

# YEAR 2 PYP UNIT HOW WE ORGANISE OURSELVES: HUMAN-MADE SYSTEMS HELP LIFE RUN SMOOTHLY

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## LEARNING PLAN OVERVIEW

<b>Subject(s)</b>	<ul style="list-style-type: none"> <li>• Social Sciences</li> <li>• Humanities</li> <li>• Environmental Education</li> <li>• Sustainable Development Project</li> </ul>
<b>Grade Level (s)</b>	Lower Primary (ages 6-7)
<b>Systems Tool(s)</b>	Sustainability Compass
<b>Purpose of Using Tool</b>	<ul style="list-style-type: none"> <li>• Inquiry</li> <li>• Critical Thinking</li> <li>• Discussion</li> <li>• Assessment</li> <li>• Action Planning</li> <li>• Reflection</li> </ul>
<b>Summary</b>	This unit was designed to enable the children to understand that human-made systems can help or hinder society. They analysed many different systems using the Sustainability Compass and designed and reflected on their own sustainable island.

## Learning Objectives

Lines of inquiry throughout the unit:

- The purpose of systems in our community (Function)
- The relationships between systems (Connection)
- how systems have changed over time (Change)

We want students to know that human-made systems make life run smoothly.

- Identify what a system is
- Identity what systems are in their community
- Identity what systems are in the wider community and the world

We want them to understand that things and systems change in order to improve (e.g. MTR Hong Kong's underground trains), and the long outdoor escalator being developed from Fortress Hill to Braemar Hill).

We want them to be able to develop their own systems and reflect on them to make improvements using the Sustainability Compass.

## Material and Settings

- Mrs Armitage on Wheels (book by Quentin Blake)
- [Parts, People, Interactions \(Harvard Thinking Routine\)](#)
- A bike
- [An Animated History of Transportation](#)
- Collaborative group work
- Knowledge of the 5 Ways to Well-being (be active, take notice, give, connect, and keep learning)
- Large pieces of paper
- Blank Compass sheets
- Walking tour of the local island (Peng Chau) that was visited on the ferry
- Sustainability Compass
- Sustainability Compass Grid Template (devised using Compass headings)
- Island map (imaginary)

## Learning Context

Year 2: 5-6 year-old students (at the time of the unit)

Context: International School in Hong Kong. 4 classes of 30 students in the year group. All teachers plan together. This was the second Unit of Inquiry taught in the year.

Previous Learning: The children and teachers in the team had never used the Sustainability Compass prior to this unit. The children didn't have any prior knowledge about systems when we assigned them a pre-assessment task.

## Purpose of Using the Systems Thinking Tools

I chose the Sustainability Compass because I was trialling its use as part of my course. This turned out to be the perfect tool for the students to visually see the 4 areas that make a system sustainable and to make connections between them.

## Learning Plan Step-by-step Description

### Systems

- Read 'Mrs Armitage on Wheels' by Quentin Blake. A great story to highlight a system being overloaded and breaking down. This is a funny story. No need to discuss systems until after the bike activity below.
- Use a bike to understand the idea of a system being a series of parts that work together to make the thing work. Use the Harvard Project Zero Thinking routine (see resources) to identify the parts, people and interactions using a bike.
- Look at systems throughout the school
- Go on a walk around the school to identify systems
- Introduce the concept of community
- Go on a community walk around the neighbourhood to identify systems in the local area (transport, roads, parks, schools, university, housing)

### Sustainability Compass

- Introduce the Sustainability Compass to the children.
- Look at pictures and children's cartoons to notice aspects of everyday life that children could place on the Sustainability Compass.
- To set up for the summative assessment, go on a trip to Peng Chau (a sleepy outlying island). The question we have in our minds while filling out the compass with adults on the trip: 'Is Peng Chau a place where everyone can live?'
- Back at school. Take the words written on the compass and change them into pictures on small squares. Stick onto a blank Compass with their trip groups.
- Draw and write connections they have made between the Compass points. Any issues they noticed with systems on the Island using arrows or sticky notes.

### Transport Through the Ages

- Personal timelines lesson to learn about the passing of time in our own lives.
- Look at [Transport through the Ages](#) (YouTube video in resources). What do they notice about how trains, cars and planes have changed over time? Linked to the reading strategy of asking questions. Take notice of changes and ask questions about those changes. Spend some time researching those questions.
- This links to designing future transport to align with summative assessment.

### River provocation (with Sustainability Compass)

- (Idea based on a high school video lesson used on Compass level 1 course) In groups of 4 the children have a section of the river. They are told that it is on a new Island. They need to think about the 5 ways to wellbeing and design spaces around their river section to support a community's wellbeing.
- Put the river together at the end and look at what everyone has included.

- Discuss the use of space along the whole river (doubling up, lack of things, hospitals and locations, transport etc.)
- Use the Sustainability Compass to add the collective ideas. What do we notice? The Compass is not balanced. Some things could go elsewhere on the Compass. We need to balance and careful planning to design a sustainable community. Can a community be sustainable if the only thing considered was wellbeing?

### Planning Summative Assessment

- Children are given a blank Island outline and a blank Compass plus the completed class Compass from the river provocation. They can use their knowledge of Peng Chau and what worked there to inform their choices of what to include on their island.
- Choose 12 systems/things that are essential to a balanced, sustainable life on the island. Draw pictures on the Compass. Once complete, cut and place onto the Island. Many decisions have to be made through discussion and trial and error. These depend on how the systems link to other systems on the island. The children need to discuss this with their peers before making a final decision and sticking things down.
- Reflecting on the island. Is there anything that they would like to add to make the systems run smoother?
- Use scenario cards to play out scenarios in small groups with the islands and whether or not their island's systems work. (Someone over here needs urgent medical attention. Where do they go? How will they get there? What might need to change? How can you improve that aspect of your island?)
- Decide if anything needs adding/moving to ensure that it is sustainable and they have considered multiple perspectives.

### Future Transport

- Design future transport for the island.
- Criteria for design: number of people it carries, how it is powered.
- Build future transport with the support of parents in school.

## REFLECTION

### Plusses

When we started this unit I had not yet started this course. The Sustainability Compass made a late (a few weeks in) but very welcome addition to the whole unit of inquiry. It has given the students and teachers a clear understanding of systems and how they are interconnected. It was also a driver for the rest of the unit.

The students had their own understanding of how the systems they had chosen to include on their island connected to each other and were able to reflect on whether their island could sustain itself with what they had or if they had to add more to it.

### Areas for Improvement

A restriction on the number of systems they could add was useful for year 2 students however it restricted some and there was no time to actually add more at the end due to time constraints.

If they had time, maybe they could make their own Island template. However, it was useful as an assessment tool to have everyone working on the same model. They all produced something unique with that template.

I would introduce the Sustainability Compass a lot earlier next time so they were familiar with it before starting the unit of inquiry (probably in the format of a class essential agreement at the start of the academic year).

## EVIDENCE

### Evidence of students work - Compass Education Lesson 6

Is the Island of Peng Chau a place where everyone can live?

This is a compass the teachers created prior to the trip on their visit to the island

Let's look at fish in nature. What things can we link to fish at other compass points?

\*Notes below for ideas

- Play area/relax
- Parks
- Exercise station
- Moveable seating
- Clinic
- Benches
- Walking trails
- Local events
- Bikes
- Outdoor exercise bikes
- Temples
- Playground
- Sports centre
- Dog friendly
- Library
- Hospitals
- Places to park bikes
- Fish-fishing boats
- Parks
- Hill
- Walking areas
- Walking trails
- Recycling areas
- Banana trees
- Protected areas
- Flower decoration
- Nature integrated in buildings (tree)
- Beach views
- Birds
- Turtle ponds
- Insects
- Space for animals
- Beach - litter
- No solar power
- Shops - supermarket - Wellcome
- Wet market
- Restaurants
- Families to different islands
- Fishing jobs
- Open construction
- Banks
- Fire station
- Post office
- Police station
- Rental/ estate agents
- Government buildings
- No 7/11 or Circle K
- Lack of variety - restaurants
- Very crowded in rush hour
- Lack of budget to repaint and refurbish
- Community notice board
- Education- school
- Public facilities
- Public housing
- Elderly care home
- Sports Centre
- Moveable chairs
- Government buildings
- Public toilets
- Boats - speed/ fishing
- Recycling centre/ bins
- Dragon boats
- DB to Peng Chau separate pier
- Kayaks
- Island maps and sign posts
- Temple
- No roads for cars
- Community garden
- Exercise areas
- Lack of lifeguard
- Shark nets
- Beach clean ups



