Scientific Literacy Center

Why is Scientific Literacy Important?

Teaching Notes

Class Time: 15 minutes
Assignment Type: Homework

Grade Level: High School- Pre-Freshmen
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400 ppm or Not?

Lesson Overview:

This lesson will allow students to learn the importance of real world applications of scientific concepts; specifically surrounding climate change.

Materials:

1. Scientific Literacy video lecture, PowerPoint and lesson handouts for *Why Scientific Literacy is Important*
2. Handout of "Northern Hemisphere Cracks 400 ppm CO2 for Whole Month for First Time" by Brian Clark Howard.
3. Math Bench link: www.mathbench.umd.edu
4. Teacher Answer Key
5. Computer, Projector, Internet connection

High School Students

National Standards:

C: Life Science
D: Earth and Space Science
E: Science and Technology
F: Science in Personal and Social Perspectives
G: History and Nature of Science

GA Standards:

SCSh1. Students will evaluate the importance of curiosity, honesty, openness, and skepticism in science.
SCSh6. Students will communicate scientific investigations and information clearly.
SCSh8. Students will understand important features of the process of scientific inquiry.
SB4. Students will assess the dependence of all organisms on one another and the flow of energy and matter within their ecosystems.

Undergraduate Students

Best Practices for Scientific Literacy

1. An understanding of the nature and development of scientific research and knowledge
3. Possessing the ability to evaluate scientific evidence and explanations
4. Having the ability to participate productively in scientific discourse
5. Demonstrating an aptitude for scientific reasoning, quantitative literacy and critical thinking

Lesson Objectives:

1. Students will learn the importance of real world applications of scientific concepts; specifically surrounding climate change.
2. Students will gain an understanding of scientific information related to the important area of climate change.
3. Students will investigate how CO_2 is measured and understand how to interpret the data.
4. Students will investigate how the charting of the Earth's temperature over time was developed.
5. Students will think critically when answering questions and assessing their own understanding of an important scientific concept.