### Year 4 Service Learning: Food Waste Reduction Project and Composting System
(Submitted by Jessica Beloded, 2017, while serving as Grade 4 Teacher and Upper Primary Learning Leader at United World College International School Thailand)

| Tool(s) used:                  | • Sustainability Compass  
|                               | • Pyramid Lite (VISIS) Introduction  
|                               | • Systems Iceberg  
|                               | • Behavior Over Time Graphs  
|                               | • Gilman's Equation  
|                               | • Ladder of Inference |

| Purpose of using tool:         | • Research  
|                               | • Generating Questions  
|                               | • Synthesizing Thinking  
|                               | • Guiding Discussion  

**Overview:**
This is a year long project, therefore there are many phases. It is also a school wide project, so we will need to be constantly reassessing results and collecting information. This is why we are using a multitude of tools, rather than just one.

| Context of lesson/case study: | Service learning project for the whole school |

| Participants (# and description): | Year 4 (with assistance from Kindergarten, Grade 6 and Grade 10) |

| Topic, Theme, or Key Understanding of unit/project: | Food Waste Reduction Project & Composting System At UWC Thailand  
|                                                      | Our hope: to create a self sustaining system within a year  
|                                                      | SDG Goal#12: Responsible consumption and production |

| Length of unit/project: | 1 year |

| Resources/materials & setting required: | Cafeteria, open space to build composting system and gardens, materials for building composting structure, collaboration across the school in order to create a successful change in the system |

**Lesson Plan/Description of the Project:**
See this action plan for details of the project

**Reflection**

**Plusses:**
The Sustainability Compass tool helped the grade 4's to understand the initial problem with the food waste system at our school. They were able to ask questions within the four sections of the Sustainability Compass and follow various pathways of inquiry to get a better understanding on the situation. The additional tools are helping us to figure out if our new system is actually working and giving them the frameworks to reflect and adapt their approaches without too much teacher interference. They are supporting this student led action and allowing for common, student friendly language to be used within the primary school.

**Challenges:**
One of the big challenges we are having is the limited time we have to work on this project - though we have managed to allocate 1 hour at the same time every week. Additionally, culturally, people have very different mental models about what is important, so making these changes and creating understandings is slow going. The language barrier also creates it's own challenges as everything we do must be translated by the students into Thai and then checked by a Thai teacher. This directly affects our project as there are often many departments required in making any change to a system in Thailand, which means many meetings with many people to ensure that everyone is on the same page with 'the next step' in the process.

Suggestions for other practitioners and educators:

Be patient when trying to make a big change such as this project. It always takes longer than expected. Just remember that your job is to support the students as they make these initiatives, maintain forward progress by asking critical thinking (guiding) questions and providing encouragement and words of support.

Evidence and Resources: