LEFTOVER CHALLENGE

Comprehensive Report on Embedding Food Waste and Sustainability Education into the Curriculum

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Introduction

Embedding food waste and sustainability education into the school curriculum requires more than just occasional lessons it demands a structured, ongoing, and collaborative approach. Based on our research and insights gathered during brainstorming sessions with educators, it is evident that long-term success depends on continuous engagement, experiential learning, and strong connections with the wider community.

This report presents key strategies, challenges, and practical recommendations for integrating sustainability education into everyday teaching. The findings are grounded in collaborative discussions facilitated by two partner schools: 4th Primary School of Nafplio- Greece and Școala Gimnazială Conil-Romania, involving eight primary school teachers who contributed diverse perspectives from both traditional and inclusive education settings.

By drawing on both practitioner expertise and relevant academic frameworks, this report aims to support educators in moving sustainability from the margins of the curriculum to its core helping students not only learn about food waste but actively contribute to its reduction within their schools, homes, and communities.

These sessions involved eight primary school teachers and focused on both traditional and inclusive teaching approaches.

Embedding New Materials into the Curriculum: Do's and Don'ts

Integrating Food Waste and Sustainability Education: Strategic and Policy Considerations

Successfully embedding food waste reduction and sustainability education into the curriculum requires a dual approach that combines strategic curriculum design with effective, hands-on implementation techniques. Research underscores that educational interventions must go beyond theoretical instruction, incorporating experiential learning, real-world applications, and cross-disciplinary connections to ensure long-term engagement and behavioral change among students (Sterling, 2001; Tilbury, 2011).

A growing body of literature highlights the role of social policies in shaping educational outcomes in this field. National and international frameworks, such as the United Nations

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Sustainable Development Goals (SDG 12: Responsible Consumption and Production), emphasize the need for systemic approaches that bridge education, policy, and community initiatives (Leicht & Byun, 2021). Studies suggest that when schools align their sustainability education efforts with public policies—such as school meal programs, waste management regulations, and community composting initiatives—students develop a deeper understanding of their role within broader societal systems (Barth, 2015; Evans et al., 2017; Sonnenfeld et al., 2024).

Moreover, behavioral change theories support the idea that long-term engagement in sustainability practices is most effective when reinforced by a supportive social and policy environment (Kollmuss & Agyeman, 2002). Schools that integrate inquiry-based learning, gamification, and service-learning projects into their curriculum not only enhance knowledge retention but also empower students to become active participants in sustainability efforts (Jickling & Wals, 2008).

Thus, a comprehensive approach to food waste education should include:

- Curriculum Alignment – Embedding sustainability concepts into core subjects such as mathematics (e.g., food waste calculations), science (e.g., decomposition and composting), and social studies (e.g., global food distribution inequalities).
- Experiential Learning – Engaging students in hands-on activities such as food audits, composting programs, and collaboration with local farms.
- Policy Integration – Aligning school initiatives with municipal and national food waste policies to reinforce real-world connections.
- Community Engagement – Encouraging partnerships with NGOs, food banks, and local businesses to provide practical experiences in waste reduction.

Dos and Don’ts based on brainstorming sessions

Integrating food waste and sustainability education into the curriculum requires not only strategic planning but also practical implementation techniques that ensure long-term engagement and relevance. Teachers emphasized that a structured approach, cross-curricular connections, and community involvement are essential components.

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Do's:

Align with Existing Subjects: Based on teachers' recommendations, food waste topics should be integrated into multiple disciplines. The brainstorming sessions resulted with a few specific examples also. **In science lessons**, children can explore the environmental impact of food waste by learning how discarded food contributes to pollution and climate change. Through simple experiments, they can investigate how food production wastes water and energy and how landfill waste releases harmful gases. Students can also study the carbon footprint of food by comparing the environmental impact of local and imported foods. They can learn how transportation and packaging affect greenhouse gas emissions and discuss ways to reduce waste at home and school. The science of composting can be explored through hands-on activities, such as creating small compost bins to observe decomposition. By learning about microorganisms and how organic waste turns into nutrient-rich soil, students can see how composting helps the environment and reduces food waste. **In mathematics lessons**, children can analyze food waste statistics by collecting data on how much food is wasted at school or home. They can compare numbers, identify patterns, and discuss ways to reduce waste. Students can also calculate the financial losses from wasted food by adding up the cost of uneaten meals. This helps them understand the real impact of waste and the importance of smart shopping and meal planning. Using data visualization techniques, children can create bar graphs or pie charts to represent food waste trends. These activities make numbers more meaningful and show how math can be used to solve real-world problems. **In social studies**, children can learn that food is valuable because it takes work and effort to grow, transport, and prepare. They can explore how farmers, shopkeepers, and cooks all play a role in bringing food to the table. They can also discuss how some people do not always have enough to eat while others waste food. This helps them understand fairness and the importance of sharing and helping those in need. Through simple activities, like talking about different food traditions around the world, children can also see how food is important in every culture and why it should be respected and not wasted. **In civic education**, children can learn about rules and policies that help reduce food waste, such as school recycling programs or donation initiatives. They can discuss why these rules exist and how they help people and the environment. They can also explore the idea of social responsibility by talking about ways they can help, like sharing food, not wasting meals, or supporting food banks. This helps them understand that small actions can make a big difference. Through community projects, such as collecting food for those in need or visiting local organizations, children can see how people work together to make sure everyone has enough to eat.

