Global Schools Program

Course Overview

Grade 3

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SUSTAINABLE DEVELOPMENT GOALS
17 GOALS TO TRANSFORM OUR WORLD

Global Schools Program

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Overview	
Learning Goal Students will understand the origins and the complex systems which are required to produce food and how these systems intimately impact the lives of humans around the world. Students will forge an ethical orientation towards our natural resources and all other forms of life — on land and water — and understand our common responsibility to preserve/conserve our planet for sustainability.	
Lesson Scaffold	
Lesson 1	Origins of Food
Lesson 2	Farming Cultures with Guest Speaker
Lesson 3	How Plants Grow
Lesson 4	Class Garden
Lesson 5	Food in Complex Systems: Harkness Discussion
Learning Objectives	
• Students will learn about a new topic and share knowledge with their peers. • Students will think critically about how an issue affects their own lives. • Students will participate in a hands-on project, working with classmates to produce a final product.	

Grade 3 Lesson 1
"Origins of Food"

Time Frame: 60 minutes
Subjects: Science, Social Studies, Health
Standards: No Poverty (SDG 1); Zero Hunger (SDG 2); Good Health and Well-Being (SDG 3); Responsible Production and Consumption (SDG 12)

Summary and Rationale: Students will use their own lunch to discuss the origins of their food, where it comes from, and relate their meals to issues of poverty and hunger worldwide.

Instructional Goal: Students will develop an appreciation of food differences globally and understand the equality issues related to food distribution in different contexts.

Understanding Goals:

- The delivery of food from the farm to the table involves complex technologies and delivery chains.
- People in other cultures eat different foods because of geographic characteristics as well as issues of access.
- Access (or lack of access) to different foods is related to inequalities such as health and poverty.

Essential Questions:

- Where does our food come from?
- Why do different cultures consume different foods?
- How is food access unequally distributed throughout the world?

Student Learning Objectives (Students will be able to):

- Identify the origins of food production
- Compare and contrast differences in food cultures
- Discuss injustices related to food access and nutrition across the world

Assessment:

- 1-2 sentence answers to final questions at the end of the lesson
- Maps of food production created by students

Sequence of Activities:

★ **Hook (10 minutes):** What's for lunch today?

- Describe and draw a picture of what you brought/what the school offers for lunch. What types of foods are you eating? Where did these foods come from (the ground, an animal, etc.)?
- Where did your food come from today? What had to happen in order from the food to get from where it started (the farm) to your plate?
- Teacher should have students draw a healthy plate divided into four groups (fruit, vegetables, protein, grain). This will help them analyze inequalities in food consumption in the next activity.

★ **Activity #1 (20 minutes):** Picture Analysis

- Give students pictures (or written cards/drawings) of ten lunches from different countries around the world, including countries of different income status. Some of the lunches should be lacking in protein or fruit, for example, or plates with barely any food, while others should be overflowing or abundant.

- **Step 1: Partner Work (5 minutes):** In partners, students will use their healthy plate to identify which school lunches are well-rounded and which components of a healthy meal are missing. Students will sort and rank the pictures of meals based on quality. (5 minutes)

- **Step 2: Group Work (3 minutes):** In groups of four, students will compare how and why they sorted the meals the way they did. Students will note differences and common choices and share their thinking.

- **Step 3: Whole Class (12 minutes):** Students share which countries they found had well-rounded meals and which were lacking.

- **Discussion Questions:**
  - What can you guess about these countries' farms?
  - What type of food do these countries seem to have access to?
  - Why do you think some places have more food than others?
  - How do you feel when you are hungry? Are you able to focus?
  - How do you think being hungry might affect someone's focus in school?

★ **Activity #2 (20 minutes):** Food Production Map

- Students are introduced to the delivery chain of food by drawing a map (see example in Resources for Students below) in small groups on poster paper. Teacher should ask

students what steps they imagine must happen for them to have lunch today. As a class, create an outline for the map and have students draw and label the process in groups.

Conclusion/Assessment: Students write answers to the following questions...

- How does food get from the farm to your table?
- Why are some meals unequal in different places?

