

Lesson Plan

Target Audience

Vet Trainers

Goal (50-60 words)

The goal of this Lesson Plan is to contribute to a better understanding of paper overconsumption in everyday life. The VET trainer will acquire information and useful guidelines for presenting to the trainees the concept of reducing, reuse and recycling of paper. The trainees will have a better awareness of the environmental risks connected to paper waste and ways to improve their behavior at school, the workplace and at home.

Objectives (1-3 Objectives)

Upon completing the Module, the trainees will be able to:

- Recognise and evaluate the impact of paper overconsumption in offices and businesses
- Research and explore practical solutions for paperless offices, schools, homes
- Give examples and apply good practices of organising, reducing, reusing and recycling paper in schools and workplaces

Optional Theoretical Background (200-400 words)

Paper waste is a significant environmental concern due to its contribution to landfills, deforestation,

energy and water consumption, and air pollution. Nowadays **businesses** are a big cause of paper waste. Around **50%** of all waste that businesses produce is paper.

There are various factors which have increased the paper consumption in the workplace. There are many factors responsible for overconsumption of paper such as personal habits, organisation's requirements, technical factors related to the use of technology and lack of employees' awareness regarding the negative impact of paper use which has not been explored.

It is an interesting but alarming fact that the global consumption of paper and paperboard totaled 417 million tons in 2021. Consumption is projected to continue rising over the coming decade to reach **476 million tonnes by 2032**.

However, **schools** also accumulate tonnes of waste paper. In the classrooms and in the administration of schools, paper is widely used daily by students, teachers and school staff. By learning how to properly handle this waste, school officials not only have an opportunity to greatly influence the future of their schools and cities, but they can also have a **significant impact on the environment**.

We know that **reducing paper waste** aligns with the principles of reducing, reusing, and recycling, which are pivotal for creating a sustainable future. It involves not only changing individual behaviours and office practices but also embracing innovative technologies that offer paperless alternatives.

"Each tonne of recycled paper can save approximately 17 trees" (Renee Yardley), underscoring the critical role that recycling can play in mitigating the ecological impact of deforestation and promoting sustainable forest management practices.

It is reassuring that **best practices** of paper waste management in schools and businesses have a crucial role in the global reduction of paper consumption. Every school and business can have an impact on the environment by introducing new rules and practices for recycling, reuse and reduction of paper on an everyday basis.

There are various ways and methods to control overused or misused paper.

- For example, printing/copying onto both sides of a paper can save up to 30% of paper.
- Reducing margin is also a significant way adopted in some organisations to reduce paper consumption. By reducing the margins, 14% less paper is used as compared to normal margin.
- If a hard copy of a document is not required, a PDF is an effective alternative to printing as a means of archiving or sharing a document.
- In order to reduce the negative impacts of paper use on the costs and environment, it is imperative that each organisation has a policy for "paper use and printing". The employees' awareness about the impact of paper on an organisation's cost and the environment is essential because it can decrease the use of paper.
- The use of electronics instead of paper documents is also best practice that reduces paper consumption and waste.

Lesson Plan Details

Lesson Plan title	Lesson Plan 2: Paper in our everyday life: reduce, reuse, recycle
21st Century Skills	<p>Choose the skills that will be developed in the lesson:</p> <ul style="list-style-type: none"> ● Collaboration ● Communication ● Creativity ● Critical Thinking ● Problem-solving ● Decision making
Duration	<p>Total duration: 100 minutes.</p> <p>Activity 1: Introduction to the topic of paper overconsumption and waste management at workplace/school and work with scenario “Greenwood High School’s Paper Waste Challenge”- 35 minutes</p> <p>Activity 2: Paper waste audit – 65 min</p>
Classroom setting	In groups for Activity 1 and Activity 2
Required material/resources	<p>Activity 1:</p> <ul style="list-style-type: none"> ● Case scenario handout ● Whiteboard and markers ● Computers/tablets (for online implementation) ● Internet connection <p>Activity 2:</p> <ul style="list-style-type: none"> ● Case scenario handout (from the previous scenario) ● Whiteboard and markers ● Recycling bins ● Scrap paper for notes ● Computers/tablets (if available) ● Internet connection

Prerequisites	General knowledge about paper production and paper waste and their impact on the environment
Final Assessment (if applicable)	<i>Group project: Create a poster/infographic or presentation up to 10 slides on ways to reduce paper waste and all good practices for saving paper waste in both business and in schools</i>
Additional resources	<p>Paper Calculator, presented by Environmental Paper Network https://c.environmentalpaper.org/calculate.html</p> <p>Case study – A Chamber goes paperless https://www.sydneyhillsbusiness.com.au/going-paperless-shbc-case-study/</p> <p>Paper Waste: Why Does It Matter? https://baleforce.com/paper-waste-why-does-it-matter-and-how-to-manage-it/</p>
References	<ul style="list-style-type: none"> ● Environmental Paper Network, Paper to Protect the Planet (2018) Understanding how recycled content in printing and writing paper – and all grades – reduces energy, water, chemical use, pollution and solid waste, while protecting forests https://environmentalpaper.org/wp-content/uploads/2018/05/EPN-recycled-fiber-fact-sheet.pdf ● Guarro Casas , Creative blog, (June, 2020) Paper, a sustainable alternative to plastic to protect the environment https://guarrocasas.com/en/paper-a-sustainable-alternative-to-plastic-to-protect-the-environment/ ● A Paper Use Reduction Guide for Your Business, Stop Waste.org https://www.stopwaste.org/sites/default/files/Business%20Assistance/PDF%27s%20%26%20Resources/paperlessguide_0.pdf

