

Less Harm on the Farm: Regenerative Agriculture TEACHER'S GUIDE

Grades: 6-12

Subjects: Science and Environmental Science

<u>Purpose</u>: Students will be immersed in a comprehensive exploration of regenerative agriculture; a sustainable farming approach designed to restore and enhance the natural environment. They will gain insights into regenerative farming techniques, including soil health management, biodiversity preservation, and reduced chemical usage. By engaging with informative videos and hands-on activities, students will discover the potential of regenerative agriculture to address environmental challenges and contribute to a healthier planet.

Essential Question: How can regenerative agriculture transform farming practices, support environmental conservation, and foster a more sustainable future?

Supporting Questions:

- 1. How does regenerative agriculture promote soil health and enhance the natural ecosystem?
- 2. What are the ecological benefits of regenerative farming, and how do they contribute to the conservation of biodiversity?
- 3. How can regenerative agriculture serve as a more sustainable solution for food production while supporting both the environment and local communities?

<u>Time Frame</u>: Two (2) 50-minute sessions, or two block schedule sessions. For a block schedule, we suggest that part 1 and 2 can serve as a day one in a block schedule. Part 3 and 4 can serve as a day 2 in a block schedule.

Focus Topics:

Climate change, Ecosystems, Connecting with Nature, Solving Environmental Issues

Description:

These materials will introduce students to the world of regenerative agriculture. Students will understand the historical context of agricultural revolutions and how these transformations have revolutionized food production. They will explore contemporary regenerative practices, such as cover cropping and conservation tillage, to understand their impact on soil health and sustainability. Students will also explore edge of field practices, including the significance of wetlands in preserving water quality and agroforestry, to obtain a holistic view of regenerative farming's environmental benefits. Students will be able to explain the importance of these practices in mitigating issues like soil depletion and greenhouse gas emissions, while emphasizing the longstanding tradition of using nature-friendly solutions in agriculture.





Students will hear insights from farmers and experts, and even actionable steps for students to get involved in supporting these practices.

Objectives:

- Students will understand the historical context of agricultural revolutions and their impact on food production, sustainability, and the environment.
- Students will explore contemporary regenerative agricultural practices, such as cover cropping and conservation tillage, and comprehend how these techniques contribute to soil health and reduce environmental degradation.
- Students will recognize the significance of wetlands in preserving water quality and mitigating nutrient runoff, and appreciate their role in maintaining a healthy ecosystem.
- Students will comprehend the environmental challenges associated with modern agriculture, including soil depletion, greenhouse gas emissions, and water pollution, and recognize the potential of regenerative practices to address these issues.
- Students will be inspired to take action by integrating regenerative agriculture concepts into their daily lives and be equipped with practical steps for supporting regenerative practices, such as composting, supporting local farmers, or engaging in community gardening.

Standards:

Disciplinary Core Ideas (DCIs):

- 1. LS2.C: Ecosystem Dynamics, Functioning, and Resilience (Grades 6-8)
 - Develop a model to describe the cycling of matter and flow of energy among living and nonliving parts of an ecosystem.
 - Construct an argument supported by empirical evidence that changes to physical or biological components of an ecosystem affect populations.
- 2. LS2.A: Interdependent Relationships in Ecosystems (Grades 6-8)
 - Evaluate the evidence for the role of group behavior on individual and species' chances to survive and reproduce.
- 3. ESS3.A: Natural Resources (Grades 6-8)
 - Construct an argument supported by evidence for how increases in human population and per-capita consumption of natural resources impact Earth's systems.
- 4. ESS3.C: Human Impacts on Earth Systems (Grades 6-8)
 - Construct a scientific explanation based on evidence for how the uneven distributions of Earth's mineral, energy, and groundwater resources are the result of past and current geoscience processes.
- 5. LS2.B: Cycle of Matter and Energy Transfer in Ecosystems (Grades 9-12)
 - Evaluate the claims, evidence, and reasoning that the complex interactions in ecosystems maintain relatively consistent numbers and types of organisms in stable conditions.
- 6. ESS3.D: Global Climate Change (Grades 9-12)





• Construct a scientific explanation based on evidence for how the uneven distributions of Earth's mineral, energy, and groundwater resources are the result of past and current geoscience processes.

