Regenerative agriculture fights climate change

Teaching Guide

Regenerative School Bus

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6-9 yrs
SLOW FOOD

Slow Food is a way of living and a way of eating. It is a global, grassroots movement with millions of supporters in 164 countries that links the pleasure of food with a commitment to community and the environment.

Slow Food seeks to steward a dramatic and lasting change in the food system.

At Slow Food Barbados we reconnect locals with the people, traditions, plants, animals, fertile soils and waters that produce our food while protecting the rich heritage, traditions and culture that food makes possible. Furthermore, we want to reinvigorate the youth's interest in food and bestow on them the knowledge of where it comes from.

EDUCATIONAL GARDENS
REGENERATIVE SCHOOL BUS

Slow Food identified educational gardens and working with youth as a key to developing Good, Clean and Fair food systems. Slow Food's physical Educational Gardens at schools and institutions island wide instill a love of Good Clean and Fair in students, while integrating garden activities into the school curriculum and building school community. The Regenerative School Bus is a way of taking students on a virtual field trip, bringing gardens and farms to so many more students than our existing gardens can reach. Exposing students to possibilities and inspiring youth, with a hope of instilling a life long love for regenerative agriculture, health and wellbeing.

PROJECT BACKGROUND

With rising rates of non-communicable diseases (NCDs) like diabetes, hypertension, heart disease and stroke; and with the increasing rates of childhood obesity in the Caribbean, the “Improving Household Nutrition Security and Public Health in CARICOM” or Food and Nutrition (“FaN”) project focuses on improving dietary diversity to help in lowering the burden of NCDs in the region. The project is generously funded by the International Development Research Centre, Government of Canada.

In collaboration with CARICOM Secretariat and other partners, the FaN project created the Health and Family Life Education (HFLE) curriculum at the Early Childhood Development level and revised the curriculum at the Primary Education Level to include more information on unhealthy diet and physical inactivity as risks for NCDs.

PROJECT RESOURCES

The FaN project partnered with CARICOM Secretariat to develop digital ‘edu-tainment’ materials to help deliver the revised HFLE curriculum in classrooms. These include a collaboration with Slow Food Barbados' educational consultants to deliver (3) three educational videos, filmed on farms in Jamaica, St. Kitts & Nevis, and St. Vincent & the Grenadines which focus on regenerative agriculture/farming, nutrition, and cooking. The videos are accompanied by worksheets, games, and challenges designed for students aged 6-9 years old and students aged 10-12 years old. Paired with a teaching guide, each video and the corresponding lesson has been designed for use in a fully virtual situation or an in-person hands-on setting in the classroom.
WHY REGENERATIVE AGRICULTURE?

One of the most pressing topics of our time, climate change. Also referred to as global warming, is an often under taught and misunderstood concept. A concept with the potential to significantly impact our lives and the lives of today’s youth, if adequate education is provided covering the WHYs and HOWs.

Regenerative agriculture is a method of producing food, on a small or large scale, which does not deplete the health of the environment. By design, regenerative agriculture increases the health of the environment, biodiversity and humans with every harvest.

Regenerative agriculture produces healthy soil, biodiverse ecosystems, abundant organic harvest, nutrient dense food and healthy people.

Regenerative agriculture seeks to keep the soil structure intact (no till / no dig farming); keep the soil covered (cover crops or mulch), does not introduce chemicals (synthetic fertilisers, pesticides or herbicides), Invites beneficial insects to create a biodiverse system.

By creating systems of regenerative agriculture we have the potential to: Draw down carbon through photosynthesis, and capture and store water in the soil structure, diverting run off to the oceans by infiltrating clean, chemical free water into the water table.

The United Nations Sustainable Development Goals suggest that major mindset shifts and action must be taken by the year 2030. Slow Food Barbados believes, that through education, a generation of regenerative youth will evolve, who will have far greater impact on this earth, than any adult will be able to make by the year 2030. Our health and the health of our planet depends upon the issues that we choose to educate the next generations on.

