Science Lesson Plan 11/13 - 11/17

November 13 - 17, 2017

MON. NOV. 13TH

7th Grade Science

Chapter 13 Energy Resources - Explain

Standards

Students who demonstrate understanding can:
MS-ESS3-1 Construct a scientific explanation based on evidence for how the uneven distributions of Earth's mineral, energy, and groundwater resources are the result of past and current geoscience processes.
MS-ESS3-4 Construct an argument supported by evidence for how increases in human population and per-capita consumption of natural resources impact Earth's systems.
MS-ESS3-5 Ask questions to clarify evidence of the factors that have caused the rise in global temperatures over the past century.

Objective

1. Students will gather and synthesize information about renewable sources of energy
2. Students will interpret information to explain how a (1) solar energy, (2) hydroelectric power, (3) wind power, (4) nuclear power, (5) biomass fuels, (6) geothermal energy, (7) electric cars and hydrogen fuel cells all produce power

Critical Questions

1. What are some renewable sources of energy?
2. How does a nuclear plant produce electricity?

Entice

- data interpretation graph

Engage

- Presentations about alternative energy researched previously with groups
- get in lab groups and read article about

TUE. NOV. 14TH

7th Grade Science

Chapter 13 Energy Resources - Explain

Standards

Students who demonstrate understanding can:
MS-ESS3-1 Construct a scientific explanation based on evidence for how the uneven distributions of Earth's mineral, energy, and groundwater resources are the result of past and current geoscience processes.
MS-ESS3-4 Construct an argument supported by evidence for how increases in human population and per-capita consumption of natural resources impact Earth's systems.
MS-ESS3-5 Ask questions to clarify evidence of the factors that have caused the rise in global temperatures over the past century.

Objective

1. Students will gather and synthesize information to explain how human energy use has changed over time
2. Students will apply scientific ideas to describe ways to ensure that there will be enough energy for the future

Critical Questions

1. How has energy use changed over time?
2. How can we ensure there will be enough energy for the future

Entice

- data interpretation graph
- short quiz from yesterday's presentations and articles

Engage

Popcorn reading for lesson 3 of chapter as a class

Assessment

WED. NOV. 15TH

7th Grade Science

Chapter 13 - Energy Resources Elaborate Writing Assignment

Standards

Students who demonstrate understanding can:
MS-ESS3-1 Construct a scientific explanation based on evidence for how the uneven distributions of Earth's mineral, energy, and groundwater resources are the result of past and current geoscience processes.
MS-ESS3-4 Construct an argument supported by evidence for how increases in human population and per-capita consumption of natural resources impact Earth's systems.
MS-ESS3-5 Ask questions to clarify evidence of the factors that have caused the rise in global temperatures over the past century.

Objective

Students will demonstrate and elaborate knowledge of fossil fuels, renewable resources, and energy conservation through writing assignment

Critical Questions

1. Students will gather and synthesize information about renewable sources of energy
2. Students will apply scientific ideas to describe ways to ensure that there will be enough energy for the future

Entice

- Data interpretation
- Video on energy consumption https://youtu.be/TnNixMosUIo

Engage

Persuasive writing assignment on alternative energy: https://docs.google.com/a/hssd.k12.ar.us/document/d/1vVJqyFH-RysOQQs-

THU. NOV. 16TH

7th Grade Science

Chapter 13 - Energy Resources Exam

Standards

Students who demonstrate understanding can:
MS-ESS3-1 Construct a scientific explanation based on evidence for how the uneven distributions of Earth's mineral, energy, and groundwater resources are the result of past and current geoscience processes.
MS-ESS3-4 Construct an argument supported by evidence for how increases in human population and per-capita consumption of natural resources impact Earth's systems.
MS-ESS3-5 Ask questions to clarify evidence of the factors that have caused the rise in global temperatures over the past century.

Objective

Students will demonstrate and elaborate knowledge of fossil fuels, renewable resources, and energy conservation through exam

Entice

Study for exam

Engage

Exam

Assessment

Exam is assessment

FRI. NOV. 17TH

7th Grade Science

Chapter 14 - Water "Will We Ever Run Out of Water" Phenomena

Standards

Students who demonstrate understanding can:
MS-ESS3-1 Construct a scientific explanation based on evidence for how the uneven distributions of Earth's mineral, energy, and groundwater resources are the result of past and current geoscience processes.
MS-ESS3-4 Construct an argument supported by evidence for how increases in human population and per-capita consumption of natural resources impact Earth's systems.
MS-ESS3-5 Ask questions to clarify evidence of the factors that have caused the rise in global temperatures over the past century.

Objective

1. Students will demonstrate knowledge and understanding of the water cycle throughout the Earth
2. Students will gather and synthesize information to describe the status of groundwater available for consumption around the world
3. Students will use graphical displays to determine how Earth's water is distributed

Critical Questions

1. Where is water found?
2. How do conditions vary in the oceans?
2. What is the water cycle?

Entice

- Data interpretation
- https://youtu.be/GW_VaFE3P-c

Engage

Students will get in new lab groups to answer open ended questions about picture
global-warming-climate-change-water-city-crisis-972094.jpg

nuclear fusion energy future: https://www.forbes.com/sites/startswithabang/2017/04/12/the-future-of-energy-isnt-fossil-fuels-or-renewables-its-nuclear-fusion/#365af2203bee

Assessment
Write on post it note and put on Wonder Wall: "One thing that you learned about nuclear fission from the article"

Homework
read article about potential clean sources of energy in the future: http://www.visualcapitalist.com/alternative-energy-sources-future/

Ask class questions to turn in answers for the following questions:
1. How has energy use changed over time?
2. Describe two ways in which you can be more energy efficient

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Assessment
Writing assignment will be graded per rubric
Writing Rubric.pdf

Homework
Finish writing assignment

Assessment
Socrative question

Homework