Crosscutting Concepts:

- 1. Systems and System Models (Grades 6-12)
 - Develop and use a model based on evidence to illustrate the relationships between systems or between components of a system.
- 2. Energy and Matter (Grades 6-12)
 - Changes of energy and matter in a system can be described in terms of energy and matter flows into, out of, and within that system.
- 3. Stability and Change (Grades 6-12)
 - Apply scientific principles to design an object, tool, process, or system.
- 4. Cause and Effect (Grades 6-12)
 - Relationships can be classified as causal or correlational, and correlation does not imply causation.

Science and Engineering Practices:

- 1. Developing and Using Models (Grades 6-12)
 - Develop a model to describe unobservable mechanisms.
- 2. Constructing Explanations and Designing Solutions (Grades 6-12)
 - Construct a scientific explanation based on valid and reliable evidence.
- 3. Obtaining, Evaluating, and Communicating Information (Grades 6-12)
 - Evaluate or refine a technological solution that reduces impacts of human activities on natural systems
- LS4.D: Biodiversity and Humans
- ETS1.B: Developing Possible Solutions
- ESS3.A: Natural Resources

Science and Engineering Practices

- Constructing Explanations and Designing Solutions
- Engaging in Argument from Evidence

Performance Expectation Middle School

Students who demonstrate understanding can:

A. MS-LS2-3. Develop a model to describe the cycling of matter and flow of energy among living and nonliving parts of an ecosystem.

Common Core Standards

6th-8th Grade Science and Technical Subjects





- CCSS.ELA-Literacy.RST.6-8.1 Cite specific textual evidence to support analysis of science and technical texts.
- CCSS.ELA-Literacy.RST.6-8.4 Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context.
- CCSS.ELA-Literacy.RST.6-8.7 Integrate quantitative or technical information expressed in words in a text with a version of that information expressed visually (e.g., in a flowchart, diagram, model, graph, or table).
- CCSS.ELA-Literacy.SL.8.1 Engage effectively in a range of collaborative discussions (one-onone, in groups, and teacher-led) with diverse partners on grade 8 topics, texts, and issues, building on others' ideas and expressing their own clearly.
- CCSS.ELA-Literacy.SL.8. Present claims and findings, emphasizing salient points in a focused, coherent manner with relevant evidence, sound valid reasoning, and well-chosen details; use appropriate eye contact, adequate volume, and clear pronunciation.

Common Core English and Language Arts Standards for Writing Grade 6-8

- CCSS.ELA-LITERACY.WHST.6-8.2. A Introduce a topic clearly, previewing what is to follow; organize ideas, concepts, and information into broader categories as appropriate to achieving purpose; include formatting (e.g., headings), graphics (e.g., charts, tables), and multimedia when useful to aiding comprehension.
- CCSS.ELA-LITERACY.WHST.6-8.2. B Develop the topic with relevant, well-chosen facts, definitions, concrete details, quotations, or other information and examples.
- CCSS.ELA-LITERACY.WHST.6-8.2. D Use precise language and domain-specific vocabulary to inform about or explain the topic.
- CCSS.ELA-LITERACY.WHST.6-8.6 Use technology, including the Internet, to produce and publish writing and present the relationships between information and ideas clearly and efficiently.

Common Core English and Language Arts Standards for Writing Grades 9-12

<u>Grades 9-10</u>

- CCSS.ELA-LITERACY.RST.9-10.1 Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions.
- CCSS.ELA-LITERACY.RST.9-10.8 Assess the extent to which the reasoning and evidence in a text support the author's claim or a recommendation for solving a scientific or technical problem.



Vocabulary:

Erosion: The process by which soil and rock are worn away and transported by natural forces, such as wind, water, or ice.

Nutrients: Substances, such as nitrogen and phosphorus compounds, that are essential for plant growth and development.

Conservation Tillage: A farming practice that reduces soil disturbance by minimizing or eliminating plowing or tilling, which helps protect soil from erosion.

Carbon Sequestration: The capture and long-term storage of carbon dioxide (CO2) from the atmosphere, often in soil or vegetation, to mitigate the effects of climate change.

Cover Crop: A crop planted primarily to manage soil erosion, fertility, and quality. It is grown in the off-season between primary crops and often helps protect the soil.

Riparian Buffer: A vegetated area, typically along the edge of water bodies like streams and rivers, that helps filter pollutants from runoff and protect water quality.

Agroforestry: An agricultural practice that involves integrating trees into the farming landscape to provide various benefits, such as shading crops, windbreaks, and additional income sources.