Lesson Plan for Activities & Scenarios #1 (include 1-3 activities & 1-2 scenarios)

Activity 1 - Scenario “Greenwood High School’s Paper Waste Challenge”

This activity consists of three steps.

Step 1: After introducing the environmental risks from paper production and paper waste, present the following mini scenario to your trainees (10 min):

You are the Director of Greenwood High School and notice a significant increase in paper waste over the past year. Teachers frequently print handouts, worksheets, and tests, while students often use paper for assignments and notes. You are concerned about the environmental impact and the rising costs associated with paper consumption. You are looking for effective ways to reduce paper waste and promote sustainability within the school.

Step 2: Choices (15 min):

1. I will implement a Digital Learning Platform where teachers can upload assignments, handouts, and tests. Students can complete and submit their work online.
2. I will introduce a Paper Recycling Program that includes setting up recycling bins in classrooms and common areas. In addition, I will educate the students and staff about the importance of recycling and how to properly recycle paper.
3. I will encourage as a practice double-sided printing for all documents and reuse paper that has only been printed on one side for drafts or notes.

Step 3: Feedback (10 min):

1. Feedback 1: Implementing a Digital Learning Platform is the best choice
 - This solution offers the most significant reduction in paper usage and provides additional benefits such as enhanced collaboration and easy access to materials. Although it requires an initial investment and training, the long-term benefits outweigh the drawbacks.
2. Feedback 2: Encouraging double-sided printing and reuse paper might not fully address the problem

- This choice *reduces paper consumption by half. It is easy to implement with existing resources and causes immediate impact on paper usage. However, this approach requires consistent effort and reminders and may not be suitable for all types of documents. You will see limited impact compared to digital solutions.*
3. Feedback 3: Introducing a Paper Recycling Program is only a short-term solution
- While recycling is important, this solution does not address the root cause of paper waste. It relies heavily on participation and proper use, which can be inconsistent. It also does not reduce the initial consumption of paper.

Activity 2 - Paper Waste Audit

This activity aims to engage students in understanding the impact of paper waste and actively involve them in finding and implementing solutions. It consists of five steps.

Step 1: Introduction (10 min)

- Briefly discuss the importance of reducing paper waste.
- Present the case: Reducing Paper Waste in XYZ Corporation

XYZ Corporation, a mid-sized company with 150 employees, has been experiencing a significant amount of paper waste. The company uses a lot of paper for all its activities, and this has led to increased costs and environmental concerns.

Current Issues:

1. *Employees print numerous documents daily*
2. *Physical tickets are issued for company events, resulting in additional paper waste.*
3. *Marketing materials (flyers, brochures) are printed and distributed in large quantities.*
4. *Meetings involve printed agendas, notes, and handouts, contributing to paper waste.*

Step 2: Reflect and Brainstorm (20 min)

- Divide the class into two groups.
 - Group A: Focus on identifying the problems caused by paper waste (for example - high costs, increased carbon footprint, etc.)
 - Group B: Focus on brainstorming potential solutions to reduce paper waste in XYZ company

For example:

1. *Waste prevention*
 - a. *Go digital – emails, memos, electronic documents archives*
2. *Waste reduction*
 - a. *Duplex printing – set default on printers*
 - b. *E-tickets for travels or events*

- c. Avoid paper flyers and posters*
- d. Use packaging free items*
- e. Use glasses and cups for multiple use*
- 3. Recycling and reuse**
 - a. Recycle shredded paper*
 - b. Reuse cardboard boxes for shipping*
- 4. Composting**

- Provide each group with the case handout.
- Allow 10 minutes for discussion within each group.
- Have each group present their findings and ideas to the class.

Step 3: Paper Waste Audit (20 min)

- Explain the [concept of a paper waste audit](#).
- Divide the class into pairs.
- Each pair will:
 - Collect paper waste from different areas of the school (classrooms, library, office).
 - Sort the collected paper into categories (e.g., single-sided, double-sided, recyclable).
 - Record their findings on a provided worksheet.
- Discuss the results as a group and identify the most common sources of paper waste.

Step 4: Discussion and Reflection (10 min)

- Reflect on the findings from the paper waste audit.
- Discuss how the identified solutions from Group B could be implemented to address the issues found during the audit.
- Encourage trainees to share their thoughts on which solution they believe would be most effective and why.

Step 5: Conclusion (5 min)

- Summarise the key points discussed during the lesson.
- Emphasise the importance of taking action to reduce paper waste.