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Ensure Practical Engagement: Teachers emphasized that hands-on activities such as cooking workshops, composting projects or school gardens are a resource including food waist and sustainability in the teaching process. **Cooking workshops** provide students with hands-on experience in creatively repurposing leftovers, transforming surplus ingredients into delicious and nutritious meals. These sessions not only reduce food waste but also enhance students' culinary skills, encourage resourcefulness, and promote sustainable eating habits that can be applied in their daily lives. **Composting projects** offer students a hands-on opportunity to learn how food scraps can be transformed into nutrient-rich organic matter, benefiting gardens and reducing landfill waste. These initiatives teach the science behind decomposition, the role of

microorganisms in breaking down organic material, and the environmental benefits of composting. By actively participating, students develop a deeper understanding of sustainable waste management and gain practical skills they can apply at home or in their communities. **School gardens** provide students with a hands-on experience of the full food cycle, from planting seeds to harvesting fresh produce and preparing meals. These projects reinforce the value of food by highlighting the effort and resources required to grow it, fostering a deeper appreciation for sustainable agriculture and healthy eating. Through active participation, students learn essential gardening skills, environmental stewardship, and the importance of reducing food waste by utilizing every part of the harvest.

Use Interactive Digital Tools: According to teachers' experiences, integrating technology into the classroom significantly enhances students' engagement and understanding of food waste reduction and sustainability concepts. **Online simulations** immerse students in real-world scenarios where they can actively explore food waste reduction strategies. These simulations allow students to make decisions about food consumption, storage, and disposal, helping them understand the consequences of their choices in a controlled environment. By experiencing these situations virtually, students develop critical thinking skills and a stronger sense of responsibility toward sustainable food practices. **Educational videos** serve as a powerful tool for illustrating the impact of food waste on climate change. Through visually engaging content, students can grasp complex concepts such as greenhouse gas emissions from food waste, the depletion of natural resources, and the role of supply chains in global food production. These videos make abstract issues more tangible, allowing students to see real-life examples of how their actions contribute to environmental sustainability. **Gamified learning**

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platforms provide an interactive way for students to reinforce their knowledge through quizzes, challenges, and reward-based learning. These platforms use elements of competition, collaboration, and achievement to keep students motivated while deepening their understanding of food waste reduction strategies. By engaging in these interactive activities, students are more likely to retain information and apply what they have learned in their daily lives.

Provide Teacher Training: As a conclusion of the teachers' suggestions, professional development is crucial for effectively integrating food waste and sustainability topics into the curriculum. Educators need the right knowledge, resources, and confidence to teach these concepts in engaging and meaningful ways. **Workshops on sustainability education** can provide teachers with hands-on experience in incorporating food waste reduction strategies into their lessons. These sessions can introduce interactive teaching methods, such as project-based learning, real-world problem-solving, and cross-curricular connections. By learning from experts and sharing best practices, teachers can gain practical skills and creative ideas to make sustainability education more impactful for their students. Access to **high-quality teaching material**s is equally important, as it reduces the burden of lesson planning while ensuring accuracy and alignment with educational standards. Providing educators with well-structured lesson plans, activity guides, digital resources, and ready-made assessments can help them confidently integrate food waste topics into subjects like science, math, and social studies. Having a collection of engaging tools, including videos, worksheets, and interactive games, makes it easier for teachers to deliver lessons that capture students' interest and encourage long-term learning. By investing in **teacher training and resource development**, schools can create a more sustainable learning environment where students develop a deep understanding of food waste reduction and responsible consumption.