Microclimates: Small-scale, localized climate conditions that can vary within a particular area, which can be influenced by factors like shading from trees or other environmental features.

Pollinator Garden: A garden designed with native flowering plants to attract and provide habitat for insects, such as bees and butterflies, which help fertilize crops.

Composting: The process of breaking down organic material, such as food waste and lawn clippings, into nutrient-rich soil, often used to improve soil quality and reduce waste.

Community-Supported Agriculture (CSA): A system where individuals subscribe directly to the harvest of a local farm or group of farms, receiving regular shares of fresh produce.

Food Waste: The disposal of edible food that could have been consumed, often leading to environmental issues and carbon emissions in landfills.

Dead Zone: An area of water, often in lakes or the ocean, with reduced oxygen levels, causing harm to aquatic life and ecosystems. It can result from nutrient runoff from agriculture





Overview of Lessons:

Part 1: Introduction - What is the regenerative agriculture?

Students will be introduced to the topic of regenerative agriculture through a discussion about farming and food. They will watch a short video about the concept and examine articles in small groups to understand the concept further.

Part 2: Background & History

Students will use visual and historical resources to understand agricultural revolutions and their impact on our ability to feed growing populations.

Part 3: Regenerative agriculture practices and their impact on ecosystems

Students will conduct a series of experiments to understand individual practices used in regenerative agriculture.

Part 4: Virtual Field Trip

Students will take a virtual field trip to various global sites to learn directly from farmers and scientists. Students will see regenerative practices in action and dive deeper into soil health, biodiversity, and other related topics.

Part 5: Extend learning (Optional)

Extend student learning with related long-term experiments and a community engagement project.

<u>Materials:</u>

- Notebook paper or journal
- Pencil or pen
- Computer or laptop
- Projector or Screen Casting Capability
- Two identical shallow containers (e.g., plastic trays) (per group)
- Potting soil
- Grass seed
- Measuring cup
- Water source (e.g., a watering can)
- Plastic wrap
- Ruler
- A spray bottle with water
- A fan or a source of gentle wind
- Interactive Kahoot Game

- Article: <u>Beyond Sustainable: A Food</u> <u>System to Restore the Planet</u>
- Article: Food Systems Should Be Central to Climate and Biodiversity Solutions
- Article: <u>Foodscapes</u>
- Article: <u>It's Time to Embrace the Potential</u> of Agroforestry as a Climate Solution
- Video: A Food System to Heal the Planet <u>https://youtu.be/rMCd9v-</u> nqds?si=ii19fTZdpVxBFa4w
- Video: Chesapeake Bay Farmers on the Forefront <u>https://youtu.be/-</u> kwllE8VXig?si=XgP3N3cOLPSIBNih
- Virtual Field Trip: Less Harm on the Farm <u>https://youtu.be/dUj-cAgwfpo</u>





Lesson Plan & Activities

These learning activities provide students with a diverse set of experiences, from historical exploration to hands-on experiments and community engagement, allowing them to grasp the concepts of regenerative agriculture and understand its significance in addressing environmental challenges.

Part 1: Introduction - What is regenerative agriculture?

Students will be introduced to the topic of regenerative agriculture through a discussion about farming and food. You may ask students to reflect on these questions in writing, individually or conduct the discussion in small groups if preferred. Students can be asked the following questions:

- What do you know about farming?
- How does our food get produced?
- What kind of practices do you associate with farming?
- 1. Guide the discussion towards describing how there are different ways that we obtain the food we eat.
- 2. Explain to students that they will be learning about regenerative agriculture. Utilize vocabulary list as needed.
- 3. Explain that to learn more about the regenerative agriculture, we are going to conduct several experiments and take an immersive virtual trip to see various practices in action.

Show a short explainer videos: "A Food System to Heal the World" https://youtu.be/rMCd9v-nqds?si=ii19fTZdpVxBFa4w

Divide the class into small groups and assign the following articles. Groups must read and discuss the article assigned and prepare to report out in a <5-minute aural presentation. Each group must present their learnings.

