Laarman Lesson Plan

Class: Earth Science Unit: Earth and Human Activity Standards: ESS3-3, ESS3-6

Topic: The Ideal Energy Mix Date: 3/20/17

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| **Materials, Prep** | Put the group recommendations on the board |
| **Anticipatory Set****-connection, motivation, relevance** | Where did the debate stand when we left off on Thursday? |
| **Procedure**  | 1. Research hydroelectric power
	1. Search “future of hydroelectricity” and select the government report
	2. Do the corresponding math to show what percentage hydro power could get to by 2030
2. Discuss with 2nd period: is coal better than natural gas?
3. Research wind energy
	1. Search “future of wind energy and select and read government report
	2. Do you agree we could be at 20% wind by 2030?
4. Negotiate a solution we can agree upon
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Topic: Wisconsin’s Major Aquifers Date: 3/21/17

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| **Materials, Prep** | Wisconsin’s Aquifers Activity Sheet, colored pencils |
| **Anticipatory Set****-connection, motivation, relevance** | 1. What is an aquifer?
2. How is the water stored in an aquifer?
3. Discuss groundwater model presentation last week and show diagram from <https://water.usgs.gov/edu/graphics/wcgwstoragewell.gif>
4. Watch news story from <http://fox11online.com/news/fox-11-investigates/fox-11-investigates-follow-up-high-capacity-wells-in-central-wisconsin>
5. Look at recent news story at <http://host.madison.com/ct/news/local/govt-and-politics/wisconsin-s-large-scale-farmers-environmentalists-square-off-over-high/article_59df0e1f-17fa-5764-a2a3-2acde3fde2cc.html>
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| **Procedure**  | Student groups complete the “Wisconsin’s Aquifers” activity sheet |

Topic: Hazardous Household Products Date: 3/22/17

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| **Materials, Prep** | Reading Product Labels sheet |
| **Anticipatory Set****-connection, motivation, relevance** | Watch video segment at <http://www.pbs.org/wgbh/pages/frontline/teach/poisonedwaters/>  |
| **Procedure**  | 1. Iowa DNR youtube video: Hazardous Household Materials
2. How a Septic System Works video on youtube
3. Reading labels activity sheet
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Topic: Water Filtration Lab Date: 3/23/17

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| **Procedure**  | Students work to design water filters. Lab description at: <http://www.jpl.nasa.gov/edu/teach/activity/water-filtration-challenge/>  |

Topic: “Trouble in Paradise” Date: 3/24/17 (sub)

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| **Materials, Prep** | Colored pencils, “Trouble in Paradise” sheets |
| **Procedure**  | Trouble in Paradise activity: from Wisconsin DNR: students conduct an investigation, trying to determine the source of groundwater contamination. |