Lesson Plan for Sustainable Waste Management
Topic 3: Sustainable mobility

Target Audience

Vet Trainers

Goal (50-60 words)

Help learners to create and implement action plans for sustainable transportation in their communities. Design strategies to raise awareness and engage the public, and participate in hands-on projects like organizing events, conducting surveys, and running campaigns to promote cycling, carpooling, and public transit.

Objectives (1-3 Objectives)

Upon completing the Module, Trainers should be able to:

- **Build VET trainers' competences** to create a green education action plan for the VET sector
- Provide VET trainers with **a collection of hands-on teaching and learning material to engage sustainable waste management** and green skills within the VET sector
- Provide a **collection of digital resources focusing on sustainable waste management** to be adopted and adapted by VET trainers in their everyday practices

OR

- **Understand** the key components needed to create effective action plans for sustainable mobility in local communities.

- **Analyze** community needs and current transportation patterns to tailor sustainable initiatives effectively.
- **Research** successful case studies and best practices for promoting cycling, carpooling, and public transport to inform project development.
- **Design** action plans and interact with relevant local organisations for execution

Optional
Theoretical Background (200-400 words)

The current transportation systems, especially in busy and developed (urban) areas, is made out of man-made (artificial) constructions. This in return has overall both positive and negative outcomes (consequences). Some of the positive examples of the current transportation systems are ease and convenience to use the already known modes. However these common modes and mediums of transport are also linked with health, socioeconomic and environmental risks to societies globally. Such risks can be tackled by promoting examples of sustainable mobility. According to the European Commission Sustainable mobility is: 'Development of transport systems that are safe, accessible, inclusive, affordable, smart, resilient and emission-free' (EC Europa, 2023). This means that you should be able to travel from any point to any destination safely, cheaply, easily and in a way that does not harm nature and environment. Water, air and noise pollution are key examples of how the quality of the environment and nature are affected negatively (i.e. Global Warming) which altogether can also affect your healthy state. Other negative environmental impacts resulting from the current transportation systems are the loss of biodiversity when constructing new transportation mediums like roads and motorways (TheCityFix, 2023; RepublicofCyprus, 2022). In order to start creating a better transportation system, both for your health, socioeconomic development and for the environment, start by using ways with less emissions to travel around. A useful example is the use of bicycles or even public transport. These and other many actions can help reduce both the amount of traffic and loudness on the roads, but also your personal wellbeing.

- This lesson plan covers the discovery of various solutions that can bring progress on sustainable mobility.

- Another topic of this training is examining existing data is important to understand what are the challenges of why some solutions are more difficult to apply.

- At the end of this training you will have the ability to put your ideas into action by creating tools and communicating with the relevant organisations, communities and other stakeholders.

Lesson Plan Details

Lesson Plan title	Developing and Implementing Sustainable Transportation Projects
21st Century Skills	Choose the skills that will be developed in the lesson: ■ Critical Thinking ■ Creativity ■ Collaboration ■ Communication ■ Information / Data literacy ■ Technology literacy ■ Leadership ■ Initiative ■ Productivity ■ Social skills
Duration	Define how long the Lesson shall last in minutes. Total: 120 minutes. *Introduction: 5-6 minutes* *Engagement with Mentimeter: 20 minutes* *Activity 1: 20 minutes*

	Activity 2: 30 minutes *Scenario 1: 15 minutes* *Activity 3: 15 minutes* *Scenario 2: 15 minutes*
Classroom setting	Select how the class needs to be organized for the lesson: ● in groups ● individually ● Complete class discussion
Required material/resources	List any material that will be required throughout the lesson *For all activities:* ● *an electronic device – smartphone (recommended) and a laptop (preferred) for each of learner* ● *accessibility to online assessment tool e.g. Mentimeter* ● *accessibility to Online meeting platform* ● *accessibility to Online spreadsheet platform*
Prerequisites	Plot graphs in spreadsheet platforms Use of smartphones and internet to enter a provided website to access assessment tool
Final Assessment (if applicable)	● *M/C quiz*
Additional resources	N/A
References	Deignan, S. (2022, September 01). *8 Best Assessment Tools for Educators.* From Mentimeter: https://www.mentimeter.com/blog/education/best-assessment-tools EC Europa. (2023, June 9). *Sustainable Urban Mobility.* From Mobility and Transport: https://transport.ec.europa.eu/transport-themes/urban-transport/sustainable-urban-mobility_en European Commission. (2018, April). *Transport in the European Union:Current Trends and Issues.* From MOBILITY AND TRANSPORT: https://transport.ec.europa.eu/system/files/2018-06/2018-transport-in-the-eu-current-trends-and-issues.pdf Europpean Commission. (2019, March). *Transport in the European Union: Current Trends and Issues.* From Mobility and Transport: https://transport.ec.europa.eu/system/files/2019-03/2019-transport-in-the-eu-current-trends-and-issues.pdf

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

Duration:

1. Upon lesson start, engage with trainees by introducing yourself, the topic (sustainable mobility) and briefly the importance of this lesson goal. State how activities will take place and

the equipment suggested to proceed. Include a statement that the use of an electronic device (laptop or preferably smartphone) will be required for the surveys responses and activities. The use of both laptop and smartphone can be more efficient and is recommended, but not essential for the activities (*5-6 minutes*).

