

LESSON PLAN

Title of thematic unit	Tools for monitoring food waste in catering establishments
Length	1 hour and 30 minutes
Learning outcomes	<p>After this lesson students will be able to:</p> <ul style="list-style-type: none"> • define and understand sustainable management of food • describe food recovery hierarchy • explain why is sustainable management of food important • understand what businesses and organizations can do to prevent and divert food waste • find and use interactive online tools to prevent and divert food waste
Teaching and learning resources and materials	Notebooks, flip chart table, markers, TV
Learning methods and techniques	Lecture, brainstorming, discussion, problem solving assignments, self-directed learning, simulation learning, debate, demonstration
Instructions (course of the lesson)	<ul style="list-style-type: none"> • Tell students they will be learning about food waste in catering establishments. • Brainstorming: What is Sustainable Management of Food? What is Wasted Food and Where Does it Come From? • Share background knowledge: Why is Sustainable Management of Food Important? <ul style="list-style-type: none"> ○ Saving Money ○ Helping People ○ Conserving Resources • For a collaborative element, divide students into 3 groups to find <u>United Nations' Sustainable Development Goals (SDGs) Target 12.3</u> and answer two questions: 1) how

much of the food produced each year goes to waste (each year, an estimated 1/3 of all food produced – equivalent to 1.3 billion tons worth around \$1 trillion – ends up rotting in the bins of consumers and retailers, or spoiling due to poor transportation and harvesting practices); 2) what percentage of the energy produced is spent on food production? (The food sector accounts for around 30 per cent of the world's total energy consumption and accounts for around 22 per cent of total Greenhouse Gas emissions)

- Show the video *FAO Policy Series: Food Loss & Food Waste* (<https://www.youtube.com/watch?v=pxoz88-GXyk&list=PLzp5NgJ2-dK6rvL0neIyknuTmM-3QKwBh>) and *Food is Never Waste* (<https://www.youtube.com/watch?v=AuahLYYiSHs>).
Debate: What surprised, shocked students in these videos?
- On - screen show *Food Recovery Hierarchy*, explain that it prioritizes actions organizations can take to prevent and divert wasted food. Explain tiers of the hierarchy.
 - Source Reduction
 - Feed Hungry People
 - Feed Animals
 - Industrial Uses
 - Composting
- To familiarise students with the Individual Waste Reduction Model (iWARM) Tool (<https://www.epa.gov/warm/individual-waste-reduction-model-iwarm-tool#full>). The iWARM tool is a downloadable Microsoft Excel file that can be used to find out how much energy is saved by recycling small quantities of common waste materials. The tool illustrates the impact of recycling by translating the amount of energy saved into the amount of time an

	<p>appliance can be powered. The tool also displays the results in a graph and provides assumptions, calculations and conversions. Practical application of the Individual Waste Reduction Model (iWARM) Tool.</p> <ul style="list-style-type: none"> • Discuss the knowledge gained in today's lessons, the skills acquired and the opportunities offered by on-line tools to be aware of and reduce food waste in catering establishments.
<p>Evaluation (assessment)</p>	<p>Within one week, is expected to complete iWARM, make a presentation of (~ 5 minutes) and present main findings to fellow students.</p>
<p>Useful literature, materials</p>	<ul style="list-style-type: none"> • Food and Agriculture Organization of the United Nations "Global food losses and food waste – Extent, causes, and prevention" (PDF) (38 pp, 1.6 MB, 2011, About PDF). • Food and Agriculture Organization of the United Nations, International Fund for Agriculture Development and the World Food Programme, The State of Food Insecurity in the World 2014. Strengthening the enabling environment for food security and nutrition (PDF) (57 pp, 3 MB, 2014). • Food and Agriculture Organization of the United Nations, The State of Food Security and Nutrition in the World 2019



- Who Cares About Reducing Food Waste? (<https://www.youtube.com/watch?v=3mxwDCA8DEM>)
- USDA Tips to Reduce Food Waste at Home (<https://www.youtube.com/watch?v=pPtj-ukCcYE>)
- Plan Ahead to Reduce Food Waste (https://www.youtube.com/watch?v=itYK_Sddx0k)
- Serve Smart to Reduce Food Waste (<https://www.youtube.com/watch?v=rVTfISbQGqs>)
- Love Your Leftovers to Reduce Food Waste (<https://www.youtube.com/watch?v=AqxBs4jraX8>)
- Food Waste Animations (<https://www.fda.gov/food/consumers/food-waste-animations>)
- Tools for Preventing and Diverting Wasted Food (<https://www.epa.gov/sustainable-management-food/tools-preventing-and-diverting-wasted-food>)