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Food Systems

Promoting Sustainable Food Habits and Futures Literacy

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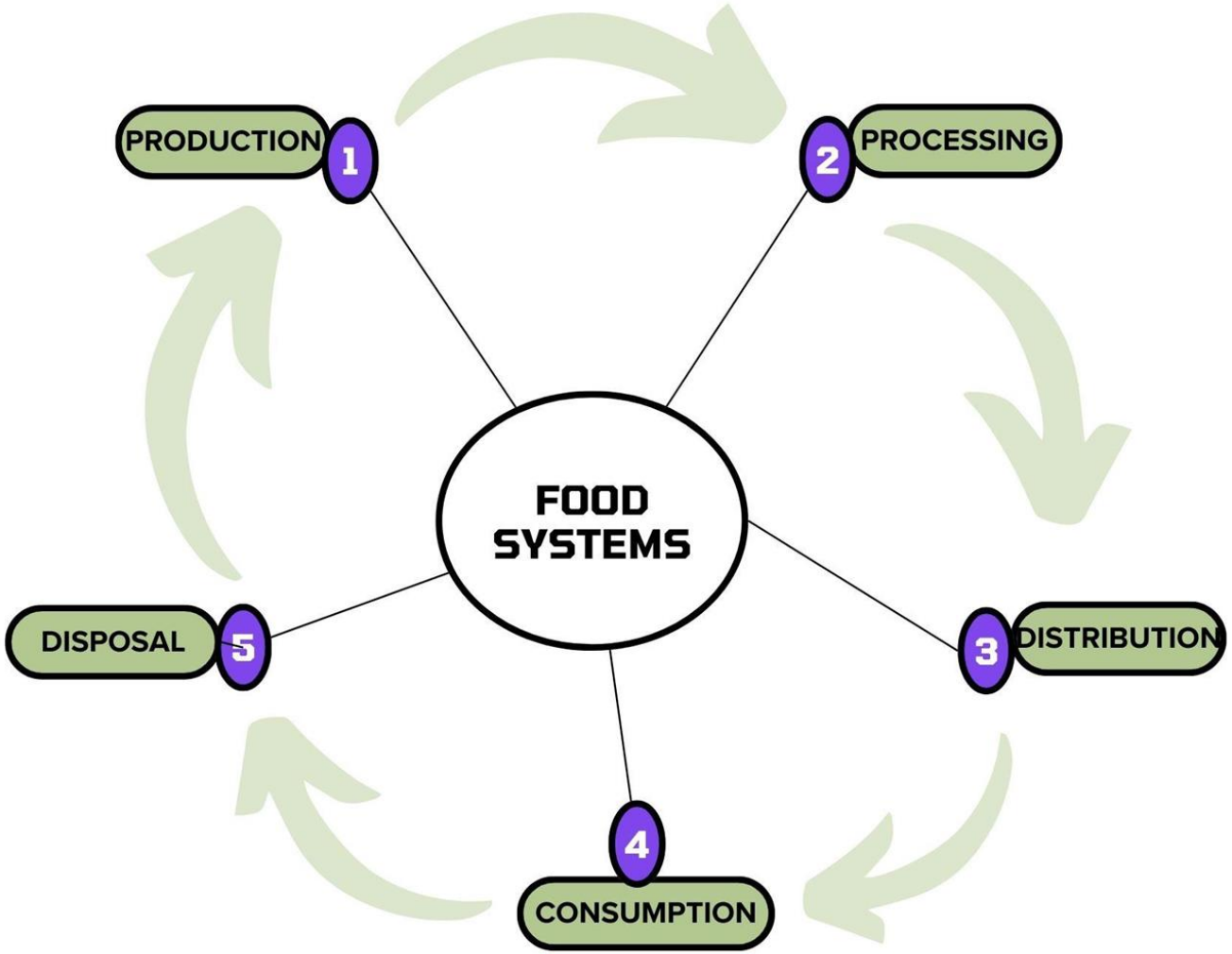
Learning Objectives

1. Understand the importance of sustainable food habits and the complexity of food systems.
2. Develop futures literacy capabilities by imagining and designing sustainable food systems.
3. Act for climate and sustainable food systems, encouraging a shift in thinking.

Duration: 1.5 hours

What is a food system?

A food system includes all the processes and infrastructure involved in feeding a population: the growing, harvesting, processing, packaging, transporting, marketing, consumption, and disposal of food and food-related items.