Resources for Students:

- Pictures of school lunches in different countries: http://tiny.cc/G3L1R1
- A healthy plate: http://tiny.cc/G3L1R2
- Diagram of farm to table process: http://tiny.cc/G3L1R3

Resources for Teachers:

- Why teaching food origins is important: http://tiny.cc/G3L1R4

Grade 3 Lesson 2
"Farming Culture and Guest Speaker"

Time Frame: 60 minutes
Subjects: Science, Social Studies
Standards: No Poverty (SDG 1); Zero Hunger (SDG 2); Good Health and Well-Being (SDG 3); Decent Work and Economic Growth (SDG 8); Sustainable Cities and Communities (SDG 11); Climate Action (SDG 13); Life on Land (SDG 15)
Designed by: Chihiro Yoshida

Summary and Rationale: Students will be taught about various farming cultures around the world, be exposed to and engage in a conversation with an adult who is in the occupation of farming from a nearby community.

Instructional Goals: Students will be able to...

- Gain an understanding of various forms of agriculture around the world
- Increase understanding of occupations in agriculture

Understanding Goals:

- There are various forms of agriculture and means of production around the world.
- Differences stem from cultural, societal, and economic factors.
- There are individuals within your own community who work in agriculture.

Essential Questions:

- What are the different types of agricultural products around the world?
- How are foods produced around the world?
- What role does agriculture play in society in different cultures?
- What are the raw experiences of people in your own community that work in agriculture?

Student Learning Objectives (Students will be able to):

- Compare and contrast differences in agricultural production around the world
- Identify the roles that people in agricultural occupations play within the community
- Relate to and emphasize with current issues faced by people working in agriculture within their own community

Assessment: Individual reflections and/or letters written to Guest Speaker.

Sequence of Activities:

- **Opener (5 minutes):**
    - **Discussion:** Who knows people who work in agriculture? What do they do? How are they involved in the food producing process? What is their role in society?

- **Introduction (15 minutes):**
    - **Presentation:** Teacher will introduce various people around the world who are involved in agriculture and their local processes and issues (United States — cornfields, machinery; Japan — rice paddies, smaller family-based manufacturing; India - sugar canes).

- **Core Event (30 minutes):**
    - **Guest Speaker:** Someone who works in agricultural production will be invited to speak to the classroom. Ideally, it would be someone who is involved in agriculture with an entrepreneurial mindset and a vision of changing the way that agricultural business is operated.
    - **Q&A:** The classroom teacher will facilitate questions and follow-up discussion between the guest speaker and students.

- **Reflection (10 minutes):** Concluding remarks and individual reflection (journal writing and/or letter writing to Guest Speaker)

Resources for Students:

- The Man Who Fed the World: http://tiny.cc/G3L2R1
- The Kid Who Changed the World (children's book): http://tiny.cc/G3L2R2
- The Day the Crayons Quit (children's book) - http://tiny.cc/G3L2R3

Resources for Teachers:

- World Food Prize (Norman Borlaug): http://tiny.cc/G3L2R4
- Genius Behind the Green Revolution (Norman Borlaug): http://tiny.cc/G3L2R5
- Urban Farming Around the World: http://tiny.cc/G3L2R6
- Agriculture's Importance within the Economy: http://tiny.cc/G3L2R7
- Green Bronx Machine: http://tiny.cc/G3L2R8
- Entrepreneurship in Agriculture - http://tiny.cc/G3L2R10
- America's Farmers: http://tiny.cc/G3L2R14

Grade 3 Lesson 3
"How Plants Grow"

Time Frame: 60 minutes
Subjects: Biology, Food Sciences
Standards: Clean Water and Sanitation (SDG 6); Responsible Consumption and Production (SDG 12); Climate Action (SDG 13); Life on Land (SDG 15)
Designed by: Matt Owens

Summary and Rationale: Students will explore the life cycle of plants in order to understand how plants grow and produce food as well as how humans are able to influence and alter this process.

Instructional Goal: Students will learn what resources plants needs to thrive and produce food suitable for humans, and utilize this knowledge to plan a classroom garden that will be implemented in the following lesson.

Understanding Goal: Plants need clean water and air, good soil, sunlight, and care to grow and produce food. The food we eat is interconnected to complex ecosystems that humans have the ability to impact in positive or negative ways.

Essential Questions:

- How do plants produce the food we eat?
- What do they need to grow?
- How do we help plants grow?