Include Assessment Mechanisms: Measuring Learning and Behavioral Change: To effectively track progress and support meaningful learning, educators recommended incorporating clear assessment mechanisms into sustainability education. These tools help teachers evaluate not only what students have learned, but also how their attitudes and behaviors toward food waste and sustainability have evolved over time. **Pre- and post-learning surveys** can be used to assess students' understanding of food waste concepts before and after the lessons. These surveys may include simple questions or visual scales appropriate for primary school students, helping teachers identify knowledge gained and areas that may need reinforcement. **Classroom waste tracking projects** offer a practical and visual way for students to monitor their own progress. By measuring and recording the amount of food waste at the beginning and end of a learning unit, students can see the impact of their efforts. This hands-on activity also reinforces data collection and analysis skills, linking learning

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across subjects like science and mathematics. **Sustainability challenges** allow students to put their knowledge into practice in real-life settings. Activities such as “No Waste Week” or “Leftovers Lunch Day” encourage students to apply what they’ve learned at home or in school. These challenges not only make learning fun and engaging, but also help to build lifelong habits around responsible consumption and environmental care.

Encourage Cross-Curricular Collaboration: Connecting Food Waste Topics Across Subjects Teachers emphasized the importance of **linking food waste and sustainability topics across various subjects** to create a more integrated and meaningful learning experience for students. This approach helps children see how food waste is connected to many areas of life and learning, reinforcing key concepts from different perspectives. **In literature lessons**, students can read and discuss stories or poems that explore themes such as food scarcity, sharing, and caring for the environment. These texts provide opportunities to reflect on values like empathy, responsibility, and respect for natural resources, while also developing reading comprehension and critical thinking skills. **In geography**, students can explore how global food supply chains work and how they affect sustainability. Lessons can focus on where food comes from, how it travels, and what impact this has on the environment. Children can also learn about local food systems and compare the ecological footprint of imported versus locally grown foods. **In economics**, students can be introduced to basic concepts such as supply and demand, pricing, and consumer behavior, using real-life examples related to food waste. They can explore how food prices are influenced by production, transport, and seasonal availability, and how waste at different stages of the supply chain leads to financial loss. These discussions help students understand the economic side of sustainability in a way that is accessible and relevant to their daily lives.

Don’ts:

Avoid Isolated Lessons: Teachers emphasized that food waste education should not be treated as a one-time or isolated lesson but rather as an ongoing and integrated part of school life. Sustained engagement helps students internalize the values and practices associated with sustainability and apply them in real-world contexts. Ongoing discussions and reflection activities during different games are essential in deepening students’ understanding. Teachers suggested incorporating regular classroom conversations about food habits, personal choices, and the consequences of waste. When students see the real-life application of what they’ve learned they are more likely to adopt and maintain sustainable behaviors.

Do Not Rely Solely on Theory: Many educators highlighted the importance of going beyond theoretical instruction when teaching about food waste and sustainability. While

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foundational knowledge is essential, students benefit most when it is paired with engaging, hands-on learning experiences that make concepts tangible and memorable. Experiential learning methods, such as simulations, experiments, and interactive classroom activities, help students actively explore real-life situations. Student-driven inquiry projects also play a vital role in deepening learning. These projects encourage children to ask questions, explore solutions, and take ownership of their learning. By combining theory with practical experience, students are more likely to develop meaningful connections to the topic and carry those lessons with them beyond the classroom.

Avoid Complicated Language and Materials: Teachers emphasized the importance of using clear, age-appropriate language when teaching food waste and sustainability to primary school students. Complex terms and abstract concepts can be confusing at this level, so simplifying the content ensures that children can fully understand and engage with the topic. Visual aids play a crucial role in enhancing understanding. Infographics, illustrated posters, diagrams, and simplified fact sheets are effective tools for presenting information in a way that is both engaging and easy to remember. By tailoring materials to the developmental level of students, educators can ensure that food waste education is not only accessible but also enjoyable and meaningful.

Do Not Overburden the Curriculum: Integrate Food Waste Topics Seamlessly: Teachers stressed the importance of integrating food waste and sustainability topics into existing lesson structures, rather than treating them as additional content that might overwhelm the curriculum. The goal is to make these topics a natural part of everyday learning without placing extra pressure on teaching time. Instead of creating separate lessons, food waste themes can be woven into subjects like science, math, language, social studies, and art. For example, a math lesson can include calculating food waste quantities, a science class can explore composting, and a language lesson can involve writing stories or reflections about responsible food habits. Project-based learning approaches were also recommended as an effective way to make these topics engaging and relevant. By organizing cross-curricular projects—such as designing a food waste awareness campaign, conducting a classroom waste audit, or creating a school garden—students can explore sustainability in a hands-on, collaborative, and meaningful way. These projects allow for deep learning while also supporting creativity, teamwork, and real-world problem-solving, all without adding extra load to the curriculum.

