YEAR 9 INDIVIDUALS AND SOCIETIES: FOOD SECURITY CASE STUDY

Submitted by Lachlan Morton, 2026, while serving as MYP Coordinator at Wesley College, Australia

LEARNING PLAN OVERVIEW

Subject(s)	• Humanities
Grade Level (s)	• Middle School (ages 12- 13) • High School (ages 14-18)
Systems Tool(s)	• Sustainability Compass
Purpose of Using Tool	• Inquiry • Critical Thinking • Discussion
Summary	Students looked at a photo with some context about its location and time, then used the Sustainability Compass to explore all the possible impacts shown in the image—social, economic, environmental, and personal wellbeing.

Learning Objectives

By the end of this lesson, students will be able to:

- **Analyse** a given image and identify key details, using observation skills to infer its context and meaning.
- **Understand** and apply the concept of cardinal directions to frame discussions about the image.
- **Collaborate** in groups to generate thoughtful questions and discuss diverse perspectives related to the image.
- **Evaluate** and **reflect** on their peers' responses, identifying patterns, unique insights, and areas of interest.
- **Apply** systems thinking by taking on the role of a government official to propose recommendations that address the social, economic, environmental, and personal well-being impacts of the area shown in the image.

This lesson aims to develop critical thinking, collaboration, and systems thinking skills, while fostering a deeper understanding of real-world issues such as sustainability and governance, and of the balance required to provide a sustainable food supply.

Material and Settings

Materials:

1. Image for observation (printed or digital display).
2. Chart paper or notebooks for group discussions and note-taking.
3. Markers, pens, or pencils for writing.
4. A large printout of a visual of the Sustainability Compass.

Setting Requirements:

1. Classroom setup with tables or group seating to facilitate discussions.
2. A projector or large screen to display the image (if not using printed copies).
3. Quiet environment conducive to group work and individual reflection.
4. Space for students to move around when exchanging notes between groups.

Learning Context

Year 9 Individuals and Societies class in Melbourne, Australia.

Purpose of Using the Systems Thinking Tools

I chose this systems thinking tool to help students explore food security from multiple perspectives, encouraging them to consider how it affects social, environmental, economic, and personal wellbeing.

Impact on Participant Learning

In previous versions of a similar exercise, students would focus on one aspect of sustainability (economic sustainability, environmental sustainability). While students would provide correct answers, they would be narrow. The result of this lesson was that students began to incorporate a wider range of sustainability elements because the Sustainability Compass routine provided a scaffold to more holistically analyse a source. Students began analysing from multiple perspectives and using critical thinking to balance what was most important. See the student writing sample image attached.

Learning Plan Step-by-step Description

55-Minute Lesson Plan

Step 1: Observe and Guess (10 minutes)

- Present the image to students.
- Allow them time to observe it carefully and guess:
- Where the image is from.
- What the image shows or represents.

Step 2: Review Cardinal Directions (2 minutes)

- Briefly review the cardinal directions (north, south, east, west) and what each represents.
- Adjust the time as needed, depending on your student group's familiarity.

(Note: For this class, the concept was fresh from a previous Language & Literature activity, so 2 minutes was sufficient. You may need more time for other groups.)

Step 3: Group Discussion & Question Generation (15 minutes)

- Divide students into table groups.
- Instruct them to discuss the image together and generate thoughtful questions about it.
- Encourage curiosity and diverse perspectives.

Step 4: Peer Review & Notetaking (10 minutes)

- Have groups exchange their questions and answers with other groups.
- Ask students to review these responses and take notes on what they notice, such as:
    - Patterns
    - Unique perspectives.
    - Surprising or thought-provoking observations.

Step 5: Role-Based Reflection & Recommendations (15 minutes)

- Present the following prompt to the students:
  "You are a government official responsible for overseeing this area. What are your key recommendations?"
- Allow students time to individually reflect and write their responses based on their observations and discussions.

Reflection: Plusses

Engagement during the lesson was high, with different groups of students bringing their own unique understanding to each area of the discussion. The girls in the class were quick to focus on the natural elements, while the boys leaned heavily toward considering the economic aspects.

This dynamic, though unsurprising given the cohort, allowed students to draw on one another's knowledge and interests, resulting in richer and more balanced evaluations.