Student Learning Objectives (Students will be able to):

- Identify the steps of the plant life-cycle and the different resources a plant needs to thrive (e.g. clean air and water, good soil, sunlight, care, etc.)
- Identify simple steps they can take to care for plants
- Utilize this knowledge to plan a classroom garden that will be implemented in the following lesson

Assessment:

- Informal checks for comprehension as students plan the garden
- Life cycle diagram
- Garden plan

Sequence of Activities:

- **Hook: Reflect and Discuss (10 minutes)**
    - Teacher leads the class in a reflection on the farmer's visit in the previous lesson.
    - Teacher prompts students with questions about the different types of food the farmer grows, how he grows the food, leading into a discussion of what food needs to grow and how humans might be able to help.

- **Discover: The Plant Life Cycle (20 minutes)**
    - Teacher transitions the lesson to an exploration of the plant life cycle. Suggested mediums to introduce the topic include children's books and video clips that show the life cycle of a plant and how people can help plants grow.
    - Teacher then leads the class in a discussion of the different parts of the plant and its different stages, focusing on the things a plant needs to grow strong and healthy.
    - **Optional Activity:** In order to assess student understanding, students draw diagrams of the plant life cycle in order to demonstrate how plants grow and produce food, and what they need to do so.

- **Connect: Design a Class Garden (20 minutes)**
    - Students draw and design their own garden, including a plan of what they can do to make sure the plant grows.
    - Students are then invited to share their plan with partners or in small groups.

- **Plan: Looking Forward (10 minutes)**
    - The teacher brings the class back together to discuss and explain to students the plan for the next lesson: building a class garden.

Resources for Students:

- **Video Clips:**
    - How Does It Grow: http://tiny.cc/G3L3R1
    - How Food Grows: http://tiny.cc/G3L3R2
    - From Seed To Flower: http://tiny.cc/G3L3R3
- **Children's Books:**
    - Eddie's Garden And How to Make Things Grow: http://tiny.cc/G3L3R4
    - First Peas to the Table: http://tiny.cc/G3L3R5
    - The Carrot Seed: http://tiny.cc/G3L3R6
- **Online Exploration:**
    - The Great Plant Escape: http://tiny.cc/G3L3R7

- Parts of a Plant: http://tiny.cc/G3L3R8

Resources for Teachers:

- **Garden Plans and Guides:**
  - Creating School Gardens: http://tiny.cc/G3L3R9
  - Gardens for Learning: http://tiny.cc/G3L3R10
- **Other Resources:**
  - Plant Parts: http://tiny.cc/G3L3R11
  - Agriculture Literacy Curriculum: http://tiny.cc/G3L3R12

Grade 3 Lesson 4
"Class Garden"

Time Frame: 60+ minutes
Subjects: Social Studies, Life Skills
Standards: No Poverty (SDG 1); Zero Hunger (SDG 2); Good Health and Well-Being (SDG 3); Decent Work and Economic Growth (SDG 8); Sustainable Cities and Communities (SDG 11); Climate Action (SDG 13); Life on Land (SDG 15)
Designed by: Cassie Fuenmayor

Summary and Rationale: This lesson will center around implementation of the class garden designed in Lesson 3. It will promote creativity, agency and action, as well as self-reliance and community development.

Instructional Goals: Students will...

- Cultivate an appreciation, curiosity, and respect for cultural diversity
- Practice teamwork and community development
- Use their own agency to implement a hands-on project

Competencies:

- Cultivate an appreciation, curiosity, and respect for cultural diversity and world culture as the foundation for self-reflection, identity formation, and empathetically approaching human interaction, forms of life — on land and water — and understand our responsibility to preserve/conserve our planet for sustainability.
- Understand the elements of trust and collaboration, decent and gainful employment and why it is important to making and sustaining relationships both locally and globally.
- Acquire skills in economics and financial relations, science, technology, data analysis, and health that will allow students to address real world issues.
- Analyze and researching solutions to problems (water, energy, and food) from the perspectives of different roles, such as consumers, businesses, scientists, policy makers, researchers, retailers, media, and development cooperation agencies, among others.

Understanding Goal: Students will understand the importance of teamwork and collaboration as well as agency and action in the implementation of a project plan.

Essential Questions:

- Who will do what task when implementing the garden?
- What strategies will they use to complete their task?
- What do we need to do to keep our garden healthy?
- Who will take responsibility for these tasks?
- How is our garden similar/different than what we've learned about agriculture?
- How can we share our garden with our school/community?

