

## Grade 8 Science: Living on Mars

*by Sam Uber*

<b>Tool(s) used:</b>	<ul style="list-style-type: none"> <li>• Sustainability Compass</li> </ul>
<b>Purpose of using tool:</b>	<ul style="list-style-type: none"> <li>• Generating Questions</li> <li>• Synthesizing Thinking</li> <li>• Guiding Discussion</li> </ul> <p><b>Overview:</b> It was used as a way to teach students what being sustainable really means and how it is important to look at ALL possible ways one decision can impact the human race in both negative and positive ways.</p>
<b>Context of lesson/case study:</b>	8th grade Life Science Classrom
<b>Participants (# and description):</b>	Twenty-five 8th graders
<b>Topic, Theme, or Key Understanding of project:</b>	Living on Mars
<b>Length of unit/project:</b>	3 class periods.
<b>Resources/materials &amp; setting required:</b>	Large butcher paper, markers, devices for research
<p><b>Lesson Plan/Description of the Project:</b></p> <p>Students were asked what sustainability meant to them and discussed a possible definition in their groups. They later shared and then were given the Compass definition. After that the Compass was introduced. They were then asked to match the parts of the definition with each part of the Compass with their groups.</p> <p>Students were then given the question of should we send people to inhabit Mars? (we were learning about space exploration) Within their groups they were told to list as many factors they could think of and put them where they believed they fit best.</p> <p>Next, they walked around the room silently, reading other group's compasses and then adding to them wherever they felt appropriate.</p> <p>After that, they returned to their compass and discussed what they read, read their new "nodes" and added whatever they thought appropriate to their own.</p> <p>They then made a list of positive and negative nodes from their compass. With the list, they made a decision as a group and presented their reasoning's to the class.</p>	
<p><b>Reflection</b></p> <p><b>Plusses:</b></p> <p>Students were highly engaged at first. Were able to begin thinking in a new way. Many light bulbs turned on in their heads and it allowed for great class discussions. They are now ready to take the Compass learning to the next level.</p> <p><b>Challenges:</b></p> <p>I had to prompt them to think about the real reason of why we should possibly not go to Mars. We should try to save our own planet first, make it sustainable for humans, before we move on. Once they saw a good ted talk on that and discussed it more, they were able to add much more to their Compass.</p>	

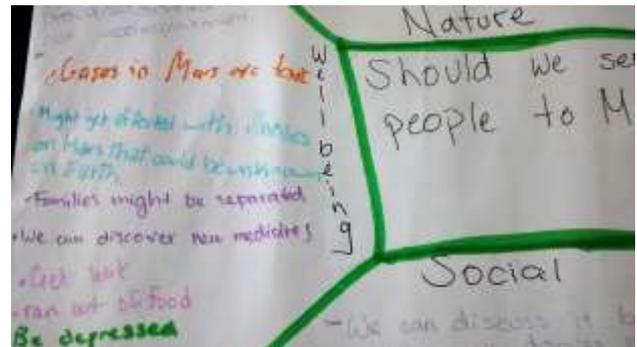
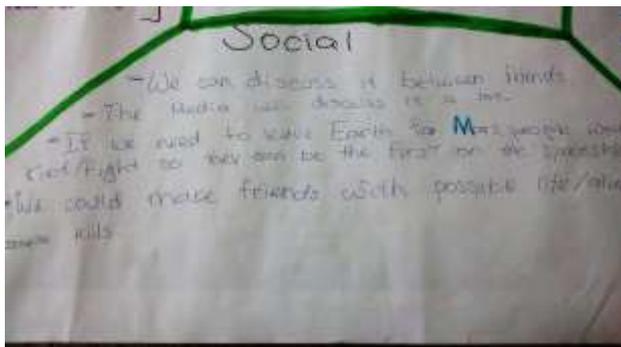
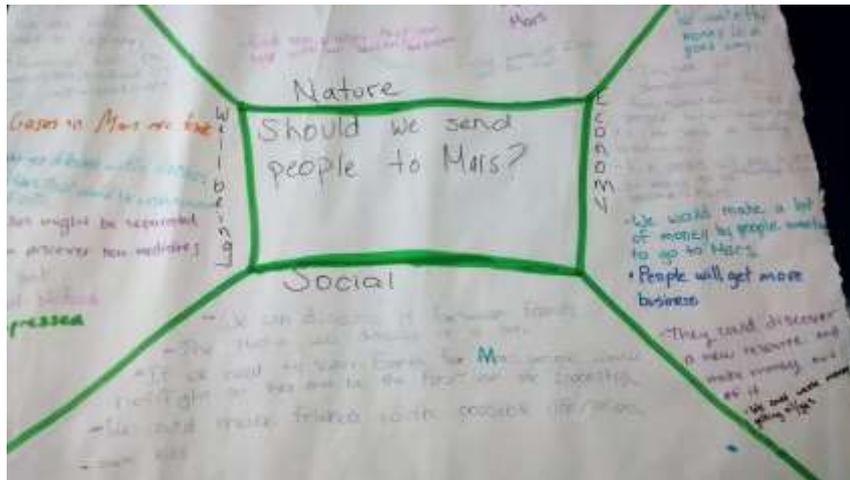
Be nice to allow more time for guided research about their questions. I will also have them make a questions column on their Compass next time.

I would like to be able to take this to the next level and try to find the leverage point. Not quite sure how to do that yet.

**Suggestions for other practitioners and educators:**

Allow time for research, and show important informational videos, etc., before starting the Compass.

**Evidence and Resource:**



**Case study submitted by: Sam Uber, 2017, while serving as Sustainability Coordinator/Middle School Science Teacher at American School of Puerto Vallarta**