



REGENERATIVE SCHOOL BUS

REGENERATIVE AGRICULTURE
FIGHTS CLIMATE CHANGE

TEACHING GUIDE

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. KITTS AND NEVIS:
FARMER MACKIE**

Waste streams,
closed loop systems
and factors affecting
health and the environment

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HFLE Themes:

Self and Interpersonal Relationships

Managing the Environment

Appropriate Eating and Fitness

Topic A - Waste streams / Closed-loop systems

Topic B - Factors affecting human health and the environment

Overarching Fact statement:

"There is no such thing as waste, only stuff in the wrong place"

Vocabulary:

Refuse, Reuse, Repair, Repurpose, Rot, Recycle, Regenerate

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 to 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

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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: The "Brainstorm" session allows students to work in small or large groups to discuss orally, draw pictures or make a written list.



Differentiated learning ideas can include research utilizing available technology, library resources, or older students/teachers being interviewed to find information.



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 the brainstorm bubbles on an outdoor hard surface with chalk and having groups rotate around to add index cards to each topic with their ideas on it.

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

- It may be advantageous to move into the gamification from here or run this on a separate occasion.

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Lesson three: Gamification

The student resource contains a printable .pdf file with 36 images.

- Ideally, print these on cardstock in color and laminate.

Alternately, have students help reproduce these: use recycled cardboard.

- View cards on a screen and write a description or title in students' own words.

- Cut similar images out of magazines/newspapers and paste them onto cards.

- Draw a depiction of each on an index card.

*NB: Use a smaller number of cards for younger students.

Game A: "Carbon Points"

Use the provided gameboard numbered 1-62 and some recycled game pieces as movers (i.e.: bottle tops). *Reusing any old gameboard with numbered or coloured spaces is a great integration into the lesson ('repurpose')

1. Start by spreading out the image cards and discussing what you see on each. Ask guiding questions: *What do you see happening? What is bad about that? What is something that could happen to hurt the earth or humans as a result of what is in this photo?*

2. Follow the discussion by assigning a number of points to each card.

Have the students sort them according to an age-appropriate set of categories.

E.g.: Bad and Worse (bad cards get 1 point and worse cards get 2)

Bad, Worse, and Worst (1, 2, and 3 points per card)

Has an immediate effect and Has long term effect (2 and 4 points)

3. Once all cards have points assigned stack the cards, shuffle, and leave the point and picture side down in a pile. *When it is your turn, pick up a card and move your game piece to the corresponding amount of spaces.*



Draw the gameboard outdoors on a hard surface/use tiles on the floor to make it a BIG game.

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Game A - continued:

4. Winning the game:

Typically winning a game means getting to the finish line first, but if you've assigned a higher number of points to your "worse" images, the winners will have done the most damage.

This creates a teaching moment. Pause and change the way students are thinking. Protecting the environment is not about a race to the finish line, it's about careful consideration of the impact that each of our actions have. We want to do less harm to our environment, to our own health and the health of the animals around us.



Extension: students can be introduced to a carbon footprint and carbon miles. 1 point can equal 1 carbon mile that food travels. The game can evolve with different rules as the discussion amongst students takes shape.



Extension: Have students design a set of cards that allow them to "Gain" carbon credits with environmentally conscious actions (eg: harvesting rainwater, cleaning up a beach, recycling, composting etc). These cards would allow students to move backward when they pull them from the stack.



Play the game as much as you want, and ensure that students discuss along the way, if a disagreement occurs between students about the point value or placement of a card, create a teaching moment: eg: use available resources to research; take a vote amongst the class; hold a courtroom style hearing about the item.

Moral: Winning in environmental conservation and health is not about more. It is about less! less impact on the earth and economy, fewer toxins, less waste, smaller carbon footprint etc.

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Game B: "Image Sorting"

Use the same image cards provided in whichever form is most accessible along with the Venn diagram which is most age-appropriate to your students.

1. Start by spreading out the image cards and *repeating the discussion* if it has been had already. Ask guiding questions: *What do you see happening? What is bad about that? What is something that could happen to hurt the earth or humans as a result of what is in this photo?*

2. Follow the discussion by using the Venn diagram as an image sorting tool. Students will need to discuss which section the cards fit best into. Some cards will overlap categories naturally other cards won't seem to fit well into any given category.



Draw your Venn diagram large on an outdoor hard surface or the blackboard.

If a disagreement occurs between students about the placement of a card, create a teaching moment: eg: use available resources to research; take a vote amongst the class; hold a courtroom style hearing about the item; work in small groups to create pros and cons lists; hold a classroom debate assigning a team to argue for and a team to argue against.

Other quick ways to use your game cards:



Stick image cards to students' backs and have them ask questions of each other to try guessing what image they have without the obvious "what am I".



Assign students a card each and have become that item. They can then write an apology letter to the earth for being so bad. Have them include ways they will make it up to the earth.

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Game C:

Use the accountability chart which is most age-appropriate to 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.

- Brainstorm ways that they can personally have a positive impact on the health of the environment and their own health by using some or all of the 7 R's. Fill in the blanks on the chart and tick off each box using an age-appropriate method and establish what the 'reward' will be for completing the accountability chart as an extra fun incentive that is both healthy and promotes environmental stewardship (e.g.: the class will be allowed extra outdoor playtime, the student will win a pack of seeds, everyone who completes the chart helps to make themselves a healthy frozen treat.



A goal of collecting garbage could be represented on an extra-large scale by using a hallway wall, masking tape and actual items of garbage picked up to check off the chart as students collect items.



Get the whole school involved and create a class vs class competition to complete the charts.



Challenge teachers to complete charts that the students have filled in with ideas.

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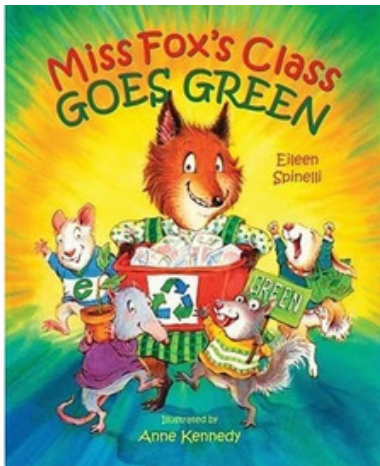
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Additional Resources / Research Assistance / Extension Resources



The Carbon Cycle – You Tube Video

<https://www.youtube.com/watch?v=p3R-dB9K4ss>



[Mrs Fox's Class Goes Green - YOUTUBE](#)

Read-aloud video book:

earth day .org Fact sheets:

<https://www.earthday.org/food-systems-and-climate-change-fact-sheet/>

Nat Geo kids – Circular economy

<https://www.natgeokids.com/uk/discover/science/general-science/all-about-the-circular-economy/>





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RESOURCES PRODUCED IN COLLABORATION WITH



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