



**Grade 7-12: Sustainability and Systems Thinking**

(Submitted by Steven White, 2017, while serving as Upper School Principal/Guidance Counselor at Equity American School, Guatemala)

<p><b>Tool(s) used:</b></p>	<ul style="list-style-type: none"> <li>• Sustainability Compass</li> <li>• Systems Iceberg</li> <li>• Behavior Over Time Graphs</li> <li>• Causal Loop Diagrams</li> <li>• Systems Mapping</li> <li>• Ladder of Inference</li> </ul>
<p><b>Purpose of using tool:</b></p>	<ul style="list-style-type: none"> <li>• Research</li> <li>• Generating Questions</li> <li>• Synthesizing Thinking</li> <li>• Guiding Discussion</li> </ul> <p><b>Overview:</b></p> <p>I have used the Compass tools to help students:</p> <ul style="list-style-type: none"> <li>• Map out their personal system in the evaluation of the college search/application process</li> <li>• Analyze news stories (writing class)</li> <li>• Analyze science projects</li> <li>• Analyze research in science, history, and literature</li> </ul>
<p><b>Context of lesson/case study:</b></p>	<p>Introducing tools and showing how they can be used in various classroom environments</p>
<p><b>Participants (# and description):</b></p>	<p>Grades 7-12 students, teachers</p>
<p><b>Topic, Theme, or Key Understanding of unit/project:</b></p>	<p>Sustainability and Systems Thinking</p>
<p><b>Length of unit/project:</b></p>	<p>Varied</p>
<p><b>Resources/materials &amp; setting required:</b></p>	<p>Classroom Setting, Post-it note, markers, posters, poster paper</p>
<p><b>Lesson Plan/Description of the Project:</b></p> <ol style="list-style-type: none"> <li>1. Introduce sustainability</li> <li>2. Introduce mapping and components</li> <li>3. Introduce Sustainability Compass</li> <li>4. Introduce Systems Iceberg</li> <li>5. Introduce Ladder of Inference</li> </ol> <p>Use these tools to analyze various situations/events throughout the training</p>	





## Reflection

### Plusses:

Almost everything went well. The tools were quite well received. Students seemed to incorporate these into their daily lives. I have seen these tools appear in various classes and the vocabulary now is used when analyzing situations/events.

### Challenges:

I would have better liked to introduce this at a MUCH younger age. If I needed to do this again in the 7-12th grade levels I would have introduced it in a more comprehensive way, more thoroughly including teachers of all subject matter simultaneously. This would be followed up with multiple chances for students to use these tools in various class situations.

### Suggestions for other practitioners and educators:

Do not underestimate the students' ability. I noticed in almost all grade levels that the students who were typically NOT the "best" students grasped on to these tools readily and could make connections more quickly. They also saw uses that were unorthodox, yet valid and worthy of further exploration.

### Evidence and Resources:



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