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Engaging Parents and Caregivers in Food Waste Education

Parental and caregiver involvement significantly reinforces classroom learning about food waste and sustainability. Based on teachers' perspectives, students are more likely to adopt responsible behaviors when their families actively participate in sustainability efforts. Schools should aim to create a collaborative learning environment where parents understand their role in reducing food waste at home. If families actively participate in sustainability efforts these efforts will transform in family routines and later on life routines. This way sustainability will not be a burden or something that needs to be learned it will be a normal behavior

Strategies for Parental Engagement:

- **Organize Family Challenges:**

To strengthen the connection between school and home, teachers suggested organizing simple and fun family **challenges focused on reducing food waste**. These activities encourage students to apply what they've learned in class in real-life situations, while involving their families in sustainable habits. One idea is to hold a **Zero-Waste Week**, where families track how much food they throw away and work together to reduce it. Students can share what they did at home and reflect on the results in class. Another activity could be a **meal planning challenge**, where families create smart grocery lists and menus to avoid buying more than they need. This helps children understand planning, budgeting, and mindful consumption. A **creative cooking contest using leftovers** can also be a fun way to show how food scraps can become tasty meals. Families can submit recipes or photos of their dishes, encouraging resourcefulness and teamwork at home. Creating a weekly meal inside the classroom where all students eat together food they brought from home and we try to leave no leftovers.

- **Provide Take-Home Resources:**

To help reinforce learning beyond the classroom, teachers recommended **providing families with take-home resources** that are both practical and engaging. These tools support ongoing conversations about food waste and sustainability at home, encouraging children to become advocates for change in their own families. Printable **sustainability checklists** can guide families in adopting simple daily habits, such as using leftovers, storing food properly, and composting. These checklists can be placed on the fridge or in the kitchen, serving as a friendly reminder of small actions that make a big difference. Educational board games and mobile apps focused on food waste themes offer fun ways to learn at home. These interactive tools can

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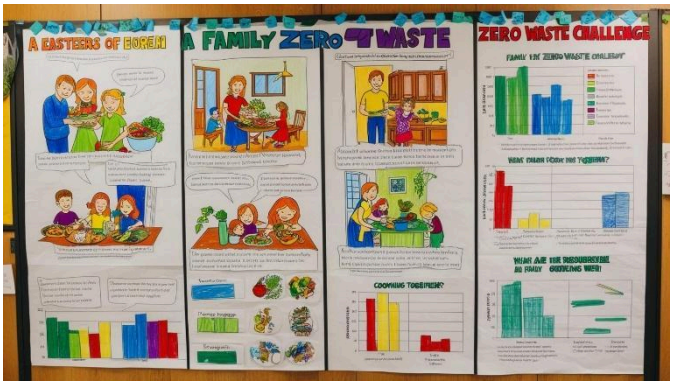
include challenges like planning zero-waste meals, sorting food scraps, or identifying eco-friendly choices. They make learning enjoyable while reinforcing key sustainability concepts. Step-by-step **guides on proper food storage** could help families on how to keep food fresher for longer. These guides can explain how to organize the fridge, which foods should be stored in certain conditions, and how to read expiration labels. Clear visuals and tips help make the information accessible and easy to follow. By equipping families with these simple and supportive resources, schools can help create consistent sustainability messages at home and at school.

- **Involve Parents in School Initiatives:**

Teachers emphasized the importance of involving parents in school-based sustainability efforts to create a united and supportive learning environment. When families participate alongside students, the message of food responsibility becomes more impactful and lasting. **Cooking workshops** are one activity where parents and children learn to prepare simple, healthy meals together using leftover ingredients. **Composting and gardening programs** offer families the chance to get involved in hands-on activities that teach about natural cycles and waste reduction. Teachers emphasized that there is a great number of parents who are afraid of composting because they think it involves machines that are costly. During these programs parents can exercise and see that composting can be done easily in their home and most of the time it involves no extra costs. **Food donation drives** are another powerful way to involve the wider school community. Families can contribute surplus items and help sort and deliver donations, while students learn about food redistribution, empathy, and helping those in need. **Educational gardens** are another way to involve parents in school initiatives. Organizing garden meals and other outside activities inside an educational garden in which parents are exposed to the space where their children cultivate and garden during the school year. Organizing a harvest dinner made from the food that the children were able to harvest from the educational garden of the school.