PRODUCTION
1
PROCESSING
2
FOOD SYSTEMS
DISPOSAL
5
DISTRIBUTION
3
4
CONSUMPTION

VIDEO: FOOD SYSTEMS
https://youtu.be/rb8v1zg77ks

Impact of Food Systems

- Personal Health and Food Choices
- Public Health
- Environment
- Environmental Impact of Food Choices
- Sustainability of Food Habits

Let’s think about the impact of our choices…

1-What is a primary benefit of choosing locally sourced food?

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B. It reduces the carbon footprint associated with food transportation.
C. It tastes better than imported food.
D. It eliminates the need for food packaging.

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B. Higher levels of cholesterol.
C. Lower risk of chronic diseases such as diabetes.
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Importance of food systems

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B. Enhanced soil fertility.
C. Methane emissions from decomposing food in landfills.
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5-Why is food security an important aspect of sustainable food systems?

A. It ensures all communities have access to high-calorie foods.
B. It promotes the use of genetically modified organisms (GMOs).
C. It ensures all people have access to sufficient, safe, and nutritious food.
D. It encourages the global distribution of food.

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Challenges we face with our Food Systems

- **Complex Web**: Food systems are an intricate web of production, processing, distribution, consumption, and disposal.
- **Interdependency**: Each component relies on the others – changes in one affects all.
- **Global Impact**: Choices made locally can have global environmental, economic, and social impacts.

Challenges we face with our Food Systems

- **Resource Intensive**: High demand for water, energy, and land resources.
- **Climate Change**: Agriculture is a major contributor to greenhouse gas emissions.
- **Food Security**: Ensuring everyone has access to sufficient, safe, and nutritious food.

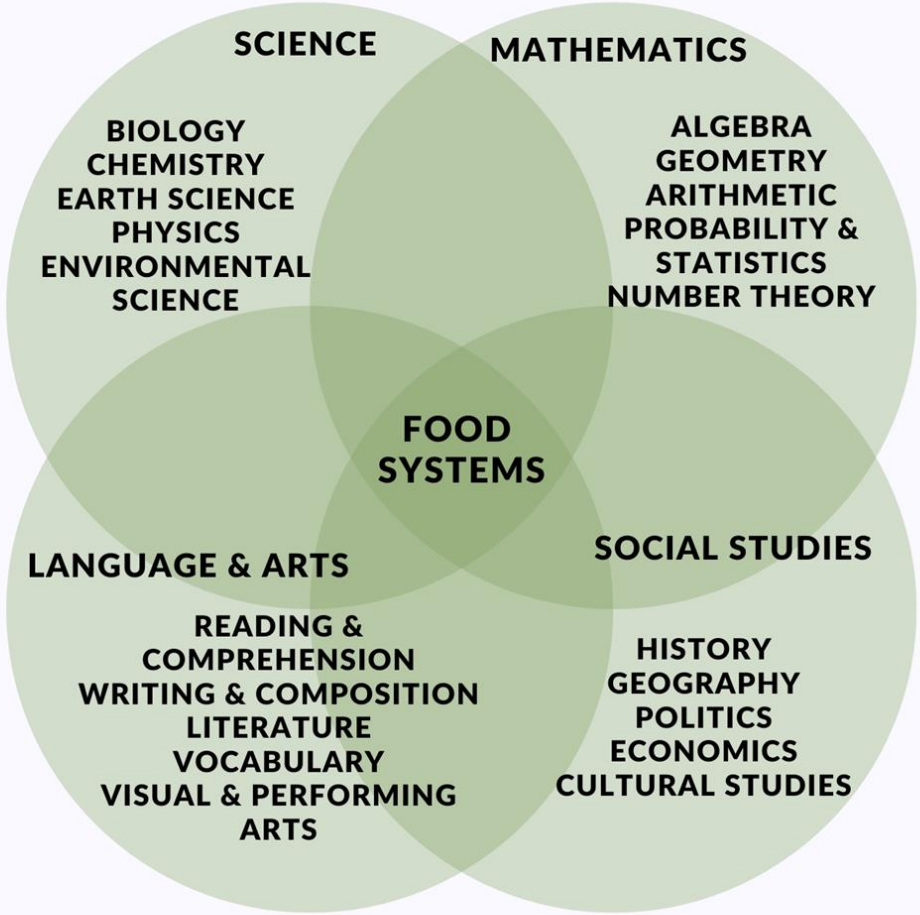
Challenges we face with our Food Systems

- **Biodiversity Loss**: Monoculture farming reduces biodiversity, affecting ecosystem health.
- **Waste**: Significant food waste at all stages – production to consumption.
- **Social Equity**: Disparities in food access and quality across different regions and communities.
- **Sustainability**: Balancing the need to feed the growing population with the need to preserve the planet.

