




Learning scenario about **environmental awareness**

Title: " **Seeds of Change: Nurturing Sustainable Solutions in the Food Chain Challenge** "



General information

Topic(s)	Goals	Activity description
<input type="checkbox"/> Climate change <input type="checkbox"/> Biodiversity and conservation <input type="checkbox"/> Waste management and recycling <input type="checkbox"/> Water resources and quality <input checked="" type="checkbox"/> Sustainable agriculture and food security <input type="checkbox"/> Environmental health and justice <input type="checkbox"/> Energy use and transportation 	<p style="text-align: center;">Objectives</p> <ul style="list-style-type: none"> • Gain a comprehensive understanding of the different roles and processes involved in the food distribution chain, from production to consumption. • Increase awareness of global and local food security issues, emphasizing the interconnectedness of the food system and its impact on communities. • Advocate for sustainable food choices by understanding the environmental, social, and economic implications of different agricultural practices and consumption patterns. • Bridge classroom learning with real-world challenges, allowing students to see the practical applications of theoretical knowledge in addressing complex issues. • Foster collaboration and teamwork among participants by assigning and valuing different roles within the food distribution chain. 	<p style="text-align: center;">Student's profile (age): 14-18</p> <hr/> <p style="text-align: center;">Number of participants: 20-25</p> <hr/> <p style="text-align: center;">Duration: ≈90' min</p>
Learning outcomes		





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- Students learn the importance of resource efficiency, organic farming, and other environmentally friendly strategies.
- Students gain insight into the challenges faced by each part of the food chain, cultivating a broader understanding of the diverse perspectives within the system.
- Students learn to make informed decisions under varying conditions, enhancing their ability to navigate complex situations.

Related subject of the school curriculum/Skill/Content:
 Geography–Economics–Environmental Science–Social Studies/Sociology–Biology–Ethics/Philosophy–Civics

Material needed:
 Simulation Materials:
 Index cards with roles (e.g., farmer, distributor, retailer, consumer, government regulator, etc.).
 A large world map or marked playing area.
 Tokens or small objects representing food items.

Introduction





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"Seeds of Change: Nurturing Sustainable Solutions in the Food Chain Challenge" is an experiential journey into the world of sustainable agriculture and food security. In this activity, participants will embark on a dynamic exploration of the intricate web that connects our food from farm to table. This initiative not only deepens students' understanding of the complexities within the food distribution chain but also empowers them to cultivate innovative, sustainable solutions to real-world challenges.

Kolb's cycle steps

1



FEELING

Engage students in hands-on activities and real-life examples related to the environmental topics.

C Introduction and Role Assignment. This phase sets the stage for the simulation and provides participants with their specific roles in the food distribution chain. Here's a detailed breakdown of Step 1:

O Begin the session by explaining the purpose of the game. Emphasize that it's a simulation designed to mimic the complexities of the food distribution system.

N Provide a brief overview of the importance of understanding food security and the challenges associated with the global food supply chain.

C Role Assignment :

R Distribute role cards or inform participants about their assigned roles in the food distribution chain. Common roles include farmers (producers), distributors, retailers, consumers, and optional roles like processors or government regulators.

E Each participant is responsible for playing their assigned role throughout the game.

T Role Explanation

E Clarify the responsibilities and constraints of each role. For example:

X Farmers: Responsible for growing and harvesting the initial resource (tokens representing harvested food).

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I Distributors: Handle the transportation and distribution of food from producers to retailers.
E Retailers: Sell and distribute food items to consumers.
N Consumers: Represent the end-users purchasing and consuming the food products.
C If additional roles are included, explain their specific functions.
E Overview of Game Dynamics:
Briefly explain the mechanics of the game, including how resources (tokens representing food) will flow through the system, potential challenges (such as transportation delays, market fluctuations), and the goal of ensuring a steady food supply to consumers.
At this point, you can introduce challenge such as transportation delays, natural disasters, or fluctuations in market prices. These challenge add a layer of complexity and realism to the simulation. Students should consider how the challenge affects their specific role in the food distribution chain. For example, if there's a transportation delay, distributors may face difficulties in moving the tokens from farmers to retailers. Encourage students to communicate and collaborate with other participants. The success of the food distribution chain often depends on effective communication and problem-solving among different roles. Based on the challenge, students should adapt their strategies to overcome the obstacle. This might involve finding alternative transportation methods, adjusting prices, or collaborating with other roles to find solutions.
Questions and Clarifications
Allow participants to ask questions for clarification. Ensure that everyone understands their roles and the basic rules of the game. Address any concerns or uncertainties to facilitate a smooth and engaging experience.





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2



WATCHING

Encourage students to reflect on their experiences, observations, and emotions during the activities.

