Laarman Lesson Plan

Class: Earth Science Unit: Sources of Energy Standards: ESS3-2

Topic: Energy Mix Date: 3/18/24

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| **Anticipatory Set**  **-connection, motivation, relevance** | 1. Summarize results of the “Great Energy Debate” 2. Introduce the next task: students are employees at the U.S. Department of Energy and must decide on the ideal mix of energy in the U.S. Groups will form independent of each other to work on the solution, but they are not in competition with each other. The goal is come up with the one best solution as a class (show a picture of a boardroom). 3. Predict: What is the current mix for electricity generation? |
| **Procedure** | 1. Examine data from <https://www.nrc.gov/docs/ML1408/ML14086A551.pdf> and <https://www.eia.gov/tools/faqs/faq.php?id=427&t=3> 2. Discuss questions that must be answered in order to answer the big question. Possibilities include:    1. What is the current mix?    2. What are the costs of building new plants of each type?    3. What is the electrical generation capacity of a typical plant of each type?    4. What is the environmental impact of each type of plant (and the means of obtaining the material for each)? |

Topic: Beginning of Group Research Date: 3/19/24

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| **Anticipatory Set**  **-connection, motivation, relevance** | Class discussion: Group projects   * Review previous discussion of dysfunctional groups   + Some do no work   + Some take over all the work and don’t take input   + Disrespect and bickering * What should you be graded on? What should be on a grading rubric for this project? How can each student demonstrate understanding? Split your answers into “process” and “product” categories. |
| **Procedure** | Student groups begin research on projects. They should follow this general procedure (guide them through questions to develop this):   * Discuss/determine which energy sources should be increased and which should be decreased and which should stay about the same * For the ones that should be increased, research the potential for growth * Determine what the ideal energy mix should be |

3/20/24: Students are gone for testing.

Topic: Group Research Date: 3/21/24

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| **Procedure** | Student groups research their topics and prepare to present to the class after break. |

3/22/24: Fact Check Friday