- **Use Digital Platforms for Engagement:**

Teachers recommended using digital platforms as a simple way to keep families informed and involved. Short **online newsletters** can share sustainability tips, showcase student projects, and celebrate small achievements. Discussion forums or social media groups allow parents to

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exchange ideas and best practices in reducing food waste. Organizing **interactive webinars** with guests like environmentalists, nutritionists, or local farmers that are both dedicated to school personnel but also for the parents. These types of activities can offer inspiration and real-life insights, all without requiring major time commitments.

- **Recognize Parental Contributions:**

In addition to providing informational materials and guidance, teachers emphasized the value of **acknowledging and rewarding families** for their active involvement in sustainability efforts. Recognizing parental contributions not only strengthens engagement but also shows appreciation for their role in supporting food waste reduction initiatives at home. Schools can introduce “Sustainability Star” awards for families who demonstrate commitment to sustainable practices whether through participating in challenges, attending workshops, or reducing their household food waste. These awards can be given monthly or at the end of each term, accompanied by a small incentive to encourage ongoing participation. Recognition can also be offered publicly during school events, assemblies, or on social media, where families are celebrated for their efforts. This **public acknowledgment** helps build a culture of shared responsibility and inspires others to get involved. To make appreciation even more meaningful, schools could consider offering **small practical rewards**, such as a voucher toward school-related costs, a free meal in the school canteen, or even a local restaurant or grocery store voucher. These gestures reinforce the message that sustainability is a shared, valuable effort and that the school truly values each family's contribution.

Embedding Food Waste into Regular Subjects

As seen in previous chapters teachers recommend integrating food waste topics naturally into existing subjects rather than treating it as an isolated topic. Doing so allows food waste prevention and sustainability to become a natural part of our lives and By connecting sustainability to real-world applications, students can understand its significance and develop lifelong responsible consumption habits.

Subject specific applications: Science

Topic: Watching Nature Work – How Things Rot and Go Back to the Earth

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Start by talking with the children about what happens to food when we leave it out too long. Ask: “What happens to a banana peel if we throw it in the garden? What happens to a plastic spoon?” Let them share their ideas and experiences.

Tell them we will become little scientists and observe how different things break down (or not!) over time. Set up small containers (like jars or clear boxes) with a bit of garden soil. In each one, place a different item: a banana peel, a piece of paper towel, a bread crust, and a plastic wrapper.

Have the children guess which item will disappear first and which will stay the same. Keep the containers somewhere safe and observe them each week. Children can draw what they see or talk about the changes: "Is it getting softer? Smellier? Smaller?" After a few weeks, gather the class to talk about what happened. Ask: “Which things disappeared? Which ones didn’t? Why do you think that is?” Introduce the idea that some things can become soil again (we call that compost), and others just stay the same for a long time (like plastic). Wrap up with a small art or movement activity: make a compost monster from recycled scraps or act out the “dance of the microbes” who help clean up the Earth! Encourage them to help at home with sorting food waste and recycling.

Learning goals:

- Observe changes over time
- Understand what can go back to nature and what cannot
- Begin thinking about how to reduce trash and take care of the Earth

Topic: How We Keep Food Fresh – Freezing, Drying, and Fermenting

Ask students if they’ve ever helped in the kitchen: “What do we do with food to make it last longer?” Show them a frozen food, some dried fruit, and a jar of pickles or yogurt. Let them taste or touch the examples if possible (with allergy and hygiene precautions). Explain that people use **freezing, drying**, and **fermenting** to stop food from going bad. Each method keeps the food safe in a different way. Invite students to help you set up a simple classroom experiment: Place an apple slice in the freezer, Place another in a warm spot to dry (on paper towel), Place another in a salty water jar (or show them a store-bought fermented food), Keep one slice on a plate at room temperature (the "normal" apple). Every couple of days, look at the apples together. “What do you see? Is it changing color? Smelly? Mushy?” Students can draw each apple and describe it in their science notebooks or

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on a classroom chart. At the end, talk about which one stayed fresh and which one spoiled. Ask: “Why is it good to keep food fresh longer?” Introduce the idea that keeping food from spoiling helps families waste less and saves money—and that’s good for people and the planet.

Learning goals:

- Understand that food spoils if not preserved
- Recognize common food preservation methods
- Start thinking about how to reduce food waste at home

Subject specific applications: Mathematics

Topic: Let’s Track Food Waste – What Are We Throwing Away?