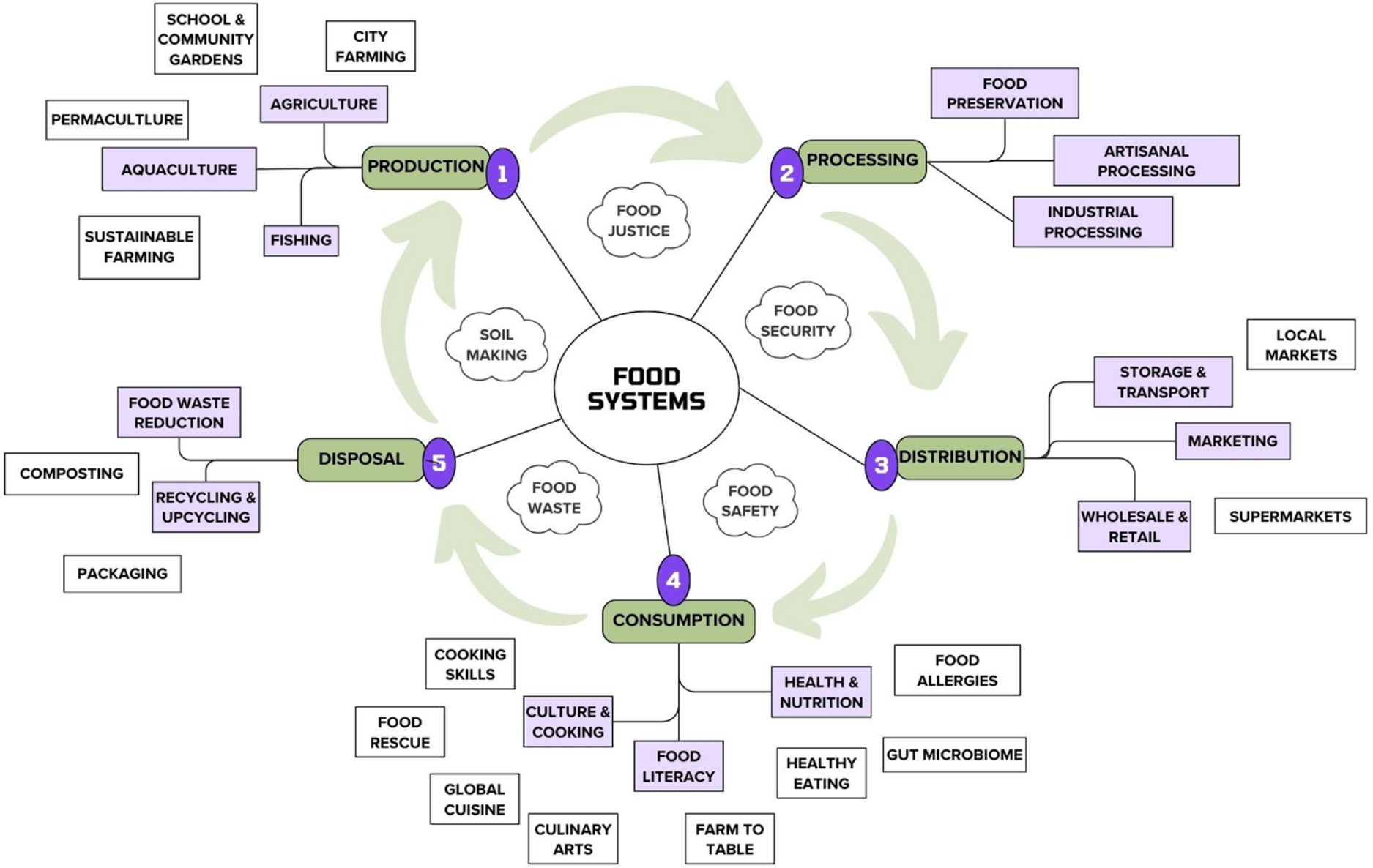
TEACHING ABOUT FOOD SYSTEMS

YOU CAN TEACH ABOUT FOOD SYSTEMS
IN ANY DISCIPLINE.

