



Islands of Nomo Powah - Sustainability

BACKGROUND:

Lesson Background:

Climate change has become a big issue that is not being addressed with the current federal government administration. However, there is so much that students can do to inform and educate their community. The students find their own community partners. Their choices are based on the alternate energy that “fate” has chosen for them, close members of their family/neighborhood, or a sustainability topic of their groups’ choosing.

Unit Overview:

How do we sustain our way of life? As we continue to adapt to various changes in the world, we have to ask ourselves how do we sustain our way of living while protecting our environment? What viable alternatives are available to us in Hawai`i that will protect our natural resources?

In groups of two thru eight, students will create their own company (name and logo, please) and propose ideas and persuade members of the community that their form of alternative energy would be the most ideal for Hawai`i. Having done their research through reading actual books, surfing the Internet, and/or interviewing professionals they will complete the following:

1. INDIVIDUAL CONTRIBUTIONS to GROUP Research paper about your technology and history.
2. GROUP Monroe’s Motivated Sequence Speech.
3. Informational PowerPoint Presentation.
4. 3-Dimensional Display to explain how your Alternate Energy generates electricity.
5. One Hour community participation minimum with reflection and evidence.
6. ELECTRONIC PRESENTATION!!!!

STAGE 1:

Students will practice:

- Using self-regulation and time management to complete tasks.
- Planning and organizing tasks to complete hourly and daily to meet deadlines.
- Interpersonal and group work skills.
- Communicating with adults verbally, electronically, or in person in a professional manner.
- Researching and writing components of a Document Based Question (DBQ) Essay.



- The current status of energy production and consumption in Hawai'i.
- The next steps in using their alternate energy in Hawai'i.

Unit Plan Title: Islands of Nomo Powah - Sustainability

Essential Question:

1. How do we SUSTAIN our way of living while protecting our environment?

Enduring Understanding(s):

- Technological advancements can have positive impacts, as well as negative impacts.
- Human beings have the opportunity to adapt in the environment and create change. (positive/negative)
- Persuasive appeals and media.

Standard Benchmarks and Values

- Identify values to reinforce (culture-based, such as NHMO or other).
- Notate if students will be *introduced to*, will *practice*, or will *demonstrate mastery* of the standard during this unit.

Science	Technology	Engineering	Mathematics	Social Science
<p><u>Standards Addressed</u> CCSS.ELA-LITERACY.SL.9-10.1.B - Work with peers to set rules for collegial discussions and decision-making (e.g., informal consensus, taking votes on key issues, presentation of alternate views) clear goals and deadlines, and individual roles as needed. SS.WH.8.12.1 - Analyze the factors affecting climate change and global sustainability. D3.1.9-12 - Gather relevant information from multiple sources representing a wide range of views while using the origin, authority, structure, context, and corroborative value of the sources to guide the selection. HS-ES3.4 - Evaluate or refine a technological solution that reduces impacts of human activities on natural systems.</p> <p><u>Standards Assessed</u> CCSS.ELA-LITERACY.SL.9-10.4 Present information, findings, and supporting evidence clearly, concisely, and logically such that listeners can follow the line of reasoning and the organization, development, substance, and style are appropriate to purpose, audience, and task. D4.1.9-12 - Construct arguments using precise and knowledgeable claims, with evidence from multiple sources, while acknowledging counterclaims and evidentiary weaknesses. HS-ESS3.1 - Construct an explanation based on evidence for how the availability of natural resources, occurrence of natural hazards and changes in climate have influenced human activity.</p>				



CCSS.ELA-LITERACY.SL.9-10.5 - Make strategic use of digital media (e.g., textual, graphical, audio, visual, and interactive elements) in presentations to enhance understanding of findings, reasoning, and evidence and to add interest.

HS-PS3.5 - Develop and use a model of two objects interacting through electric or magnetic fields to illustrate the forces between objects and the changes in energy of the objects due to the interaction.

Sense of Place (Nā Hopena A‘o and beyond)

Strengthened sense of Responsibility, Excellence & Aloha.

Critical Skills and Concepts:

- Students will be able to compare the risks and benefits of potential solutions to environmental issues.
- Students will be able to explain how technology can and has influenced society.
- Students will be able to prepare a persuasive argument.
- Students will be able to use various mediums of communication.

Lessons:

Lesson #1-Brainstorming

https://docs.google.com/document/d/1vE0AN3DbNv9dHMFgf2MI_5oBoZE6hEB4ix7kZ2vP9Gk/edit?usp=sharing

Lesson #2-Project Roll out

https://docs.google.com/document/d/1dk3QpGwpQ8GJyNH3V0QEdQXn3qe1wunG02_0ahw4zMU/edit?usp=sharing

Lesson #3-DBQ Essay

<https://docs.google.com/document/d/1Cer5ZjMf5TuNYEdp3oc7fPuYxzIqDLa0ADh5380pbLY/edit?usp=sharing>

STAGE 2:

Reflections before completing Stage II:

Students have learned and will do:

- Planning and creating a PPT/graphics for video presentation.
- Planning and creating a 3D model.
- Planning and creating the video presentation.