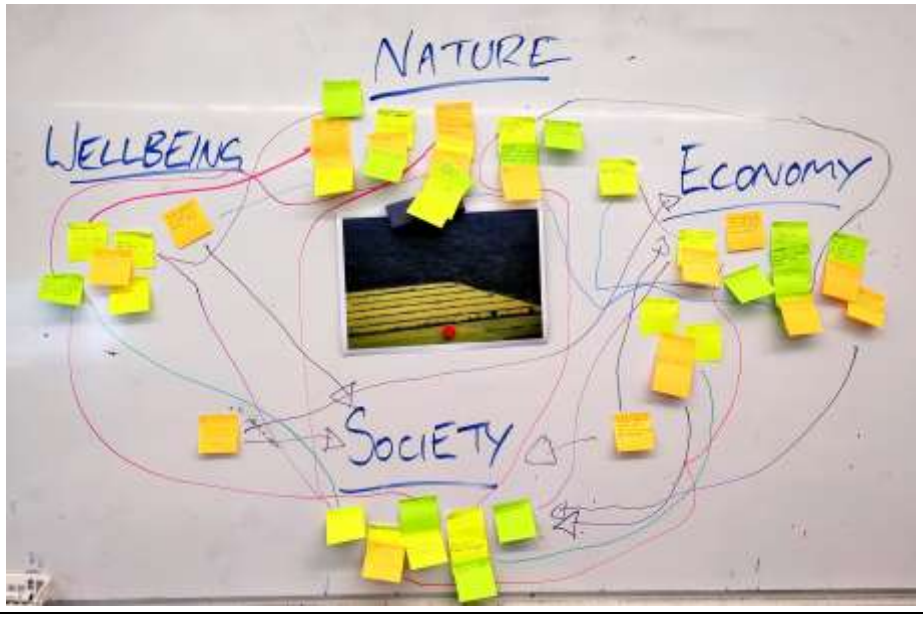
The students' writing was particularly strong because they considered a range of factors. Even with limited data, they were able to make thoughtful and well-supported recommendations in their extended responses. The use of the Sustainability Compass as a scaffold proved to be the most helpful part of the activity. Students felt compelled to address each section of the Sustainability Compass, which pushed their thinking in multiple directions and ensured that no perspective was overlooked.

Overall, this activity successfully fostered holistic thinking, which is where I observed the most notable improvement in students' abilities. By encouraging them to consider social, environmental, economic, and personal wellbeing factors, the exercise deepened their understanding and strengthened their critical thinking skills.

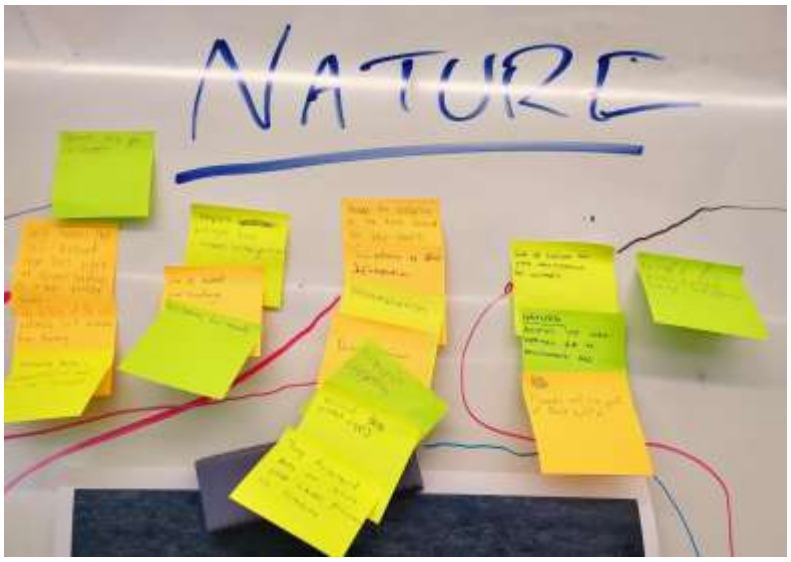
Areas for Improvement

- Too many students said the same thing. I would frame the beginning of the activity differently so that students would build on others' ideas rather than repeat them. Having more time to do a reflective routine would be better. If I ran this class again, I would ask them to complete "I used to think... now I think..." to gauge the impact of this one lesson.
- As I teach this year level across different subjects, I'd like to use the routine more consistently across the two subjects in order to help them build their MYP Approaches to Learning and see the transdisciplinary nature of sustainability in learning.

EVIDENCE




Economy


NATURE


WELLBEING

This section of farmland in the Amazon Rainforest has many impacts, both positive and negative. Due to this land, deforestation has been worsened and habitat destruction has occurred. The natural beauty of the area, which attracts tourists and improves general wellbeing has been disrupted. To improve this issue, more flora should be planted that is similar to the surrounding ecosystem, giving displaced animals a new habitat and reversing the deforestation which has occurred. The surrounding biome near to the farming area may also have been affected, as chemicals and foreign flora and fauna which has been introduced can alter soil composition, destroy naturally occurring ecosystems, and change water distribution.

This farmland should not be replaced and should stay as agricultural land to ensure food security and positive economic benefits. As the crops grown on this land will likely provide food for people around the world, who may not have access to adequate food and nutrition otherwise, the export of crops cannot be disrupted. Staple food sources may be grown and harvested in this area, and without it, the community and country may experience food insecurity. Replacement flora should be installed in the surrounding area which has not been used for agricultural purposes in order to ensure food security is not compromised and society can still benefit, while maintaining the natural environment and biome. As this land likely exports large amounts of goods, the economy of the surrounding area and country most likely benefits greatly from this farming land. Due to this reason, the agricultural land cannot be removed completely, as the economy will suffer, and therefore the population.

Systems should be put into place such as irrigation to ensure resources are not taken away from the natural environment, as well as a crop rotating system to prevent the soil from becoming arid or unusable. Sustainable energy sources should be used to power machinery, minimising the use of fossil fuels which could further destroy the environment and contribute to global warming. Irrigation should be effective and efficient to minimise water usage while maintaining crops, and without taking away from the land. Efficient farming systems and practices should be utilised to prevent any loss of crops, or wastage of resources and power. This can include the way the crops are planted, harvested, rotated and fertilised.