



Grade 3 Science and Service: Energy Transfer and Electricity

(Submitted by Daniel Withington, 2019, while serving as Classroom Teacher at UWCSEA Singapore)

Tool(s) used:	<ul style="list-style-type: none"> Sustainability Compass
Purpose of using tool:	<ul style="list-style-type: none"> Research Synthesizing Thinking Guiding Discussion <p>Overview: We used the Sustainability Compass to unpack the concept of Sustainable Development, within the context of a Grade 3 unit focused on energy transfer and electricity. The purpose of the tool was to guide thinking during a guided inquiry into an energy transfer system.</p>
Context of lesson/case study:	Unit of Study - Science and Service
Participants (# and description):	Grade 3
Topic, Theme, or Key Understanding of unit/project:	<p>SCIENCE: By developing technical processes to generate, store and transmit electrical energy, people can access electricity where and when they need it.</p> <p>SERVICE: By analysing systems within natural and built communities, individuals can plan and evaluate actions for sustainable development.</p>
Length of unit/project:	8 weeks
Resources/materials & setting required:	-
Lesson Plan/Description of the Project:	
<ul style="list-style-type: none"> The children were guided through a structured inquiry into a specific energy transfer system (a coal powered plant in this instance). The children co-created questions to address the concepts of electrical energy, systems and sustainable development to guide the research. Once research was completed as a class, children recorded their thinking in a form of a diagram and aligned their thinking with the focussed concept. The guided inquiry component of the lesson was to explore multiple energy transfer systems through the lens of sustainable development, using the tool of the Sustainability compass. Once multiple case studies were explored, the children then used the information from the compass to look for patterns in order to create generalisations that are transferable and truthful. 	
Reflection	
Plusses:	
Modelling the use of the Sustainability Compass in a structured inquiry, and co creating driving questions with the students gave the children an example to reflect on.	
Challenges:	
The objectivity of the Sustainability Compass challenged student thinking to create generalisations. Although the conversations about which energy transfer system was the most sustainable were excellent.	





Suggestions for other practitioners and educators:

Model the use of the Sustainability Compass with your children in a guided inquiry.

Evidence and Resources:

