



Educators Inquiry Meetup

Featured Presenters:

- **Dr Scott Lankford** (Professor of English emeritus, Foothill College; GEN Executive Board Member)
- **Dr. Sharon Sikora** (Ph.D. Chemistry, National Assessment of Education Steering Panel Member)
- **and YOU!**

GEN Inquiry Meetup Goals

- **Engage** community college educators from across the nation
- **Foster** inquiry and inspiration
- **Internationalize** community college education
- **Create** “next steps” you can implement immediately

Today's Inquiry Question:

How can you confront the Climate Crisis?

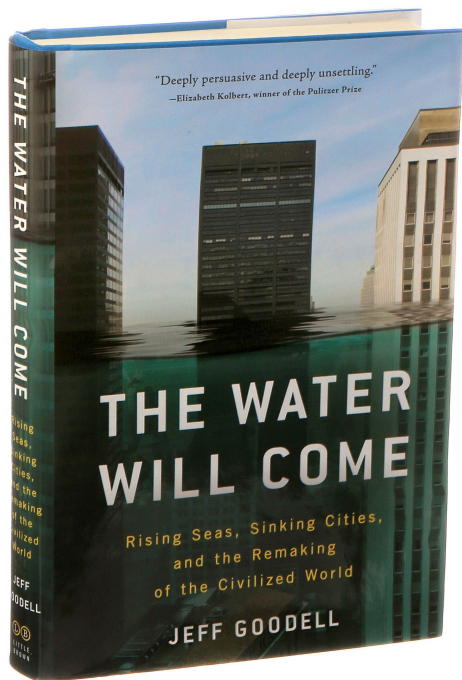
- In your classes?
- In your curriculum?
- In your campus activities?

An Urgent Introduction: Student Climate Strikes in 500+ Cities Globally in 2022

Bay Area youth gathered in San Francisco, where they marched to two locations, leaving red hand ..

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My Own Sample Climate Teaching **FAILURE**



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My Top 5 Climate Teaching Hacks

1. Emphasize Youth Climate Leaders
2. Emphasize Stories — not Stats
3. Emphasize Me-Search — not Re-Search
4. Emphasize Inquiry — not Info
5. Teach Locally / Think Globally

Sample Climate Hack Solutions:

- **Frontload chapters which profile youth climate leaders —**
both were former community college grads!!!
- **Require Me-Search papers —**
focused on “a place you love.”

Student Outcomes

- 1) **Improved Student Writing, Critical Thinking, and Research Skills!**
- 2) **Current students** organized local club/campus/community events!
- 3) **Former students** have now led student climate strikes at UCSD, UCLA!

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Former Foothill Students > Intl Climate Justice Leaders

- **Michelle Romero** — Green for All Executive Director
- **Daisy Rosalez** — Bioneers Indigenous Youth Programs International Coordinator
- **Maria Azhunova** — Stanford Law School's Bright Award International Conservationist of the Year 2020

Dr. Sharon Sikora (Ph.D. Chemistry, Univ of Denver)

- Recently appointed to the steering panel for the **National Assessment of Education Progress (NEAP)** to help formulate recommendations for updating science criteria in "**The Nation's Report Card**" for 2028.
- Has written curriculum for the **Smithsonian** as well as an **NGSS-based high school chemistry curriculum** in the context of **climate change**.
- A former Congressional **Einstein Fellow**, she currently serves as Director of Middle School Curriculum for **Sacred Heart Schools** in Atherton, CA.

If only....



Challenge....



