

TEAM Foram'able Observations

2022 ORSEA Capstone Presentation

OUR TEAM



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ANCHORING PHENOMENA / DRIVING QUESTION

Tiny Plankton as Storytellers: Living Thermometers of the Massive Ocean 'Blob'

- What does sea surface temperature tell us about what's happening in the ocean?
- How does sea surface temperature impact ocean life?
- How do forams record the story of the past ocean climate as well as current phenomena like the 'Blob'?

EDUCATION GOALS, OBJECTIVES, AND STANDARDS ADDRESSED

Science

HS-LS-2.2 Use mathematical representations to support and revise explanations based on evidence of how factors affecting biodiversity and populations in ecosystems on different scales.

HS-LS-2.6 Evaluate claims, evidence and reasoning that the complex interactions in ecosystems maintain relatively consistent numbers, but changing conditions may result in new ecosystems.

Cause & Effect: Empirical evidence is required to differentiate between cause and correlation and make claims about specific causes and effects.

Stability & Change: Much of science deals with constructing explanations of how things change and

Math

S-ID Interpreting Categorical and Quantitative Data

Summarize, represent, and interpret data on a single count or measurement variable

N-Q Quantities

Reason quantitatively and use units to solve problems.

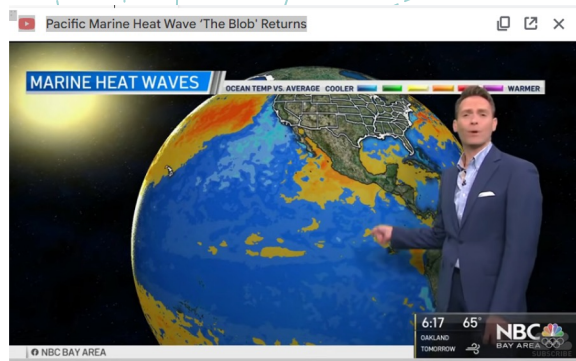
Math Practices:

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

5-E LESSON MODEL AND ASSOCIATED ACTIVITIES

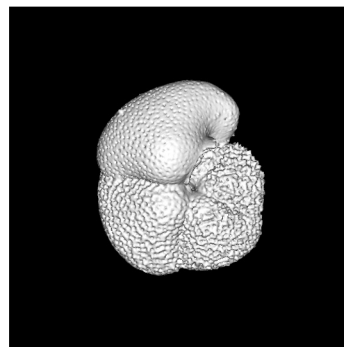
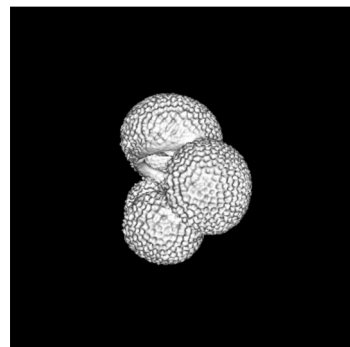
Engage

What is a marine heatwave and why do we care?



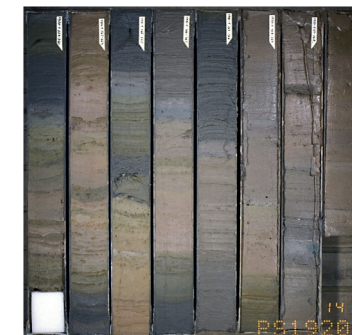
Explain

How do ocean conditions affect foram abundances?



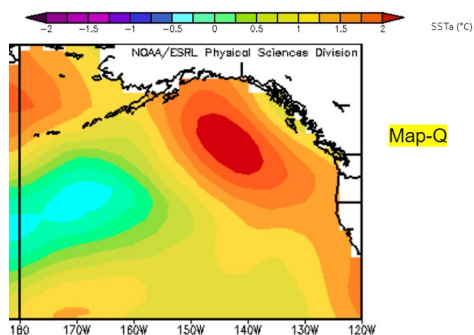
Evaluate

Make an edible sediment core



Explore

How do marine heatwaves impact the marine creatures?



Elaborate

What patterns do we notice in the foram and environmental data?