Start by talking with the children about food. Ask: “Have you ever thrown food in the trash? What kind of food was it? Why did we throw it away?” Encourage gentle discussion about waste, focusing on observation, not guilt. Introduce the idea of being **food detectives**. Explain that their job is to help the class learn more about what gets thrown away and how often. Over a week (or more), set up a simple chart in the classroom or school cafeteria. Use three basic categories like: **fruits**, **vegetables**, and **bread/pasta**. You can adjust based on what students typically eat. Each day, students will help count and record how many items are thrown away (or uneaten and left on the plate). This can be done with tally marks or simple drawings, depending on their grade level. Keep the daily data on a visible board or flipchart. At the end of the week, review the chart with the class. Ask questions like: “Which type of food was wasted the most?” “Did we waste more food on Monday or Friday?” “Why do you think that happened?”. Then, show them how to **make a simple bar graph or pictograph** of their results using blocks, colored paper, or drawings. For example, one banana drawing = 1 fruit wasted. Discuss what they learned: “What could we do to waste less food next week?” This might lead to practical suggestions like smaller portions, saving leftovers, or trying to eat new things.

Learning goals:

- Collect and organize data using charts
- Use simple addition and comparison
- Understand patterns and begin to link data to actions and choices

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Topic: Wasting Money Too? – The Hidden Cost of Uneaten Food

Begin with a fun, familiar example: “Imagine you bought an ice cream for 5 lei and dropped it on the floor—how would you feel?” Most students will say “sad” or “angry.” Then explain: “When we throw away food, we’re not just losing the food—we’re also losing money!” Tell students you will calculate how much money is “lost” in the school cafeteria when food is wasted. Use a fictional but realistic example: “Let’s say our school lunch costs 10 lei, and we see that 5 students throw away half of their lunch.” Work together to calculate: Half of 10 lei/euro is 5 lei/euro so 5 students x 5 lei/euro = 25 lei/euro wasted in one lunch! Now stretch that out: “If this happens every day for one week (5 days), how much is wasted?” Let them calculate (25 x 5 = 125 lei/euro). You can extend this further: “How much in a whole month? What else could we do with that money?” Use play money or coins for hands-on work and let students create their own "waste reports." They can work in teams to solve problems like: “If 3 sandwiches are wasted and each cost 4 lei/euro, how much money is lost?” “If a class of 20 throws away 1/4 of their food each, what part of the budget is wasted?” Finish the lesson by asking: “How can we help save food and money at school?” This brings math into real life and empowers them as change-makers.

Learning goals:

- Practice addition, multiplication, fractions (as appropriate)
- Understand money as a limited resource
- Connect math with personal responsibility and environmental care

Subject specific applications: Social Studies:

Topic: Food Around the World – Who Has Enough and Who Doesn’t?

Begin by asking a gentle, reflective question: “Have you ever felt really hungry? What did you do?” Then guide the conversation to the idea that **not all children in the world have enough food** every day. Reassure them that learning about this is not meant to scare them, but to help them understand how we can help others and make kinder choices. Introduce the concept of **food insecurity** using a simple story or photo. For example, read a short-illustrated story about a child who lives in a different country where the family’s food comes from a small garden, and some days there isn’t enough. Contrast that with a story of a child from a city with a full fridge and lots of food options. Create a visual chart: “What makes it hard to get enough food?” List ideas like: no money, bad weather for farming, war, or food being too expensive. Then ask: “What can we do to help?” Let them brainstorm ideas such as sharing, donating food, planting gardens, or not wasting. Show them a world map and place small picture cards or stickers

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representing types of food eaten in different countries (e.g., rice in Asia, beans in Latin America, bread in Europe). Ask: “Where does our food come from?” and “What if the food doesn’t grow one year what happens then?” Conclude the activity with a drawing or storytelling exercise: “Draw a meal that you would share with someone who doesn’t have enough food.” Or: “Write (or tell) what you would do if you were in charge of helping your town share food fairly.”

