

# Renewing Math

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Algebra II and Pre-Calculus  
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# Education in Eastern, NC

- 1) Student achievement is low
- 2) School is boring
- 3) Environmental health is poor

**42%**



# My Goals



1) Increase student achievement

2) Improve student engagement and interest in math

3) Educate and inspire students about local environmental issues



# Essential Questions

- 1) How do I make math more meaningful, engaging, and purposeful?
- 2) How do I build critical thinking and problem solving skills in my students?
- 3) How do I demonstrate that algebraic functions are simple models for our complex world?
- 4) How do I educate students about environmental issues and inspire them to take action?

# Why Environmental Issues?



United States  
of America

## Congressional Record

PROCEEDINGS AND DEBATES OF THE 111<sup>th</sup> CONGRESS, SECOND SESSION

WASHINGTON, THURSDAY, APRIL 22, 2010

### *House of Representatives*

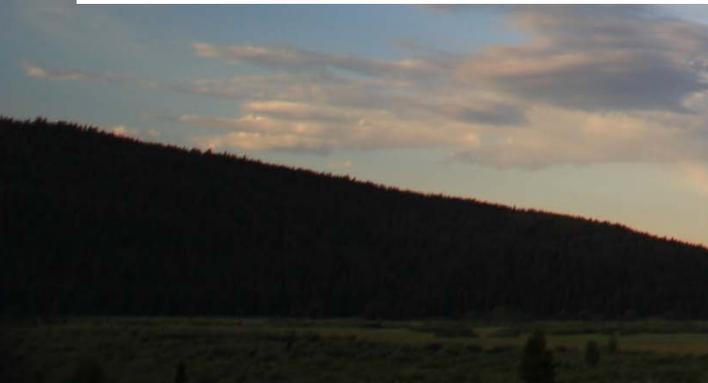
A Tribute to Earth Day and  
Northwest Halifax High School

Madame Speaker, as we celebrate Earth Day, I urge Congress to meet the mandate of the American people and pass meaningful legislation to confront climate change. I ask my colleagues to join me in celebrating Earth Day, and commending Northwest Halifax High School on setting an example for all Americans.

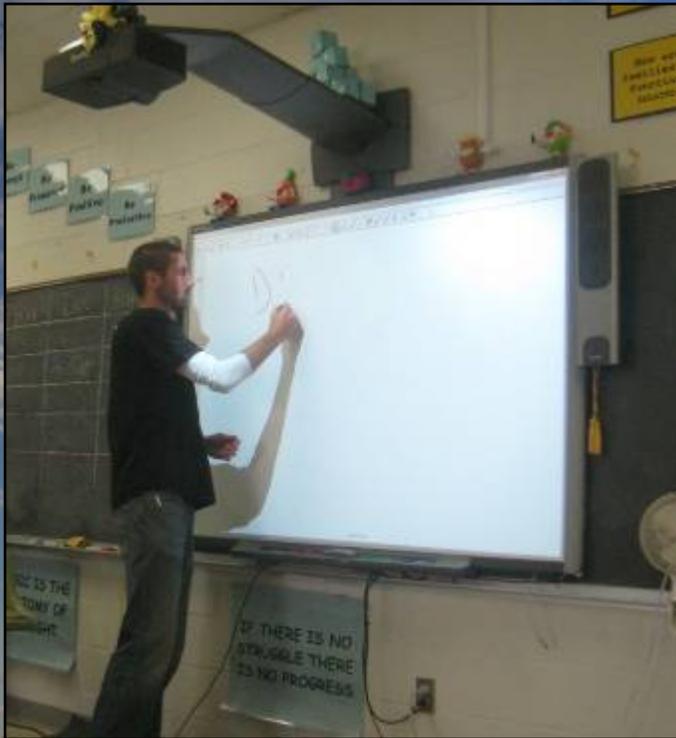
Very truly yours,

A handwritten signature in blue ink, appearing to read "G. K. Butterfield".

G. K. Butterfield  
Member of Congress



# Why Renewable Energy Technology?



# The Process

- 1) Visit with environmental education experts at Earth Day Network in Washington D.C.
- 2) Observe and interview Sustainability and Renewable Technologies class in Richmond, VA
- 3) Work with In Solar! In Anaheim, CA to understand the math involved in renewable energy business
- 4) Visit Grand Teton and Mt. Rainer National Parks to inspire work

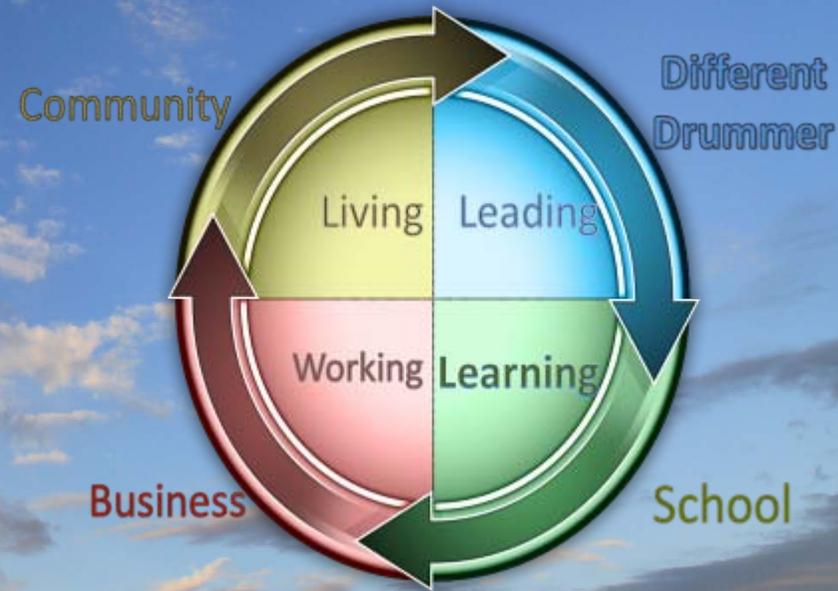
# Earth Day Network

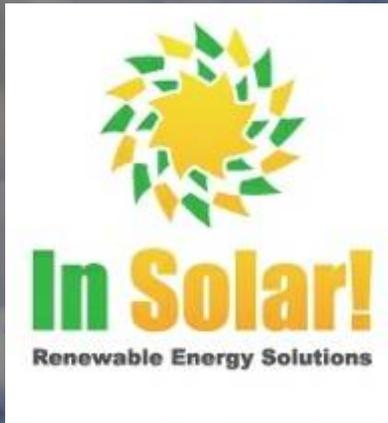
- Greening America's Schools within a generation
- Leading environmental educators
- Empower teachers, students, and schools to go green



# Different Drummer

- First “green” CTE class in VA (nation?)
- Explores issues that affect global citizens – economics, social justice, environmental issues, sustainability, and social and cultural diversity





# In Solar!

- Leading solar installation company in Anaheim
- Installing solar flags at schools in Anaheim
- Collaborated on math involved with business models



# Grand Teton National Park



# Mt. Rainier National Park



# What Did I Learn?

- Math is hard for most people to understand
- Renewable energy is still very small and not well understood industry
- Different approach required?
- But, times are changing -
- This is tough!



# Outcomes

- 1) Increased student achievement
- 2) More students engaged in math
- 3) Real-life application questions
- 4) Eco-Club