THERE ARE MANY TOPICS AND OPPORTUNITIES
TO INCLUDE FOOD SYSTEMS IN YOUR CLASS PLANS



MANY TOPICS TO CHOSE FROM



Starting with production. Why do we need sustainable food production?

- Farms as cultivated ecosystems
- Integrated Design: for energy, water and fertility storages with cultivated biodiversity and accelerated succession on our farming methods.

VIDEO: SUSTAINABLE FARMING
https://youtu.be/9-pNjAu9D7A

Lets talk about Sustainable Food Habits?

- Plant Predominant Diets (meat or no meat?)
- Local sourcing of food (market X supermarkets)
- Food Waste Reduction (food at home?)

Sustainable Food Habits - True or False?

1- A plant-based diet is considered more sustainable than a diet high in animal products.

Sustainable Food Habits - True or False?

2- Choosing locally sourced foods always means lower environmental impact.

Sustainable Food Habits - True or False?

3- Reducing food waste is a key component of a sustainable diet.

Sustainable Food Habits - True or False?

4- Organic farming practices always guarantee better soil health.

Sustainable Food Habits - True or False?

5- Eating a variety of foods is not important for sustainability.

Sustainable Food Habits - True or False?

6- Processed foods are always less sustainable than whole foods.

Food Environments

These are the physical, social, economic, and cultural surroundings that influence people's food choices and dietary behaviours.

- Availability: The presence of healthy food options in the community.
- Affordability: The cost of healthy food relative to income levels.
- Safety: The safety and hygiene of food available.
- Quality: The nutritional value and freshness of food available.

Check
Beeforest
https://eu-cap-network.ec.europa.eu/news/inspirational-idea-sustainable-bee-forest_en

Imagining Sustainable Food Systems

- Futures Literacy: The ability to imagine and create different future scenarios, which helps in planning and decision-making.

https://illuminem.com/category/sustainable-lifestyle

Designing Sustainable Food Systems

- **Project-Based Learning**: students learn by actively engaging in real-world and meaningful projects.
- **School Gardens**: Benefits include hands-on learning, understanding of food production, and promoting healthy eating habits.
- **Local Food Sourcing Projects**: Encourage students to research and source local food for school meals or events.
- **Waste Reduction Initiatives**: Projects that focus on reducing, reusing, and recycling food waste in schools.
- **School Food week**: involve the entire school in a food systems project

Acting for climate and Sustainable Food Systems

- **Critical Thinking**: question and analyse the impact of your food choices on the environment and society.
- **Motivating Action**: student-led initiatives that make a positive impact on their communities.

Practical Activities Connected with the Curriculum

- **Classroom Activities**: cooking classes, food waste audits, visits to local farms, etc.
- **Group Discussions**: Facilitate discussions on topics such as the impact of food systems on our health and the environment.
- **Hands-On Projects**: Projects that involve growing food, cooking, recycling packaging or creating awareness campaigns about sustainable food habits.

Case Study: CLIKIS-Network – climate-friendly school kitchens - Estonia

The project provided eight Estonian kindergartens and schools with an opportunity to evaluate their kitchen equipment, menu, cooking practices, and waste management.

Example: Tartu Kivilinna School has introduced weighing the food waste left on the plate, which provides useful information for students, the school administration, and the caterer. The cafeteria keeps a daily record of food waste, which shows the number of students who eat and the amount of leftover food in liters

Case Study: Berlin Challenge

- **Problem**: Berlin faced challenges with food security, access to fresh produce, and food waste management.
- **Solutions**:
  - Community Gardens: Provided local residents with access to fresh produce and green spaces.
  - Cooperative Supermarkets: Enabled consumers to have more control over the food they purchase and support local producers.
  - Food Waste Reduction Apps: Connected surplus food with people in need, reducing food waste.
- **Outcomes**: Improved food security, enhanced community engagement, and reduced food waste.

Case Study: Children's summer camp in the farm - Estonia

The Ranna Rancho summer camp offers children the opportunity to gain a fresh perspective on nature, including the process of food cultivation. During the camp, children live amidst nature and engage in simple, traditional countryside activities.

Children gain valuable knowledge and experience about food literacy, specifically the process of food growth, health benefits of various plants, creating recipes with minimal food waste, etc. Caring for farm animals also fosters empathy and respect for animals.