Learning goals:

- Build awareness of global differences in food access
- Develop empathy and a sense of fairness
- Begin connecting local actions to global challenges

Topic: Sharing is Caring – How Food Brings People Together

Open this lesson with a warm classroom conversation: “When do we share food with others? Who have you eaten with this week?” Let students share experiences of family meals, birthdays, picnics, or holidays. Then explore **how different cultures share food** as a way of building community. You can present simple examples like: In Greece offering food is a natural part of welcoming guests—whether it's a full meal or a simple plate of meze (small dishes). It shows care, respect, and generosity. In Romania, many families bake and share cozonac during holidays. In India, people bring sweets to neighbors during festivals. In Italy, many families gather to eat together during the Christmas and Easter holidays. In the Netherlands, sharing coffee and sweets embodies “gezelligheid,” that friendly, lively spirit that makes even everyday gatherings feel warm and special. In Japan, families make bento lunches with care and creativity. In Africa, large bowls of food are shared among family and friends. Bring photos or actual objects (like a small tablecloth or serving bowl) to make it more visual. If possible, invite parents or community members to share food stories or even demonstrate a traditional way of serving or preparing food. Discuss: “Why do people share food?” Guide them to answers like showing love, helping someone in need, making friends, or celebrating together.

Then ask: “How do we share food at school? At home?” As a follow-up, students can: Draw a special food they share with family or friends. Make a simple “Food and Culture” booklet with one page for each country, featuring a photo or drawing of a shared dish and what it means.

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End with a simple reflective prompt: “What did you learn about food and people today?” and “How can we show kindness through food?”

Learning goals:

- Understand that food has social and cultural meaning
- Respect cultural traditions and diversity
- Recognize sharing as a value connected to community and sustainability

Subject specific applications: Civic Education:

Topic: Student-led sustainability campaigns - We Can Make a Difference! – Our Classroom Sustainability Campaign

Start by asking students a simple, powerful question: “If you were the mayor of our school, what would you do to make it a cleaner, kinder place for the Earth?” Let them share ideas and list them on the board. Explain that in civic education, students learn how to take action to help their community. One way is by creating a campaign, a way to share ideas and ask others to help. Introduce the idea of a “Sustainability Campaign” where the class chooses one small thing to focus on (like reducing food waste, turning off lights, using reusable containers, or sorting trash properly). Guide students to vote on one topic they care about. For example, if they choose food waste, ask: “What can we do in our school to help?” Responses might include reminding friends not to throw away fruit, making posters, or starting a leftover basket. Let students form small “teams” for campaign tasks: Poster team: Draws friendly posters to put in the cafeteria or halls. Message team: Creates a simple slogan like “Don’t Waste, Taste!” Action team: Helps collect food waste data or checks for recycling bins. Set a timeline: 1 week to prepare, 1 week to implement. Celebrate at the end with a “Sustainability Hero” certificate for every student and a wall display showing their actions.

Learning goals:

- Understand how we can influence our school community
- Practice decision-making, teamwork, and public speaking
- Build a sense of civic responsibility and pride

Topic: Policy research on food waste reduction laws - Rules for a Greener World – What Does the Government Say About Food Waste?

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Begin by helping students understand what rules and laws are: “At home, there are rules. At school, there are rules. The country also has rules to help protect people and even food!”. Explain the idea that some countries have laws to stop food from being wasted. For example, in France, supermarkets are not allowed to throw away food; they must donate it. Explain that governments can help reduce waste by creating smart policies. In Romania there is a food waste prevention law that makes supermarkets reduce the price up to 80% in order to be sold and used when their expiration date is closer.In the Netherlands the app “Too Good To Go” is a popular way for shopkeepers to prevent food waste by selling surprise packages filled with leftovers or products that can't be sold before the next time the shop opens. The surprise packages can be collected at 30 minutes before closing ensuring no money is lost.. In Italy, the fight against food waste is supported by various policies and initiatives which promote the redistribution of food surpluses, or finance projects for the free distribution of food. Keep the language simple and clear. A teacher could explore the following topics in discussions with children: “What kinds of rules could help stop food waste?”, “Should restaurants give leftovers to people who are hungry?”, “Should families learn how to store food better?”. Teachers could exercise transforming children into “Mini Policy Makers.” Have them work in small groups to come up with a classroom or school rule to help stop food waste. In order to understand how policy making works, children will be given a template to understand the process: Our rule: “Don’t throw fruit away, place it in the sharing basket.” Why it helps: “Other children who are still hungry can eat it.” Who should follow it: “All students and teachers.” How we will remind people**:** “With a poster and morning announcements.” Each group presents their rule to the class. The class votes on one to try for a week. At the end, evaluate together: Did it help? Should we keep it?