Biology



Chemistry



Physics



Earth Science



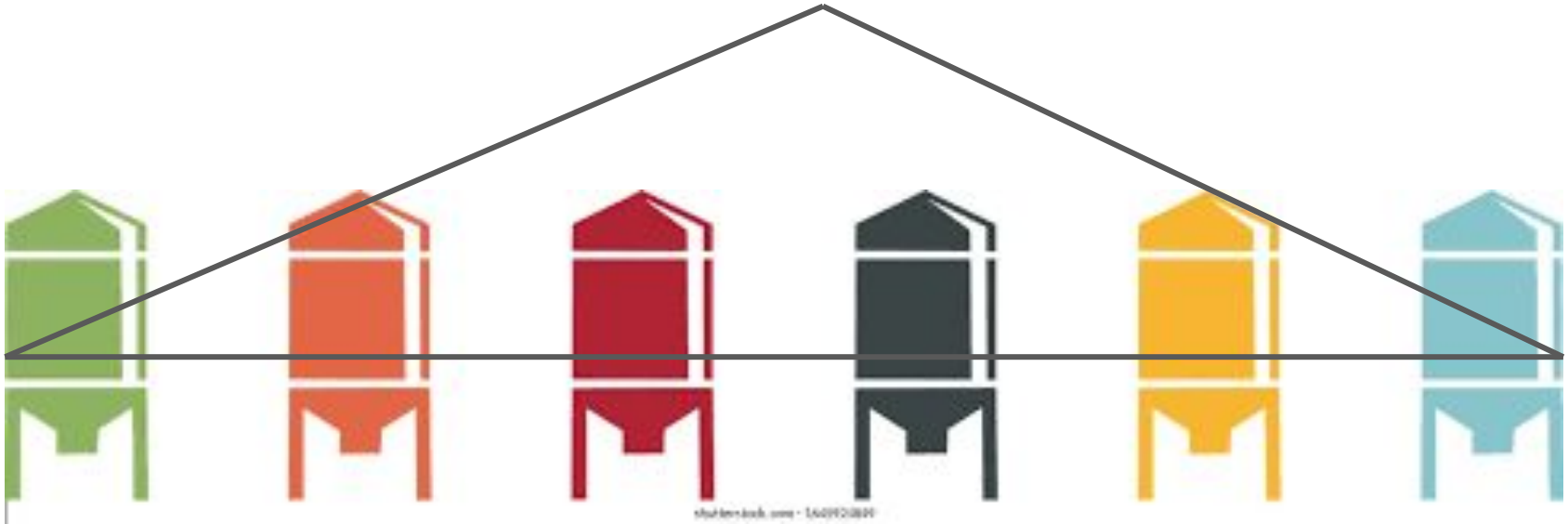
Geology



Astronomy

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Solution....

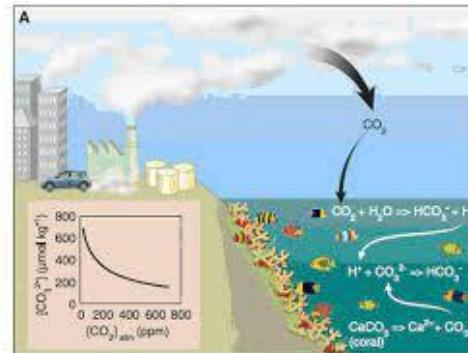
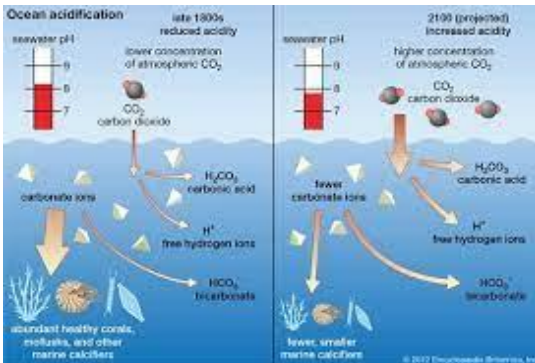
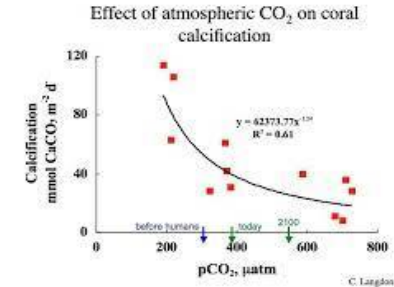
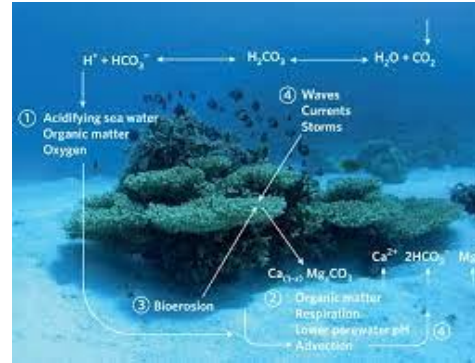


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The Story of the Coral Reefs...



When CO₂ dissolves in seawater, carbonic acid is formed. It is this chemical reaction that leads to ocean acidification.



