Laarman Lesson Plan

Class: Earth Science Unit: Human Impact on Earth’s Systems Standards: ESS3-3, ESS3-4

Topic: Climate Change and Deforestation Date: 5/1/17

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| **Materials, Prep** | *Earth: A New Wild* video |
| **Anticipatory Set**  **-connection, motivation, relevance** | Fact: More greenhouse gasses are emitted through deforestation than through the use of automobiles in the world. |
| **Procedure** | 1. Discussion: positive feedback mechanisms and global warming 2. Discussion: what technological solutions did you find that were promising?    1. What role can we play in that? <https://www.we-energies.com/business/energyeff/renewenergy.htm> 3. Video clip from *Earth: A New Wild*: native efforts to halt deforestation in Central America 4. Class discussion: what issues are at play here? (biodiversity, native rights, climate change, economic growth) 5. Video: satellite imagery showing rate of Amazonian deforestation 6. Google Earth imagery of Wisconsin: what did it look like 250 years ago? |

Topic: Open Inquiry Projects Initiation Date: 5/2/17

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| **Materials, Prep** | Semester outline |
| **Anticipatory Set**  **-connection, motivation, relevance** | 1. Semester Review  2. Do you ever wonder…   * How the bluffs came to be? * How good the soil is for farming? * How safe the school’s drinking water is? * What you’re looking at when gazing at the stars? * How energy efficient the school is? * What happens to the garbage? * What types of creatures live in our school forest? * How the air quality is here? |
| **Procedure** | 1. Write down a list of Earth Science-related questions. They can be anything. 2. Circle the ones that would make a good inquiry project. Cross off the ones that would be too simple or too expensive. 3. Group up according to your liking. Settle on a question and submit it for approval. |

Topic: Open Inquiry Date: 5/3/17

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| **Materials, Prep** | Laptop Cart |
| **Procedure** | 1. Discussion: Making the open inquiry project worthy of a summative, exam-grade assessment 2. Announce that I need one group to create a monarch garden 3. I meet with each group to establish direction |

Topic: Open Inquiry Date: 5/4/17-5/5/17

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| **Materials, Prep** | Laptop Cart |
| **Procedure** | Students plan and conduct investigations that they chose. Students are responsible for planning their own investigations (creativity is encouraged), becoming experts in their areas, and sharing that expertise with the rest of the class in the way they choose.   * On Friday, discuss and establish a rubric (modify previous one) |