

CREATING COMMUNITY FOOD GARDENS

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ACTION PLAN OVERVIEW

<p>Topic(s)</p>	<ul style="list-style-type: none"> • Language Acquisition • The Arts • Health and Wellbeing • Environmental Education • Outdoor Education • Service Learning • Global Citizenship Education • Community Project • Sustainable Development Project
<p>Central Challenge</p>	<p>Creating community food gardens is one crucial way of teaching students to care for the environment.</p>
<p>Systems Tool(s)</p>	<ul style="list-style-type: none"> • Pyramid Lite (VISIS) Introduction • Ladder of Inference • AMOEBA
<p>Additional Systems Tool(s)</p>	<ul style="list-style-type: none"> • Sustainability Compass • Systems Iceberg • Systems Mapping or Causal Loop Diagrams
<p>Purpose of Using Tool</p>	<p>Sustainability Compass- to analyze the indicators for the central challenge from different perspectives.</p> <p>Systems Iceberg- to help find out the structures and mental models of the central challenge.</p> <p>Systems Mapping - to help find connections among different indicators and test to see what is "missing" from the loop.</p>

Summary of Project and Context

Creating a community food garden on campus is one crucial way of teaching students to care for the environment. This project would help produce food, preserve native ecosystems, increase biodiversity and improve well-being. It would play an integral role in offering space for community members to grow food and facilitating collaboration for interdisciplinary studies among different subjects across the whole school. It would also offer opportunities for students to hold regular farmers' markets and share organic produce with the local community.

The students who are directly involved are students in my Chinese classes (G4-12- 70 students in total), and students from the gardening club (G6-12- 15 students in total).

Material and Settings

- Plant germination trays (3 trays);
- A variety of vegetable seeds (corn, lettuce, cucumber, eggplant, tomato, cabbage, Chinese green, squash, sunflower);
- Herb plants: rosemary, mint, basil (lemon basil, holy basil, Thai basil)
- Gardening tools (shovels-6, rakes -6)
- Recycled containers - for making shelves, watering cans, banana and pineapple enzyme, worm towers
- Materials for raised beds- banana tree trunks (put into triangle or rectangle shapes);
- Compost -food waste-school canteen
- A bulletin board (already got one outside of my classroom)

Purpose of Using the Systems Thinking Tools

Sustainability Compass- to analyze the indicators for the central challenge from different perspectives.

Systems Iceberg- to help find out the structures and mental models of the central challenge.

Systems Mapping - to help find connections among different indicators and test to see what is "missing" from the loop.

Action Plan Step-by-step Description

WEEK 1: OCT 31 – NOV 4

Action 1: Had a campus walk with the students and try to spot any food gardens

Reflection:

- Students enjoyed the walk but they had difficulties in telling the name of the plants- we saw coffee plants, mango trees, papaya trees, banana trees, jackfruit trees, passion fruit, butterfly pea flowers and more.
- One of the projects for the gardening group would be labelling the plants on campus in both Latin name and Thai.
- Came up with a conclusion- the school is lack of food gardens

Action 2: Started discussing the VISIS Pyramid and the vision (using the Sustainability Compass system) with the students (Chinese classes + the gardening group)

Reflection: It was interesting to see when we were talking about “why the school is lacking in food gardens” - many students said “because it is lacking in people and money” but they could not see themselves as gardeners.

Action 3: Display the VISIS Pyramid and the vision (using the Sustainability Compass system) on the bulletin board outside of the classroom

Reflection: It is great to see how the students expressed their thinking in different ways from Grade 4-12 and they also got inspired by reading other people’s posts.



Students are using a recycled water can to weather the seeds



Students are putting the banana tree trunks together to form a raised bed



Coffee grounds - from cleaning staff and teaching staff

WEEK 2: NOV 7-11

- Encourage students to continue posting thoughts on the VISIS Pyramid and the vision (using the Sustainability Compass system).
- Invite the students to use the System Archetypes to analyze the connections among the indicators.
- Study the seed packages (how long does it take to harvest; the distance between plants; how much sunlight do different plants need...).
- Invite the staff (teaching staff and non-teaching staff) and parents to add their thought on the VISIS Pyramid and Sustainability Compass system- could be in any language.



