



Using Chemistry to Find Vents





Vents - Experience the Phenomenon

Experience the Phenomenon

Fill in the chart below as you watch the *Oases of Life* video clip.

I Notice	I Wonder	It Reminds Me Of



Vents - Experience the Phenomenon



2016 DEEPWATER EXPLORATION OF THE MARIANAS

<https://oceanexplorer.noaa.gov/oceanos/explorations/ex1605/logs/may12/media/video/vents-1280x720.mp4>

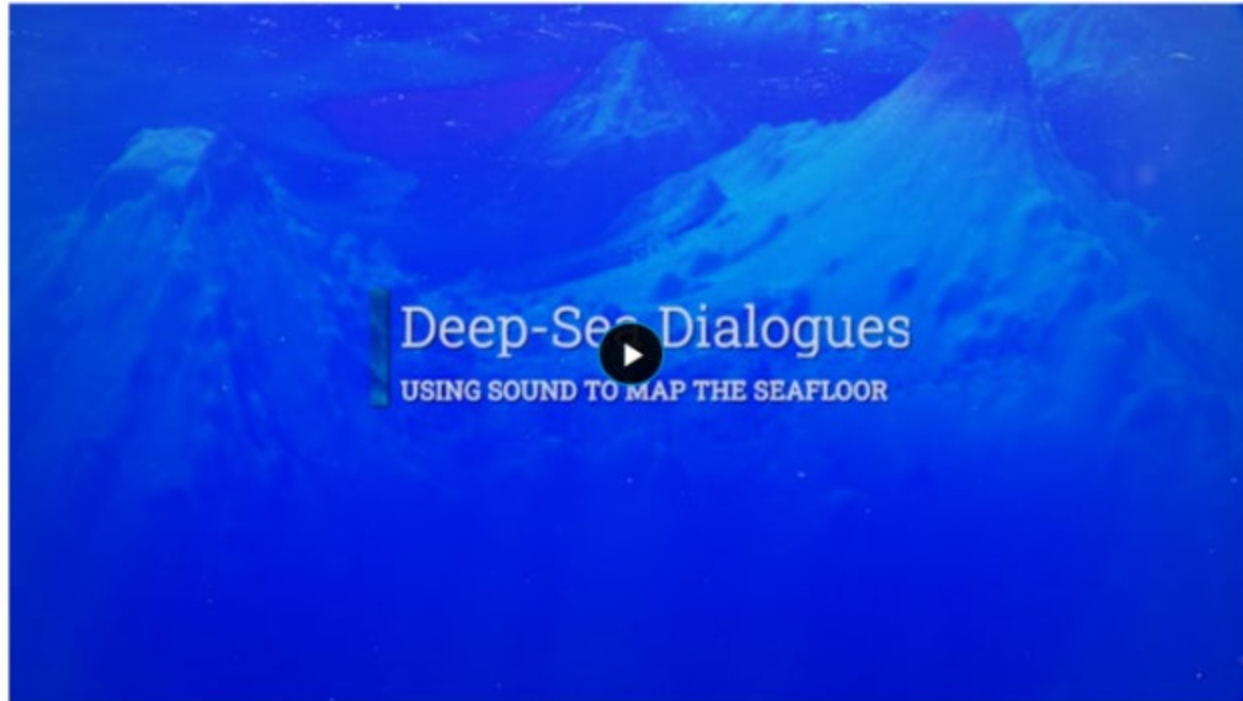


Vents - Experience the Phenomenon

- **Question:** How do chemical cues help scientists locate hydrothermal vents and other unique deep seafloor habitats?
- **Let's think about it!**
 - What makes you think about that idea?
 - What evidence or information helps support your proposed idea(s) of how to find hydrothermal vents?
 - How does this evidence connect to what they already know?
 - What more is needed to answer the driving question?