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After addressing the challenge, students should take a moment to reflect on how they responded, what strategies were effective, and what they learned from the experience. This reflection is crucial for the Reflective Observation stage in the Kolb cycle.

This reflective observation helps them connect the simulation to real-world issues related to food security.

Let them connect their experiences in the game to real-world insights. How do the challenges they faced in the game relate to the challenges in the actual food distribution system? Ask them to share their thoughts and observations. By emphasizing reflective observation, participants engage in a thoughtful discussion that allows them to connect their actions in the simulation to broader concepts of food distribution and security. This step sets the stage for the next phases of the Kolb cycle, where participants will abstractly conceptualize and actively experiment based on their reflections.





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3



THINKING

Guide students to analyze and conceptualize the information gathered, connecting it to broader concepts and theories

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Pausing the game for debriefing sessions and discussions allows participants to abstractly conceptualize the challenges and issues presented. They can analyse the systemic factors affecting food security, such as transportation inefficiencies, market dynamics, and regulatory constraints.

Provide extra resources which can enhance the learning experience. These resources could be in the form of

- case studies,
- articles,

- brief information sheets that provide background context, statistics, or examples related to the specific challenge.

We can also use visuals such as infographics or diagrams to illustrate the impact of the challenge on the food distribution chain. Visual aids can help students grasp complex information more easily.

We can consider showing short video clips or conducting interviews with experts in the field discussing similar challenges in the real world. Hearing from professionals can provide valuable insights and inspiration for tackling the challenge.

We can offer discussion prompts or worksheets that guide students in analysing the challenge, prompting critical thinking, and guiding their reflections on potential solutions.





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4



DOING

Provide opportunities for students to apply their knowledge and actively experiment with sustainable practices in their daily lives.

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The experiential nature of the game can inspire students to become advocates for food security. They may develop a sense of responsibility and a passion for addressing challenges in the real world. Students can take various actions to show their advocacy for food security. Here are some practical ways they can contribute to the cause:

- Develop educational materials or presentations to inform others about the importance of sustainable agriculture, responsible consumption, and the challenges related to food security.
- Get involved in or initiate community garden projects. Participating in or establishing community gardens promotes local, sustainable food production and fosters a sense of community resilience.
- Organize or participate in food drives to collect non-perishable items for local food banks. This practical action directly addresses immediate food security needs in the community.
- Organize events, workshops, or webinars that delve into the complexities of food security. Invite experts, community leaders, or organizations to share insights and solutions.
- Create awareness campaigns within the school or community. Design posters, organize informational sessions, or use social media to share facts about food security issues and sustainable practices.

Evaluation





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Evaluating students' performance in an experiential learning activity on food security involves assessing their understanding, application of concepts, and ability to develop sustainable solutions. Here are guidelines for evaluation:

-For visual representation:

Criteria: Assess the clarity and creativity of the visual representation, including its ability to convey complex ideas.

Assessment: Consider using a rubric or checklist to evaluate the effectiveness of visual communication, incorporation of key elements, and overall impact.

-For collaboration and teamwork:

Criteria: Assess how well students worked together within their groups.

Assessment: Use self-assessment, peer assessment, or observation to evaluate teamwork, communication, and the equitable distribution of tasks within each group.

-For Critical Thinking:

Criteria: Assess the depth of critical thinking demonstrated in the analysis of challenges and the development of solutions.

Assessment: Use open-ended questions or a rubric to evaluate the ability to think critically about food security issues, considering multiple perspectives and potential implications of solutions.

-For Application of Knowledge:

Criteria: Evaluate the application of theoretical concepts to the concrete experience and the feasibility of proposed solutions.

Assessment: Use specific criteria in a rubric to assess how well students integrated their understanding of food security issues into practical and sustainable solutions.

For presentation and discussion:

Criteria: Evaluate the clarity of the presentation, the ability to articulate key points, and responses to questions.

Assessment: Use a rubric or checklist to assess presentation skills, content organization, and the depth of understanding demonstrated during the discussion.





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Additional resources – Tips and tricks



Educational Videos: Short documentaries or educational videos that provide a concise presentation or discussion on key theoretical concepts related to the environmental footprint of agriculture. Platforms like National Geographic, TED-Ed, or YouTube often have relevant content.

Try to connect with local experts, farmers, or community organizations willing to share insights or collaborate on the projects.

Educational Websites and Platforms: direct students to reputable educational websites and platforms that focus on food security and sustainable agriculture. These platforms often provide articles, infographics, and interactive content. Examples include:

World Food Programme – Teach Hunger

FAO – Food and Agriculture Organization of the United Nations

Organize field trips to local farms, agricultural research centers, or community gardens. These hands-on experiences allow students to observe sustainable practices in action and connect with local food producers.








Remember to create a positive and inclusive learning environment, and encourage students to actively engage with the material and each other throughout the activity.





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