Imagining and Designing Future Food Systems

Futures Literacy Methods

- Scenario planning:
- Backcasting
- Visioning exercises.

The Food Systems Dashboard website

https://www.foodsystemsdashboard.org/

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3. European Environment Agency (EEA): https://www.eea.europa.eu/
4. International Panel of Experts on Sustainable Food Systems (IPES-Food): http://www.ipes-food.org/
5. Sustainable Food Trust: https://sustainablefoodtrust.org/
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EU Educational Sources

1.European Commission – Education and Training: https://ec.europa.eu/education/

2.European Schoolnet: http://www.eun.org/

3.Eco-Schools Programme: https://www.ecoschools.global/

4.European Environment Information and Observation Network (Eionet): https://www.eionet.europa.eu/

5.Food for Life Partnership: https://www.foodforlife.org.uk/

Further Readings

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The space is open for quesions

Be the change! Choose sustainable food habits today for a healthier tomorrow. Lets protect our planet one meal at a time!

Thank you!

Contact

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Glossary

Agroecology: A holistic approach to farming that emphasizes the ecological management of agricultural systems, integrating practices that support biodiversity, sustainability, and the health of ecosystems.

Agroforestry: A land-use management system in which trees or shrubs are grown around or among crops or pastureland. This practice enhances biodiversity and increases productivity, resilience, and sustainability.

Aquaculture: The cultivation of aquatic organisms such as fish, shellfish, and plants, typically for food, in controlled environments.

Biodiversity: The variety of life in the world or in a particular habitat or ecosystem. In agriculture, biodiversity helps maintain ecosystem stability, enhances soil fertility, and improves resilience against pests and diseases.

Community Garden: A single piece of land gardened collectively by a group of people. Community gardens provide fresh produce, improve urban environments, and foster social interactions.

Composting: The process of recycling organic waste, such as food scraps and yard waste, into a valuable soil amendment known as compost. This process enhances soil health and reduces landfill waste.

Crop Rotation: The practice of growing different types of crops in the same area in sequenced seasons. It helps maintain soil health, reduce pest and disease cycles, and increase crop yield.

Distribution: The process of transporting food from the place of production to where it will be consumed. Effective distribution ensures that food reaches consumers efficiently and remains fresh and safe to eat.

Ecosystem Services: The benefits that humans derive from ecosystems, including provisioning services (like food and water), regulating services (like flood control), cultural services (like recreational benefits), and supporting services (like nutrient cycling).

Ethical Farming: Agricultural practices that prioritize animal welfare, environmental

Food Desert: Urban or rural areas where access to affordable and nutritious food is limited. Residents in food deserts often rely on convenience stores and fast food, leading to poor dietary health.

Food Environment: The physical, economic, political, and socio-cultural context in which people make food choices. Food environments influence what foods are available, affordable, and desirable.

Food Insecurity: A condition in which people lack regular access to enough safe and nutritious food for normal growth and development and an active, healthy life.

Food System: The interconnected network that encompasses all aspects of feeding a population, including growing, harvesting, processing, packaging, transporting, marketing, consumption, and disposal of food.

Futures Literacy: The capability to imagine and evaluate possible futures. It enables individuals and communities to envision and plan for sustainable and desirable future scenarios.

Integral Resource Management: A holistic approach to managing all resources—land, water, energy, and materials—in an integrated manner to create sustainable and efficient systems.

Local Food: Food that is produced, processed, and distributed within a specific geographic area. Local food systems support regional economies, reduce transportation emissions, and provide fresher produce.

Organic Farming: A method of farming that uses natural processes and inputs, avoiding synthetic chemicals and genetically modified organisms (GMOs). Organic farming promotes soil health, biodiversity, and ecological balance.

Permaculture: A design system for sustainable living and agriculture that mimics natural ecosystems. Permaculture principles include care for the earth, care for people, and fair share of resources.

Regenerative Agriculture: A conservation and rehabilitation approach to food

Sustainable Diet: A diet that has low environmental impact, contributes to food and nutrition security, and supports a healthy life for present and future generations. It is culturally acceptable, economically fair, and nutritionally adequate.

Waste Management: The collection, transport, processing, recycling, and disposal of waste materials. Effective waste management reduces environmental impact and promotes resource recovery.

Teaching materials

CASE STUDY

Berlin

IMAGINING AND DESIGNING