiz are discussed in the plenary.

Differentiation

The teaching element can be differentiated by the teacher choosing to skip the glossaries.

Consideration should be given to wood resource quantities and differences in wood species in different countries, thus also varying climate and environmental impacts.

Feedback and Evaluation

The technical term lists and subsequent elaboration of terms provide the teacher with the opportunity to evaluate apprentices' learning outcomes. The plenary discussion allows apprentices to provide feedback.