Authentic Performance Tasks:

- Students will practice by sharing their findings to their family / friends / neighbors.
- Students will be presenting their findings using various forms of technology.

Authentic Audience:

- Students will practice their presentation to member of the community.
- After completing the presentation, students will have an adult fill out the community service form.

Other Evidence:

- The student created powerpoint presentation and 3-D display.

Lessons:

Lesson #4-Project PPT/video graphics

https://docs.google.com/document/d/18-hxFE0CTri82XafHVEXktSD7_pc8ES5i8d0AmHqyls/edit?usp=sharing

Lesson #5-3D Display

https://docs.google.com/document/d/1e-v9mS9ESe7jm6tA-6t4QGj_kAguRSGM5i66TQy0LhI/edit?usp=sharing

Lesson #6-Video Presentation

https://docs.google.com/document/d/1iqDsfS9KqiaUgN4CV_0WrSBg2qx1F2-BkbCCZ26m3oY/edit?usp=sharing

STAGE 3:

Reflections before completing Stage III:

- Students learn best by seeking to find understanding in order to accomplish a common goal.
- Students show mastery by teaching others for understanding.

Learning Plan:

- Present information utilizing PPT or graphics for video presentation.
- Present information incorporating the 3-D model.
- Evaluate their own video presentation before submission and each group members' performance.

Lessons:

Lesson #7-Project Wrap-up

https://docs.google.com/document/d/1tbZBNBGUICbU_bcmdyejlbqtcEkjqtfs802QkUJ8cX4/edit?usp=sharing



Project Resources:

AltNrg-HypDoc

https://docs.google.com/document/d/1WSsYflRlocpTqv3g__58sfcPNx8ZG_Hf6SOrGuJy8Nk/edit?usp=sharing

Mother nature video

<https://www.youtube.com/watch?v=WmVLcj-XXnM>

Friendly guide to climate change video

https://www.youtube.com/watch?v=3CM_KkDuzGQ till 12:54 min

Sorry video

<https://www.youtube.com/watch?v=eRLJscAlk1M>

Parent letter

https://docs.google.com/document/d/1mhB9_QorPDUxXhnUZ6vusrYgTbqK5s3voIETmt_ApQ/edit?usp=sharing

Project scenario

https://docs.google.com/document/d/1s-dW3Gxid3SzE0k_oVXoXgynq8XTH8-BuVTanqlQctc/edit?usp=sharing

Unit plan

https://docs.google.com/document/d/1ccBY40AutWkFuP_G5WjRrW7Vh-OVS_sjAimTFJq368A/edit?usp=sharing

Research paper format

<https://docs.google.com/document/d/1sAddrAHiNI4a4NcESQMMU8UiuSeFz6a8-ZkbACbMgJE/edit?usp=sharing>

Research rubric

<https://docs.google.com/document/d/1R0RiyTr7MC-0HwL4kI4iCxOLXAsK3ad3oBuT8LmMKE8/edit?usp=sharing>

Daily individual reflection prompts

https://docs.google.com/presentation/d/17JXwwgmtf_-cQLxzxvGE4yPZKcPDm7OzwePePYWYrC4/edit?usp=sharing

Community participation

<https://docs.google.com/document/d/1uKva25c4ASnmnT-q5ebkrhGfgLd4NXJ5EaNaNskS3aQ/edit?usp=sharing>

Participation feedback form

https://docs.google.com/document/d/1SML7XOb1FVI1_867ezFj6tdmMvBxyMBZQDiTuQ0HPpY/edit?usp=sharing

Community participation log

https://docs.google.com/document/d/14TDTBb_EBdze1lqRLjp8KHdjqbFDfy7mCLcvhXZyrVg/edit?usp=sharing

Speech outline format

https://docs.google.com/document/d/1zFGK9YvLe3aJ742uRf3HA9t9j0fUr06IMb_hN7PWEnR8/edit?usp=sharing



Visual presentation rubric (PPT or graphics)

https://docs.google.com/document/d/1_iOVLX-H5U_5Aar2QOxHvWP4SsBgyEEDr5YPYGgXr7U/edit?usp=sharing

3D Display PPT Examples

<https://docs.google.com/presentation/d/1BHCFYr2tIRPATswzTTFqXu6WKfJm1FbnmS-36DVZzkU/edit?usp=sharing>

3D Display rubric

<https://docs.google.com/document/d/1Of9iG7s63IpQ3VA-hpfvDfhUXV0w1ALMxporDkZSu4o/edit?usp=sharing>

Stamp chart & calendar of events.

<https://docs.google.com/document/d/1pRxVkJPt77YysjzTH6bunqChapi7-PrIL3ClrWqaYDgg/edit?usp=sharing>