- o Mention Room for questions will be available at the end of each section
- o Request participants to use their smartphones or other electronic devices to login in the 'Mentimeter' space (Mentimeter, 2020), using a provided link and access
  - ▪ <u>NOTE:</u> The purpose of this digital lesson plan is to use a platform suitable for presenting open response platforms and other audiovisual content. If you are accustomed to using different platforms following similar concepts, feel free to introduce that to your lesson plan instead. Additionally if you would like to practice other assessment tools suitable for educators, you can use this [link](#) for further suggestions.
  - ▪ Step-by-step instructions on how to create Mentimeter Presentations can be found on this video [link](#).
  - ▪ Prepare beforehand a presentation and add a questionnaire that participants will respond to during the lesson.
- o Ensure all participants have gained access to the Mentimeter link provided.

2. To involve interaction and promote mind initiation for thought, Ask trainees Mentimeter: (*20 minutes*)
   - o 'What transportation mode are you using to go to work?'
     - ▪ Address each response individually and expect multiple similar responses (*2 minutes*)
   - o Continue on the same topic on a different question: 'What are the most common modes of transport in your region?'
     - ▪ Address each response individually and expect multiple similar responses (*5-6 minutes*)
   - o Continue interaction by asking trainees to choose from the multiple choice question: 'Which timeframe applies for them to reach your working place?' (*2 minutes*)
     a. 5-15 minutes
     b. 15-30 minutes
     c. 30 - < minutes

   - o Proceed by asking participants to answer the open-ended question on Mentimeter: 'What are the situation risks of the current transportation system in your country / area of residence?', and allow a 5-10 minute interaction through Mentimeter between Learner –Participants to address current Limitations of the existing transportation system in their region (Bulgaria, Cyprus, Greece, Italy, Poland, Portugal, Romania)

- A list of 5 examples would sufficient

3. Activity 1: (*20 minutes*)
   o Now it is time to put creativity and thoughts of solutions into action!
   o Learners will need to collaborate with local stakeholders, including government officials, businesses, and community organizations, to develop and propose practical solutions for enhancing sustainable mobility in their area.
     ▪ Learners will need to think and write suggestions on Mentimeter on how they as individuals can help the promotion of alternative solutions to make the current transportation system more environmentally sustainable.
     ▪ Suggestions must be SMART (Specific, Measurable, Achievable, Relevant, and Time-Bound)
     ▪ A plan should be included of when the learners can start executing them and implement them
   o When you read all the suggested solutions, guide the learners if necessary on possible approaches on how to achieve their suggested goals
4. Activity 2: (*30 minutes*)
   o Briefly explain the purpose of the activity: to design a mini-project plan for a sustainable transportation initiative. (2 minutes)
   o Divide the learners into small groups (3-4 members each). (1 minute)
   o Assign each group a specific type of sustainable transportation project to work on, such as: (2 minutes)
     ▪ Promoting cycling through a community event
     ▪ Implementing a carpooling program in a local business
     ▪ Launching a public transit awareness campaign
     ▪ Creating a bike-sharing program
   o Each group will brainstorm and outline their project plan using the following template (10 min)
     ▪ Project Title: (e.g., "Community Bike Festival")
     ▪ Goals: What are the objectives of the project? (e.g., Increase cycling participation by 20%)
     ▪ Strategies: How will you achieve these goals? (e.g., Organize a city-wide bike event with local sponsors)
     ▪ Resources Needed: What materials, people, and funding are required? (e.g., Bike rental stations, event permits, volunteers)
     ▪ Target Audience: Who will benefit from this project? (e.g., Local residents, students, commuters)
     ▪ Evaluation Methods: How will you measure the success of the project? (e.g., Number of participants, feedback surveys)
   o Each group will present their project plan in a brief 2-minute overview. (8 minutes)

- o After each presentation, allow for quick feedback and questions from other groups. (5 minutes)
- o Recap the importance of having a clear plan for implementing sustainable transportation projects (2 minutes)
5. Scenario 1: (*15 minutes*)
    - o Raise the open-ended question on Mentimeter: "What are the most effective strategies for convincing local authorities to support a sustainable transportation campaign?"
        - ▪ Introduce concepts such as: presenting clear benefits, demonstrating community support, providing cost-benefit analyses, and showcasing successful case studies.
    - o Learners need to write their response after thinking about strategies to persuade local officials.
    - o Discuss as a group, focusing on the most compelling ways to advocate for sustainable transportation initiatives.