- Article: <u>Beyond Sustainable: A Food System to Restore the Planet</u>
- Article: Food Systems Should Be Central to Climate and Biodiversity Solutions
- Article: Foodscapes
- Article: It's Time to Embrace the Potential of Agroforestry as a Climate Solution



Use a Kahoot Game to close and check for understanding: https://create.kahoot.it/details/5b356a2ef07c-4708-9ddb-0002b1e5a8fb





Part 2: Background & History

Interactive Timeline Activity: Historical Agricultural Revolutions

- Provide students with a timeline that includes key historical events and advancements in agriculture, including the three agricultural revolutions mentioned in the script.
- In small groups, have students research and create visual representations of these revolutions, highlighting their significance and impact on food production and the environment.
- Afterward, each group presents their findings to the class, fostering discussion and comparison of the different agricultural revolutions.
- As an extension, you may have students organize a field trip to visit a regenerative farm or set up a visit from a local farmer to discuss their practices. Students can also create awareness campaigns or fundraisers to support these local initiatives or establish a class garden with sustainable practices.

Part 3: Regenerative agriculture practices and their impact on ecosystems

Students will conduct a series of experiments to understand individual practices used in regenerative agriculture.

EXPERIMENT 1

Objective: Understand the role of cover crops in mitigating soil erosion and maintaining soil health.

Materials:

- 1. Two identical shallow containers (e.g., baking pans or trays)
- 2. Potting soil
- 3. Grass seed (representing a cover crop)
- 4. A spray bottle with water
- 5. A fan or a source of gentle wind
- 6. Plastic wrap
- 7. Ruler
- 8. Notebook and pen

Procedure:

- 1. **Setup:** a. Fill both shallow containers with potting soil. b. In one of the containers, evenly sprinkle grass seeds (representing the cover crop) over the soil. Press them gently into the soil's surface. c. Water both containers lightly to ensure the soil is moist.
- 2. Simulating Rainfall: a. Place the containers side by side. b. Set up a fan nearby.



- 3. **Observations:** a. Cover one of the containers with plastic wrap to represent a field with cover crops. b. Leave the other container uncovered to represent a field without cover crops.
- 4. **Experiment:** a. Simulate rainfall by spraying the uncovered container (without cover crops) with a fine mist from the spray bottle. Ensure the soil gets wet but not overly saturated. b. Simulate wind erosion by directing the fan at the uncovered container (without cover crops). Keep the fan at a low setting to create a gentle wind.
- 5. **Observations and Data Collection:** a. Observe and record how the soil reacts in both containers. Take note of any changes in soil structure, the amount of soil displaced, and any runoff. b. Measure the distance the soil particles travel from the uncovered container and record it.
- 6. **Analysis and Discussion:** a. Compare the condition of the soil in the covered container (with cover crops) to the uncovered container. b. Discuss the differences in soil erosion, runoff, and soil health between the two containers. c. Emphasize the importance of cover crops in preventing soil erosion and maintaining soil quality, as observed in the covered container.

Conclusion: Through this experiment, students can visually and quantitatively understand the significance of cover crops in reducing soil erosion and protecting the soil's integrity. They will appreciate how regenerative agricultural practices can help maintain soil health and reduce environmental issues like nutrient runoff and sedimentation.

EXPERIMENT 2

Objective: Understand the role of wetlands in maintaining water quality and supporting agriculture.

Materials:

- 1. Two identical shallow containers (e.g., plastic trays)
- 2. Potting soil
- 3. Grass seed
- 4. Measuring cup
- 5. Water source (e.g., a watering can)
- 6. Plastic wrap
- 7. Ruler
- 8. Notebook and pen

Procedure:

 Setup: a. Fill both shallow containers with potting soil to create a level surface. b. In one of the containers, plant grass seeds to represent a field without any wetland or natural buffer. c. In the other container, leave the soil surface undisturbed, representing a field with a natural wetland buffer. Do not plant grass seeds in this container.





- 2. Simulating Rainfall: a. Measure and note the volume of water (e.g., 500 ml) that represents rainfall in your experiment. b. Pour the measured amount of water evenly over both containers, simulating rainfall.
- 3. **Observations:** a. Observe and record what happens in each container during and after the "rainfall." b. Pay attention to any runoff, sedimentation, or changes in soil structure.
- 4. **Simulating Nutrient Runoff:** a. Sprinkle a small amount of coffee grounds (representing nutrients) onto the surface of the grass seed container, as if they were applied as fertilizers. b. Pour a small amount of water onto the grass seed container to simulate nutrient runoff.
- 5. **Comparison:** a. Compare the conditions of both containers. Note any differences in runoff, soil structure, or nutrient retention. b. Measure and record the distance sedimentation or nutrient runoff has traveled from the grass seed container.