SLOW FOOD ETHOS

Slow Food envisions a world in which all people can access and enjoy food that is good for them, good for those who grow it and good for the planet.

Our approach is based on a concept of food that is defined by three interconnected principles: good, clean and fair.

- GOOD: quality, flavoursome and healthy, nutrient dense food
- CLEAN: production that does not harm the environment or humans
- FAIR: accessible prices for consumers and fair conditions and pay for producers.
ST VINCENT AND THE GRENADINES: FARMER LUKE

Food groups, processed foods and food preparation
Food provides us with all the nutrition we need for good health. We are what we eat!

Vocabulary:
Nutrition, Healthy, Unhealthy, Fruit, Vegetable, Bacteria

Lesson progression:
*All student pages are presented at varied engagement and skill levels - Students should only have 1 sheet or prompt given for each lesson segment for optimal engagement. Teachers should select the sheets or prompts given based on the skill level of their own class.

Lesson one: Video content
- Prep students and/or gauge prior knowledge by having an open discussion of the vocabulary words prior to watching the video.

- Each lesson series should minimally involve viewing the video content and utilizing the corresponding pages for parts 1-4 below.

1: "While you watch" 1 sheet or prompt can be used while viewing the video. Feel free to pause the video, re-watch it twice, or utilize the worksheets only after the video has been fully watched.

2: "Viewing Comprehension / Discussion Question" sheet.

3: "Take it to the next level" sheets (can be executed individually or in small groups and presented orally back to the class)

4: "Extension Discussion Question" sheet can be used supplementary
- if student ability allows and engagement is high
- as a group assignment or homework assignment
Lesson two: Group Work

1: Begin each lesson by re-watching the video to deepen understanding.
   - Other options: Hold a group discussion about the video with a topic such as: The favorite thing you remember, retelling the storyline, recalling key vocabulary words, or recapping by utilizing the "viewing comprehension/discussion questions".

2: If the "Extension Discussion Question" sheets have not been used prior this is a good place to start the lesson with an oral discussion in a large group.

3. Use the brain storm pages and print the attached flash card pages. Allow students to discuss which categories each food fits into and divide the foods that they usually eat up onto the plate system.

3: The "Brainstorm" session allows students to work in small or large groups to discuss orally, draw pictures or make a written list. Provide students with an age-appropriate version of the brainstorm sheet.

Differentiated learning ideas can include research utilizing available technology, library resources, or older students/teachers.

Make this lesson more tactile by including cut and glue from magazines and newspapers to create a "mood board" brainstorm.

Take this lesson outside by drawing plates on an outdoor hard surface with chalk and label each, and having groups rotate around to add index cards, images or flashcards to each plate with their ideas on it.

4: Invite smaller groups or individuals to share with the larger class.
Lesson three: Gamification

The student resource contains printable .pdf files with 7 pages of photo flash cards. They are categorized in this order: Page 1 + 2 Fruit and Veg; Page 3 Food from Animals; Page 4 Fats and Oils; Page 5 Staples (starches); Page 6 Legumes (peas and beans); Page 7 UNhealthy foods. *The flashcard resources may be used for the brainstorming and sorting activities in stead of drawing or cutting out of magazines etc.

- Ideally, print these on cardstock in color, laminate and cut out.
  Alternately, have students help reproduce these: use recycled cardboard and create oversized flashcards. Use index cards to write the names of the items and draw pictures.

To make these games come to life - collect empty packages, bags, cans etc for all items which come in some sort of wrapping and have the class make papermache versions of all the fresh fruit and veg as an art project. Having multiple versions of each item is a great idea too.

Game A: "food Engineers"

Print the tow "Investigation" cards to use as a reference and read through the information provided at least twice with the whole class engaging at an age appropriate level.

