



CE-EMF Circular Economies Case Study

Grade 5 Economics Unit: Circular Economy Innovations

*Submitted by Michelena McPherson, 2019, while serving as Grade 5 Teacher
at Dalian American International School, China*

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The Circular Economies Case Study.	<ul style="list-style-type: none">• Ecovative• Circular Building
The Systems Thinking Tool(s).	<ul style="list-style-type: none">• Sustainability Compass• Systems Mapping / Causal Loop Diagrams
Why the tool for the job? <p>I choose to use the Sustainability Compass for students to analyze their invention and the impact that it would have in the 4 different contexts of the Compass points. I choose the Systems Mapping with the purpose of the 5th graders to make connections of the vocabulary and language of the way the Circular Building case study works.</p>	
The Learning Context. <p>I teach an Economics Unit in 5th grade that I have redesigned and called Circular Economy Innovations. In this Unit students go through a simulation where they invent or redesign a product and they simulate that they will be starting up a company. I incorporate the concept of the Circular economy to be applied into the design process as well as having a sustainable company that meets LEED standards. We are lucky to have a partnership with a local company that is LEED platinum who collaborates with us. EPOCH brought twelve representatives to give feedback to 5th grader's presentations on their Invention, the circular economy of their invention, the global goals as well as the Sustainable practices of their company. 5th graders then took that feedback and improved their presentation and presented to their parents. Another task that I assigned the 5th graders was to work on Global goal #4 Quality Education by creating groups and assigning each group a Grade level in Elementary to create and present a lesson on What is Circular Economy that includes hands on activities.</p>	
The Learning Process. <ol style="list-style-type: none">1. Students watched the Ellen McArthur foundation video and we discussed what Circular Economy meant.	

2. Students were grouped and made a poster of the circular economy of an object on a poster board and presented their understanding of the concept to the class.
3. Students watched the [Ecovative](#) and the [Circular Building](#) case studies and wrote down vocabulary.
4. Students analyze the language and concepts related to the [Circular Building](#) case study and created Systems maps by table relating the concepts that make the case study fit the circular economy.
5. Students were asked to individually redesign an existing product that could be more sustainable.
6. Students made a Sustainable Compass to analyze their invention's sustainability.
7. Students made a Powerpoint that explained the sustainability of their Invention and how it fit the global goals, the circular economy and met LEED standards.

Final Thoughts.

Using the Ellen McArthur Foundation's case studies helped the 5th graders analyze and deepen their understanding of how circular economy is being used out in a real-world context and thinking about their own invention's circular economy. Using the Compass Education tools helped students analyze the Sustainable Compass of their Invention and to make connections from the Compass to understanding what a Circular Economy is.

My advice to other educators is to do several activities that help students understand what circular economy such as the Ellen McArthur Foundation case studies and analyzing and redesigning (in theory) various objects as a group and individually to deepen understanding and a grasp of the concept of circular economy.

Evidence and Resources.

[Circular Economy PowerPoint by Grade 5 students for Kindergarten students](#)