Discussion:

- 1. Discuss the observations and findings of the experiment. Highlight the differences between the container with grass seeds (representing a field without wetland) and the container without grass seeds (representing a field with a natural wetland buffer).
- 2. Emphasize that wetlands act as natural filters, capturing and retaining excess nutrients and preventing them from running off into water bodies. This filtration process helps protect water quality and reduces the risk of nutrient pollution.
- 3. Explain that in actual wetlands, native plants and the wetland ecosystem perform these filtration functions, ensuring healthier water for agriculture and ecosystems.
- 4. Discuss the importance of preserving and maintaining wetlands in agricultural areas for the well-being of the environment and sustainable farming practices.

This experiment offers students a tangible way to understand the essential role of wetlands in preserving water quality and their benefits for agriculture. It allows students to witness the impact of wetlands on nutrient retention and water quality protection.

Part 4: Virtual Field Trip

Watch the virtual field trip, "Less Harm on the Farm: Regenerative Agriculture" <u>https://youtu.be/dUj-cAgwfpo</u>

Stop the video at different points to lead conversations utilizing the discussion questions below.

Guided Discussion Questions:

1. What were the key agricultural revolutions mentioned in the video, and how did each one impact food production and the environment?

• Sample Response: The video mentioned the three agricultural revolutions, starting with the first agricultural revolution when humans began farming. The second revolution came with





industrialization and machinery, while the third was the Green Revolution of the 20th century. These revolutions significantly increased food production, but the third revolution, in particular, introduced practices that raised environmental concerns due to increased chemical usage and soil depletion.

2. How do regenerative farming practices, like cover cropping and conservation tillage, contribute to soil health and sustainability? Can you explain their benefits?

• Sample Response: Regenerative farming practices, such as cover cropping and conservation tillage, promote soil health and sustainability. Cover crops protect the soil from erosion, add organic matter, and increase biodiversity. Conservation tillage reduces soil disturbance and helps retain moisture, preventing soil erosion. These practices improve soil structure, nutrient retention, and overall soil health, leading to sustainable agriculture.

3. Why is it important to preserve wetlands and their role in maintaining water quality? How do wetlands mitigate nutrient runoff?

• Sample Response: Wetlands are crucial for maintaining water quality as they act as natural filters. They capture and store excess nutrients, like nitrogen and phosphorus, preventing them from running off into water bodies. This helps reduce nutrient pollution and the formation of harmful algae blooms, which can harm aquatic life and humans. Preserving wetlands is essential for preventing water pollution and protecting ecosystems.

4. The video discusses the environmental challenges associated with modern agriculture. Can you name some of these challenges and how regenerative agriculture practices address them?

• Sample Response: Some environmental challenges include soil depletion, greenhouse gas emissions, and water pollution caused by modern agriculture. Regenerative agriculture practices combat these issues by improving soil health, sequestering carbon to mitigate greenhouse gas emissions, and reducing runoff of fertilizers and pesticides through practices like cover cropping. They also protect water quality and enhance biodiversity, contributing to a more sustainable and environmentally friendly approach to farming.

5. What does the term "carbon sequestration" mean, and how does it relate to regenerative agriculture?

• Sample Response: Carbon sequestration refers to the capture and long-term storage of carbon dioxide (CO2) from the atmosphere. In regenerative agriculture, carbon sequestration occurs when practices like cover cropping and reduced tillage enhance soil health and allow the soil to store more carbon. This helps mitigate climate change by reducing the amount of CO2 in the atmosphere, making regenerative agriculture a climate-friendly approach.

6. How can agroforestry practices benefit agriculture and the environment? What were the advantages mentioned in the video?





• Sample Response: Agroforestry practices benefit agriculture by integrating trees into the farming landscape, providing advantages such as shading crops, reducing wind erosion, and creating microclimates beneficial to different crops. In the video, they mentioned that agroforestry can also protect water quality, enhance biodiversity, and offer additional income sources by growing fruit and nut trees alongside traditional crops.

7. What role do pollinator gardens play in regenerative agriculture, and why are they essential for ecosystems and food production?

• Sample Response: Pollinator gardens in regenerative agriculture provide essential habitats for insects, particularly bees and butterflies, that play a crucial role in pollinating crops. They are essential for food production because many of our fruits and vegetables depend on pollinators for reproduction. By fostering biodiversity and supporting pollinators, regenerative agriculture ensures healthy ecosystems and abundant crop yields.