Condition	Chemical Reaction	Effect
Elevated Levels of Atmospheric CO ₂	$\text{Carbon Dioxide } \text{CO}_2 + \text{Water } \text{H}_2\text{O} \rightarrow \text{Carbonic acid } \text{H}_2\text{CO}_3$ $\text{Carbonic acid } \text{H}_2\text{CO}_3 \rightleftharpoons \text{Bicarbonate } \text{HCO}_3^-$ $\text{Carbonate } \text{CO}_3^{2-} + \text{H}^+ \rightleftharpoons \text{Bicarbonate } \text{HCO}_3^-$ $\text{Calcium carbonate } \text{CaCO}_3 \rightleftharpoons \text{Ca}^{2+} + \text{CO}_3^{2-}$	Lower pH 7.8 Thin shells and dead coral

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The Chemistry Content...



Compounds: Ionic vs Covalent

Ion Formation

Structure of Water

Hydrogen Bonding

Chemical Reactions

Equilibrium

Covalent Molecular Shapes

Precipitation Reactions

Combustion Reactions

Partial Pressures

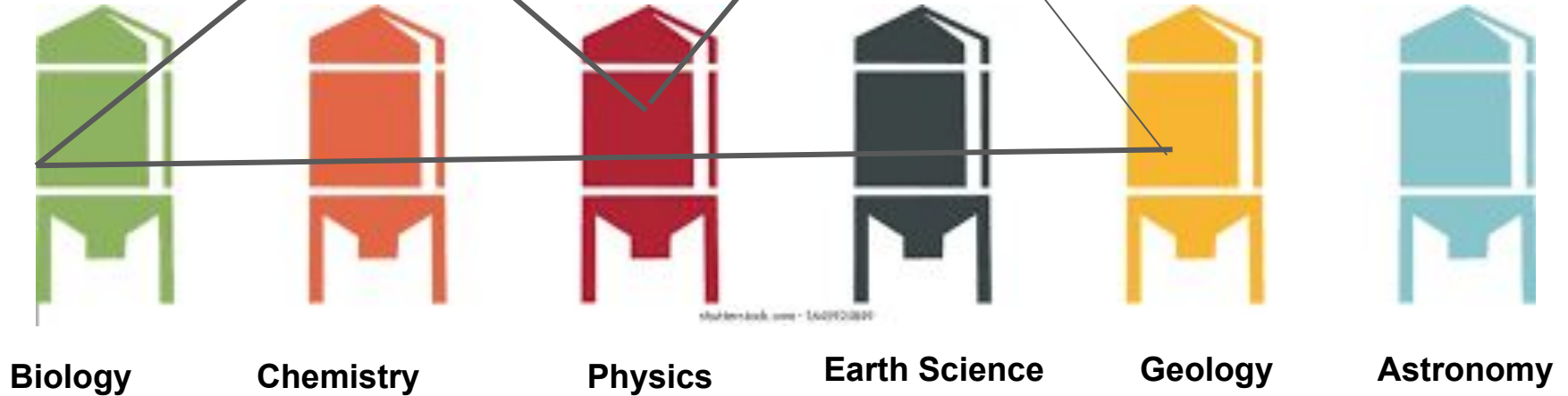
Polarity

Lewis Structures

Gas Laws

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Imperfect, yes....progress, most definitely



Support Students By....

- Connecting learning objectives to a Climate Storyline
- Sharing Successful (as well as not too successful) Examples
- Being Fearless in Unpacking Complex Systems for students



Breakout Questions

1. Your Challenges:

what obstacles do you face teaching climate change and/or organizing climate-based campus activities?

2. Your Success:

what successes have you achieved teaching climate change and/or organizing climate-based campus activities?

3. Your Next Steps:

how can you respond to urgent global student calls for climate education and/or action?

Climate Teaching Resources — MyTop 4 (of hundreds)

1. **ACE Action for the Climate Emergency** — Inspiring K12 Teaching Resources

<https://acespace.org/about-us/>

2. **Sustainability Leaders Drawdown Course** — Across-the-Curriculum Solutions

<https://www.sustainabilityleadersnetwork.org/resources/drawdown-course/>

3. **EPA Climate Change Resources Webpage** — links to NOAA, NASA, EPA, etc.

<https://www.epa.gov/climate-change/climate-change-resources-educators-and-students>

4. **Bioneers Resources for Indigeneity Education**

<https://bioneers.org/back-to-school-resources-for-indigeneity-education-zmaz2108/>

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