Student Learning Objectives (Students will be able to):

- Implement the garden design planned in Lesson 3
- Complete his/her assigned task in the garden creation
- Exercise their own agency in deciding the best way to complete their assigned tasks
- Engage with each other to help complete their tasks

Assessment: Teachers can compare the completed garden with the plan/design for the garden.

Sequence of Activities:

- **Hook (5-10 minutes):** Review garden design and assigned tasks. Students spend 5-10 minutes planning how they will complete their task.
- **Core Event (50 minutes):** Students will complete their assigned task according to garden plan with the help of each other and the teacher.
- **Conclusion (5 minutes):** students will clean up and spend 5 minutes discussing with peers if they think the garden went according to plan.
    - What went well?
    - What challenges did they face?
    - How did they meet these challenges?

Resources for Teachers:

- Growing Minds – School Gardens: http://tiny.cc/G3L4R1

Grade 3 Lesson 5

"Food in Complex Systems: Harkness Discussion"

Time Frame: 60 minutes
Subjects: Social Studies, Biology, Food Sciences, Health, Economics
Standards: No Poverty (SDG 1); Zero Hunger (SDG 2); Good Health and Well-Being (SDG 3); Clean Water and Sanitation (SDG 6); Decent Work and Economic Growth (SDG 8); Industry Innovation and Infrastructure (SDG 9); Reduced Inequalities (SDG 10); Sustainable Cities and Communities (SDG 11); Responsible Consumption and Growth (SDG 12); Life on Land (SDG 15); Partnerships for the Goals (SDG 17)
Designed by: Christian Bautista

Summary and Rationale: After students have imagined, planned, and executed their Class Garden project, the class will reflect upon their activity and connect it with local and global issues such as poverty, hunger, sharing, markets, and justice.

Instructional Goal: Students will be able to identify, consider, and address the secondary effects of food growth, markets, famine, and poverty.

Understanding Goal: Food growth and consumption is deeply connected to complex systems that intimately affect individual human lives around the world, and the interplay of these various systems have implications for human rights, sustainability, and global equity.

Essential Questions:

- After building our class garden, how much harder would it be to design a farm that fed the entire school? An entire city?
- If we built this farm, what would happen if we weren't able to grow any food?
- What if we didn't have enough money to build our garden or to maintain it?
- If the fourth-grade class built a different type of garden and ours grew food but theirs didn't, what could we do to help them?
- What are some ways that we could make sure that we would all have enough food ahead of time?

Student Learning Objectives (Students will be able to):

- Draw upon their experiences over the last 4 lessons to contribute to a deep discussion on issues adjacent to food production and consumption.
- Engage in a Harkness Discussion:
    - Teacher will pose challenging, open-ended questions as suggested in the Essential Questions above

    - Students will answer these questions and respond to one another's answers in a discussion rather than a debate format.
- Contribute to the discussion:
    - Teachers should ensure that 100% of students add to the discussion and that it is not dominated by particular students.
    - If the students have not previously been exposed to Socratic or Harkness Discussions, time should be spent going over expectations and norms.
- Keep a positive attitude towards one another's contributions and will connect their learning to larger, global issues.

Assessment:

- The lesson will include both informal, organic assessment by the teacher (noting interesting contributions by specific students) as well as two formal assessments by the teacher.
- If they choose to do so, the teacher may "grade" the class as a group by using a rubric to assess the quality of the discussion:
    - Did all students speak?
    - Did the class stay on topic?
    - Were attitudes positive rather than combative?
- The teacher will also have students reflect briefly upon one or two essential questions in writing; these reflections can be assessed afterwards by the teacher.

Sequence of Activities:

- **Introduction (5 minutes):**
    - Teacher will explain to students that class time today will be devoted to reflecting on all that they have learned so far.
    - Teacher will also direct students to arrange their desks/seats in a circle, with the teacher included in that circle.
- **Discussion (30 minutes):**
    - Teacher will lead a discussion of the 5 Essential Questions outlined above.
    - Students should engage with each other's thoughts, with the teacher only prompting further discussion or challenging statements.
- **Debrief/Conclusion (10 minutes):**
    - Teacher will spend a few minutes talking to the class about today's discussion, and allowing students to share how they felt or what they learned.
    - Prior to leaving class, each student should write down one thing that they learned from the discussion that they had not known or considered previously.