

Where we Live and how we impact it

Unit Plan: Chapters 22 (atmosphere) & Chapter 23 (Using Resources)

Course: Integrated Science

Unit Objectives:

- Students understand the basic structure of the earth's atmosphere
- Students understand the difference between climate and weather.
- Students understand basic weather patterns and effects of weather.
- Students understand the carbon cycle and the oxygen and carbon dioxide cycle.
- Students understand the difference between the greenhouse effect and global warming.
- Students can identify and know the importance of ways to reduce, reuse and recycle products.
- Students understand the difference between renewable and non renewable resources.
- Students can explain how energy can be produced from solar, wind, geothermal and other alternative energy sources.
- Students can determine ways to lessen their impact on the environment.

Science Standards:

Lessons (Day= is a 45 minute class period):

- *Teaching the basics of the Atmosphere and Weather (Duration 4-5 days):**
 - *Information from textbook
 - *Use the National Weather service website to show basics of what goes into predicting weather and meteorology.
- *The components of the Carbon Cycle and Carbon Dioxide and Oxygen cycle (Duration 3-4 days):**
 - *Use information from textbook and material (literature and posters) from Cal
 - *Forests organization the explain processes.
- *Greenhouses effect and Global Warming (Duration 8-10 days):**
 - *Explain the importance of the greenhouse effect.
 - *Explain the climate shifts/global warming is occurring
 - use the information from the IPCC, CIMIS, WRCC websites to show evidence of changes currently both globally and locally.
 - *Student visit websites and investigate on their about climate change.
 - *Present criteria for global warming debate and conduct debate: "Global warming, Natural or Human induced?"
- *Using Resources (Duration 7-10 days):**
 - *Present information from textbook about alternative energy sources, impacts on the environment and ways to reduce, reuse and recycle.
 - *Calculating carbon footprint activity
 - * Present ideas for mitigation and adaptation for the changing climate
 - *Changing your "green" behavior challenge

live *Create a magazine about using as an alternative energy source or how to more globaling friendly.

Assessment:

- *Chapter tests/Quizzes (Integrated Science, science spectrum, Holt Reinhardt exam/test bank program) Tests and quizzes are on textbook and lecture material.
- *Illustrations of Carbon and Carbon dioxide/Oxygen cycles
- *Debate
- *Magazine project

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