SDG Goals, VISIS Pyramid and Sustainability Compass



SDG Goals, VISIS Pyramid and Sustainability Compass

WEEK 3: NOV 14-18

- Invite the gardeners in school to join the project -using the banana trees on campus to build raised beds.
- Mix the soil with coconut coir and elephant dung in the raised beds (from the elephant sanctuary).
- Transplant the seedlings into the gardening beds.
- Mulch the gardening beds with dried leaves, coconut coir or hay.
- Invite the parents to join by digging holes for composting and planting with the students (on hold).
- Invite the cleaners to join by collecting the coffee grounds from the coffee machines for composting.
- Invite the school admin to join by discussing collecting the canteen food waste from the canteen (the gardening students have sent out an email to the school canteen manager and waiting for the reply to do veggie and fruit waste) (the student leader is doing that next week).



Soil mixing, transplanting and mulching



Soil mixing, transplanting and mulching

WEEK 4: NOV 21-25

Continue the work as in Week 3.

- Use the AMOEBA tool to observe the reactions and changes of different stakeholders
 - How to use this tool to support students in the food garden

When we talked about “why is this happening?” the students addressed that there are no people taking care of the gardens. Then we talked about “who are the people” - “Gardeners? Or everyone in the school?”.

I will introduce “the Spheres of Influence” and use the Ladder of Inference to help determine some of the reactions.

Reflection: The students started switching their roles from “helpers” to “owners” of the garden and took more initiative by watering the plants and feeding the worms. In my Chinese classes, if they complete the class work, they are allowed to go to the garden to water the plants or weeds- the students take pride in their work and they feel relaxed by doing so.
 - Made 4 worm towers (recycled plastic bottles)
 - Purchased compost worms
 - Gardening club long-term plan
- Community gardening activities
- Parents’ involvement in joining the gardening club and before & after school (starting next week)
 - Seeding
 - Transplanting
 - Maintenance
 - Composting
 - Mural (to be confirmed, planning to start the project after Christmas break 2023.1) - companion vegetables and community garden



WEEK 5: NOV 28 - DEC 2

- Garden maintenance - continue the maintenance work by watering the vegetable
- Create more worm towers



The students built the worm towers and fed the worms with vegetable scraps, coffee grounds and dried leaves

WEEK 6: DEC 5-9 (FOOD TO TABLE)

Dec 9th - Festival of Light: use the produce from the garden to cook some dishes (make some Chinese dumplings, and spring rolls with my Chinese classes, and could invite some parents too) and raise money for charity by selling the food.

Reflection: It is a joy to watch students harvest fresh vegetables from the garden and use them as part of the ingredients to cook food together. Moreover, they also used the vegetable to feed the earthworms through the worm towers in the gardening beds- a great action for supporting zero waste!



WEEK 7: DEC 12-16

- Grade 4 and 5 Service Market- selling Seed bombs to raise awareness for the food garden and support the charity.
- Reflect on the project and make further community gardening plans (how to maintain the food garden and actively involve the parents) for the second semester.

Reflection: I enjoyed using the system tools throughout the projects with different stakeholders in the school and it is essential to keep our community food garden sustained in the future by sharing the system tools with the wider community and keep practicing them.



The bulletin board showcases the “community food garden” challenge

EXTENTION

Use storytelling as a fun way to introduce seeds, fruits, vegetables, earthworms and the benefits of eating vegetables and fruits.

- Storytelling in Grade 4 and 5 classes
- Upper-grade levels read stories to younger students: 《神奇的种子》 The magic seeds (has completed)

The rest of the books will be introduced after the Christmas break and the Grade 11 students are interested in telling the stories to the Grade 4 and 5 students:

- 《蚯蚓的日记》 Diary of a worm
- 《爱吃水果的牛》 A cow who loves to eat fruits
- 《爱吃蔬菜的鳄鱼》 An alligator who loves his vegetable

REFLECTION

Plusses

- The tools provide a clear framework to help analyze the central challenge and mental models.
- It is a joy to see the students harvest the fresh vegetables from the garden and use the vegetable scrap to feed the worms through the worm towers- healthy eating and zero waste!
- The tools are appropriate for all age groups.

Areas for Improvement

- The tools provide a clear framework to help analyze the central challenge and mental models.
- It is a joy to see the students harvest the fresh vegetables from the garden and use the vegetable scrap to feed the worms through the worm towers- healthy eating and zero waste!
- The tools are appropriate for all age groups.

EVIDENCE