Scenario:

Step 1: Present this real-life mini scenario to your trainees.

As the mayor of a bustling city, you're committed to implementing sustainable transportation initiatives but recognize the importance of gaining public support.

Step 2: Ask them to reflect on it and present them these three choices:

Develop effective strategies to convince local authorities and the community to support your sustainable transportation plans. Consider the following factors:

1. **Community Engagement:** How can you involve citizens in the decision-making process and build a sense of ownership?
2. **Communication:** What are the most effective ways to communicate the benefits of sustainable transportation and address concerns?
3. **Data-Driven Approach:** How can you use data and evidence to demonstrate the need for and benefits of sustainable transportation initiatives?
4. **Partnerships:** What partnerships can you form with local businesses, organizations, and other stakeholders to support your efforts?

Step 3: Based on their responses, share with them the feedback below.

1. **Effective Community Engagement:** Your plan demonstrates a strong commitment to involving citizens in the decision-making process and building a sense of ownership.
2. **Clear Communication Strategies:** You've outlined effective ways to communicate the benefits of sustainable transportation and address potential concerns.

3. **Data-Driven Approach:** Your plan incorporates a data-driven approach to demonstrate the need for and benefits of sustainable transportation initiatives.
4. **Strong Partnerships:** You've identified key partnerships that can support your efforts and help to achieve your goals.
5. **Needs Further Refinement:** While your plan shows promise, it could benefit from further elaboration on specific strategies or a more detailed analysis of potential challenges.

Note: Encourage trainees to think creatively about ways to engage the community and build support for sustainable transportation initiatives. They may consider organizing community events, conducting surveys, or using social media to raise awareness and gather feedback.

6. Activity 3: (*15 minutes*)
   o Generate a final assessment in the form of multiple choice quiz summarizing the key learnings of this lesson plan, using Mentimeter (10 -15 questions would suffice)
      ▪ Suggested questions could include
         1. What is a key component of designing an action plan for sustainable transportation?
         2. Which of the following is an example of a hands-on project for promoting sustainable transportation?
         3. What is an important factor to consider when conducting surveys about public transportation needs?
         4. Why is public engagement important in sustainable transportation initiatives?
         5. What is a benefit of creating campaigns to encourage carpooling?
7. Scenario 2:(*15 minutes*)
   o Raise the open-ended question on Mentimeter: "Which approach would be most effective for assessing community needs for public transportation improvements?"
      ▪ Introduce concepts such as, conducting surveys, hosting focus groups, analyzing transportation data, and engaging with local leaders..
   o Learners need to write their response after evaluating different methods for understanding community needs.
   o Discuss together, focusing on the most effective approach for gathering accurate and actionable information.

Scenario:

Step 1: Present this real-life mini scenario to your trainees.

As the mayor of a city looking to improve its public transportation system, you need to gather accurate information about the needs and preferences of your residents.

Step 2: Ask them to reflect on it and present them these three choices:

Evaluate different methods for assessing community needs for public transportation improvements. Consider the following factors:

1. **Reliability:** Which methods are most likely to provide reliable and accurate data?
2. **Efficiency:** Which methods are the most efficient and cost-effective to implement?
3. **Inclusivity:** How can you ensure that your assessment methods are inclusive and accessible to all residents?
4. **Community Engagement:** Which methods can help to build a sense of community involvement and ownership?

Step 3: Based on their responses, share with them the feedback below.

1. **Comprehensive Assessment:** You've considered a variety of methods for assessing community needs and identified the strengths and weaknesses of each approach.
2. **Reliable and Accurate:** You've prioritized methods that are likely to provide reliable and accurate data, such as surveys and focus groups.
3. **Inclusive and Accessible:** You've considered ways to ensure that your assessment methods are inclusive and accessible to all residents, regardless of language, age, or disability.
4. **Engaging Community:** You've recognized the importance of community involvement and have suggested methods to build a sense of ownership.
5. **Needs Further Refinement:** While your analysis is strong, you could benefit from further elaboration on specific methods or a more detailed discussion of potential challenges.

Note: Encourage trainees to think creatively about ways to engage the community and gather accurate information about their needs. They may consider a combination of methods, such as surveys, focus groups, public meetings, and social media engagement.