Learning goals:

- Understand how rules and laws work in communities
- Encourage problem-solving and fairness
- Build confidence in civic participation

Subject specific applications: Technology and IT

Topic: Designing infographics on food waste statistics - Let’s Show the World

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Begin by explaining what an **infographic** is in simple terms: “An infographic is a picture that shows information. Instead of reading a long text, you can understand the big idea just by looking!” Show them examples: a poster showing how much food is thrown away in a week, or a chart with happy and sad faces showing which foods are most often wasted. Together with the class, collect simple statistics either from the classroom, school cafeteria, or a short video of a teacher-made worksheet. For example: 20 apples were thrown away this week, most wasted food: bread, only 3 students finished all their food every day then guide children on how to design basic infographic using a child-friendly tool like: Canva for education, google slides or book creator. Help them understand what the layout needs to include: title, one or two key numbers, simple icons and drawings, and one message. In order to feel purposeful and empowered the infographics created by the children could be posted in the class or cafeteria to raise awareness.

Learning goals:

- Learn to organize data visually
- Use basic design tools to communicate ideas
- Understand how tech can help raise awareness

Subject specific applications: Literature and Language Arts

Topic: Learning to write persuasive essays an include sustainability topics

The teacher will introduce the concept of persuasive essays and explain to the students that the purpose of these is to argue a point of view but also to emphasize some important topics that others might not be aware of. Teachers can start by discussing what “persuading” means: using words to share ideas and help others see why something is a good idea. Teachers can read a short story or show a picture of a school garden, and then ask, “What can we do so that our food is used wisely and nothing gets wasted?” after that based on their answer together with them group the answers in order to include three basic ideas: state the problem (for instance, too much food being thrown away), share one or two ideas on how to solve it (such as sharing leftover fruit with friends or putting food scraps in a compost bin), and finish with a kind request. The exercise will mean writing a short letter or paragraph to someone important perhaps a teacher, or the principal explaining why they think it’s important to take care of our food and reduce waste. This exercise does not only help students practice persuasive writing but also opens the conversation about responsibility and caring for the

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environment. Teachers can also encourage children to draw a picture that shows their idea along with their letter.

Topic: Creating short stories that highlight food waste solutions

In literature classes children can exercise creative story activities based on images or answers to a question given by the teacher. Teachers should explain that storytelling is a way to share exciting adventures and helpful ideas. They might create a character, a brave "Food Saver" or a kind "Compost Wizard" who goes on an adventure to rescue food from being wasted. Teachers will emphasize the three main parts of a story and exercise after that the effective creation of it. They should encourage to include a beginning where the problem is introduced (perhaps a school or town where too much food is thrown away), a middle where the character comes up with a clever idea (maybe a magical box that turns extra food into a tasty snack or a community feast where everyone shares), and an ending that shows how the idea helped make the world a little better. This creative process builds literacy skills while fostering a sense of responsibility, encourages self-expression and lets students see that even small voices can make a difference when it comes to caring for our environment.

Learning goals:

- Strengthen imagination, sequencing, and sentence structure
- Use narrative writing to explore real-world problems
- Foster creative engagement with sustainability themes

Conclusion

The integration of food waste and sustainability education into the school curriculum, as reflected in this report, is not only necessary but also deeply transformative. Drawing from the rich input of primary school teachers during the brainstorming sessions, as well as supporting literature and international frameworks such as the UN Sustainable Development Goals, it is clear that successful implementation hinges on a few essential principles: relevance, accessibility, continuity, and community collaboration.

Educators have consistently emphasized that sustainability *should not be treated as an isolated theme or a one-off project, but rather embedded across disciplines* and daily routines. By incorporating real-life scenarios, hands-on learning experiences, and inclusive teaching strategies, schools can help students develop both the knowledge and the values required for

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long-term behavioral change. The insights gained from classroom experiences demonstrate that when food waste prevention is connected to mathematics, science, civic education, language arts, and digital literacy, it becomes meaningful, memorable, and measurable.

At the same time, the alignment of school practices with broader social policies, local contexts, and family involvement is critical. Whether through educational gardens, composting activities, data visualization, storytelling, or school-wide sustainability campaigns, students learn to see themselves as agents of change both locally and globally. The integration of interactive tools and teacher training ensures that educators are empowered, and that learners of all abilities are included in these vital conversations.

Ultimately, this report underscores the importance of adopting a whole-school approach to food waste education. This involves collaboration across subject areas, ongoing professional development, the use of simple yet impactful language and materials, and meaningful engagement with families and community partners. By doing so, we are not only preparing our students to be responsible consumers but nurturing a generation that values equity, empathy, and care for the planet.

Embedding sustainability into education is a shared journey—one that starts in the classroom, grows through community, and extends far beyond the school gates.

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