1. Start by having the students complete one or both of the accompanying Design worksheets. (drawing a package for a food, or designing a label for a food). The foods could be fictitious but the activity will have more impact if a most loved food is used in both cases. Perhaps start with a poll of the classroom's most loved foods.

Instead of printing all of the worksheets - recreate them large on a hard surface outside, the chalkboard or whiteboard, or have students make posters and work in small groups, or verbally talk through this activity asking questions.
Game B: "Let's Play Supermarket!"

Use the previously created set of flashcards, index cards, or 3D versions of packaged and fresh foods. For this game it will be best to also include the sheet of UNhealthy foods. Or bring in packages and examples of such.

1. Start by having the students create a point or star based ranking system for how healthy or unhealthy the foods are. Healthy foods should have LESS points and unhealthy foods MORE points! Older students could also create a 2 tier point ranking system where points are assigned for how local the food is, and how necessary it is in a healthy plate (ie: fruits and veg are worth more points than fats because a larger portion of a healthy plate of food consists of fruit and veg; or breadfruit is worth more than flour because it is not imported.) Younger students may just assign a food point up to 5 based on health.

2. Once all foods have been assigned points transfer those points into $ dollars. This is how much your food will cost in your supermarket. At whatever level is appropriate, make a supermarket where the class can now shop. Create a system of money (perhaps monopoly money or hand drawn notes with the school crest can be used).

   - Note: Given a specified budget, shopping for local healthy (fruit and veg) foods are cheaper. Allowing students to discover this before discussing is key.

2. Allow students to be creative and to extend this activity as much as possible.

   - Created roles within the supermarket could be to buy and sell from farmers as well as buy and sell to consumers.

   - Students could do away with the monetary system and develop a system of barter by assigning point values to other things such as tasks, and physical classroom items.

   - If there is an abundance of fruit or veg from a local farmer who is willing to donated, teachers could use the point system to award students for work well done, allowing them to then purchase fresh fruit at break.
Game C: (Advocacy challenge)

1. Use the advocacy challenge chart which is most age-appropriate for your students. Print on cardstock or redraw on recycled cardboard. Use something rewarding as a check box: stickers, glue and paste, or use something recycled like bottle tops.

- have students either perform this as a small group, class or individually.

2. Re-read the information cards, rewatch the video (or have these on hand for older students to research with). Refer back to the brainstorm pages for help too. Have students discuss the fact that eating 5 DIFFERENT fruits and vegetable each day is recommended by health professionals. Challenge them to do this for an appropriate length of time for your age group. Fill in the blanks on the chart with the foods they could choose. Once they have eaten their 5 each day students can tick off each box using an age-appropriate method and establish what the 'reward' will be for completing the advocacy chart as an extra fun incentive that is both healthy and promotes environmental stewardship (eg: the class will be allowed extra outdoor playtime, the student will win a fruit basket, the student will win coupons to shop for healthy food at the school shop.)

Fruits which are in-season could be examined to educate about the fruits which are more available locally throughout the year, and in the time of year the challenge is taken.

Using a rainbow for inspiration students could try to eat a fruit or vegetable of a different colour for each of their 5 choices. Older students could research the vitamins and minerals contained in foods of different colours.

Get the whole school involved, make it a lunch time showcase of 5 fruits and veg daily. Do this challenge as a teaching or administrative body as well to inspire students and keep administration accountable!
Farmer Luke:
LUKE PUNNET: ECOLOGICAL FARMER IN ST VINCENT:

Additional Resources / Research Assistance / Extension Resources

Read-aloud video book:
Sweet Tooth by Margie Palatini - You Tube

Read-aloud video book:
I Can Eat A Rainbow - by Olena Rose - YOUTUBE

Soil Food Web : Nutrient Cycling explained
Dr Elaine Ingham - You Tube

Video (cartoon) Explanation - YOu Tube
Food Groups and Nutrition

FAO food dietary guidelines by country
Information is like compost, it does no good unless you spread it around.

~ Eliot Coleman
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