8. The video highlights the importance of learning from indigenous peoples' agricultural practices. What was the example given from the Maya people in Central America, and how can these practices benefit modern agriculture?

• Sample Response: The example from the Maya people in Central America involves the Milpa system, where corn, beans, and squash are grown together. This mutually beneficial system enhances crop yields and soil health. These practices can benefit modern agriculture by promoting intercropping and polyculture, which can reduce the need for synthetic inputs, improve soil fertility, and provide ecosystem services, as seen in the Milpa system.

9. In your opinion, what was the most inspiring or innovative regenerative practice discussed in the video? Why?

• Sample Response: In my opinion, the most inspiring regenerative practice was the use of cover crops. Cover crops are like natural protectors for the soil, preventing erosion and adding nutrients. They are innovative because they offer a simple and effective solution to maintaining soil health and sustainability, which is crucial for the environment and food production.

10. How can individuals and communities support regenerative agriculture in their own lives, as suggested in the video? Can you think of additional ways to get involved?

• Sample Response: Individuals and communities can support regenerative agriculture by buying produce from local farmers who practice sustainable methods, participating in community-supported agriculture (CSA), and planting pollinator gardens or their own vegetable gardens. Additionally, they can get involved by promoting awareness of regenerative agriculture through education and advocacy, supporting local farmer's markets, and engaging in community gardens. These actions empower people to make a positive impact in their local food systems and the environment.





Part 4: Extend Learning

Mini Farming Experiment: Understanding Cover Crops

- In this hands-on activity, students can simulate the use of cover crops in regenerative agriculture.
- Provide students with small planting containers and a variety of cover crop seeds (e.g., clover, rye, or vetch).
- In pairs or small groups, have students plant two containers: one with a cover crop and one without.
- Over several weeks, students monitor and compare the growth of the cover crops and the condition of the soil in both containers.
- Through observation and data collection, students can discuss the benefits of cover cropping in maintaining soil health.

Community Engagement Project: Supporting Local Farmers

- Encourage students to take action in their local community by supporting regenerative agriculture.
- As a class, identify local farms or farmers' markets that practice sustainable farming methods.
- Discuss the importance of supporting these initiatives for environmental and community health.

Supplemental Digital Resources and Videos:

Utilize the resources below to supplement students learning. Articles, videos, and other tools can be used to create additional group projects, at-home learning, or community engagement initiatives.

Resources:

- TNC Foodscapes Mapping Tool: <u>https://www.globalfoodscapes.org</u>
- How to build a garden: <u>https://www.nature.org/en-us/about-us/who-we-are/how-we-work/youth-engagement/nature-lab/school-garden-resources/</u>
- Soil Management: <u>https://www.nature.org/en-us/what-we-do/our-</u> insights/perspectives/soil-management-a-foundational-strategy-for-conservation/
- Wetlands: Our Unsung Heroes: <u>https://www.nature.org/en-us/about-us/where-we-work/united-states/vermont/stories-in-vermont/wetlands/</u>

Videos:

- <u>Restorative Aquaculture for Nature and Communities</u>
- <u>Milpa: Growing Food in Harmony with Nature</u>
- Farmers in a Changing Climate
- What are Foodscapes?





Nature Lab Related Resources: The following lesson plans and videos can be used to supplement this virtual field trip and teaching guide.



Food and Carbon Grade Levels: 5-12

In this lesson, students will consider different ways food is produced, transported and consumed.

https://www.nature.org/en-us/about-us/who-we-are/howwe-work/youth-engagement/nature-lab/school-gardenresources/



How Dirt Works Grade Levels: 5-12

Soil sustains plant and animal life, regulates water, filters pollutants, cycles nutrients and supports structures. In this lesson, students learn the value of soil and its role as a natural resource.

https://www.nature.org/en-us/about-us/who-we-are/how-wework/youth-engagement/nature-lab/school-garden-resources/



Kahoot Playlist: Food Grade Levels: 5-12

Use interactive quiz games to check for understanding, supplement classroom learning, or assign as an at-home extension. The games found in the Food playlist cover topics such as regenerative agriculture, pollinators, oyster reefs, and more.

https://create.kahoot.it/course/1a56fc62-927c-431d-94f1e5e631e7a1c8

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