Vents - Experience the Phenomenon



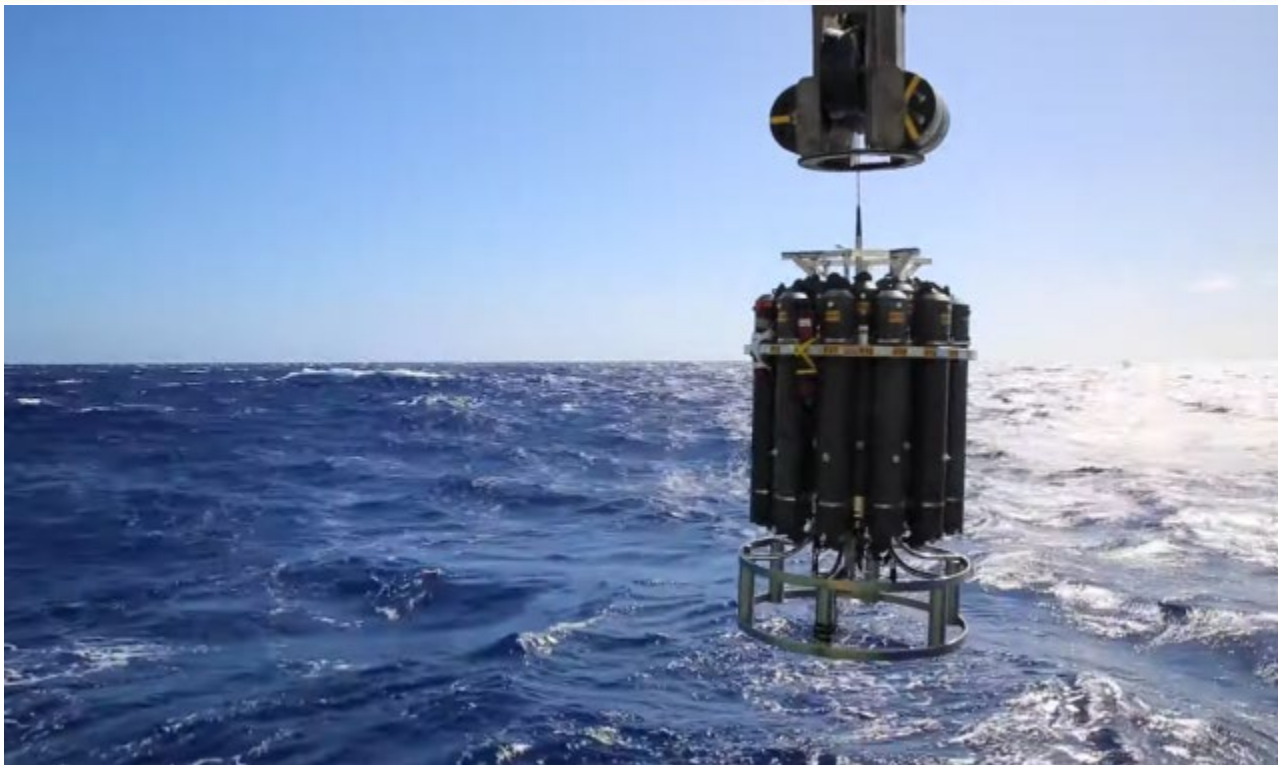
<https://oceanexplorer.noaa.gov/edu/multimedia-resources/dsd/media/2023-DSD-Mapping-v6-1920x1080.mp4>



Vents - Investigate



Vents - Investigate



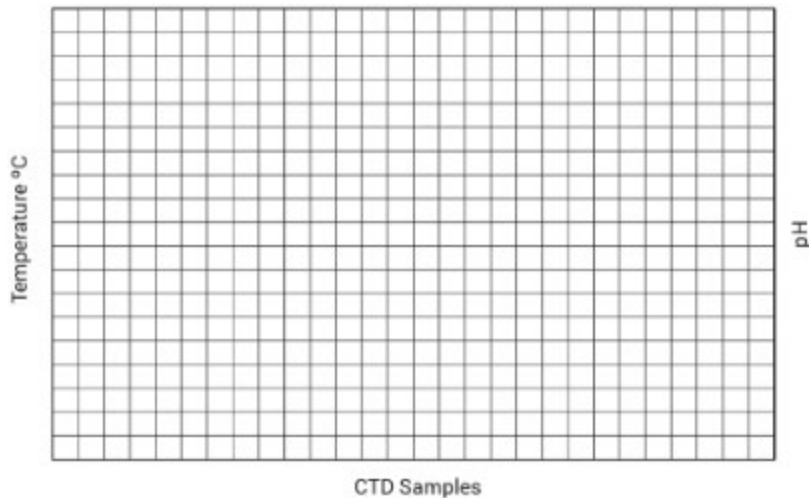
<https://oceanexplorer.noaa.gov/technology/ctd/ctd.html>



Vents - Investigate

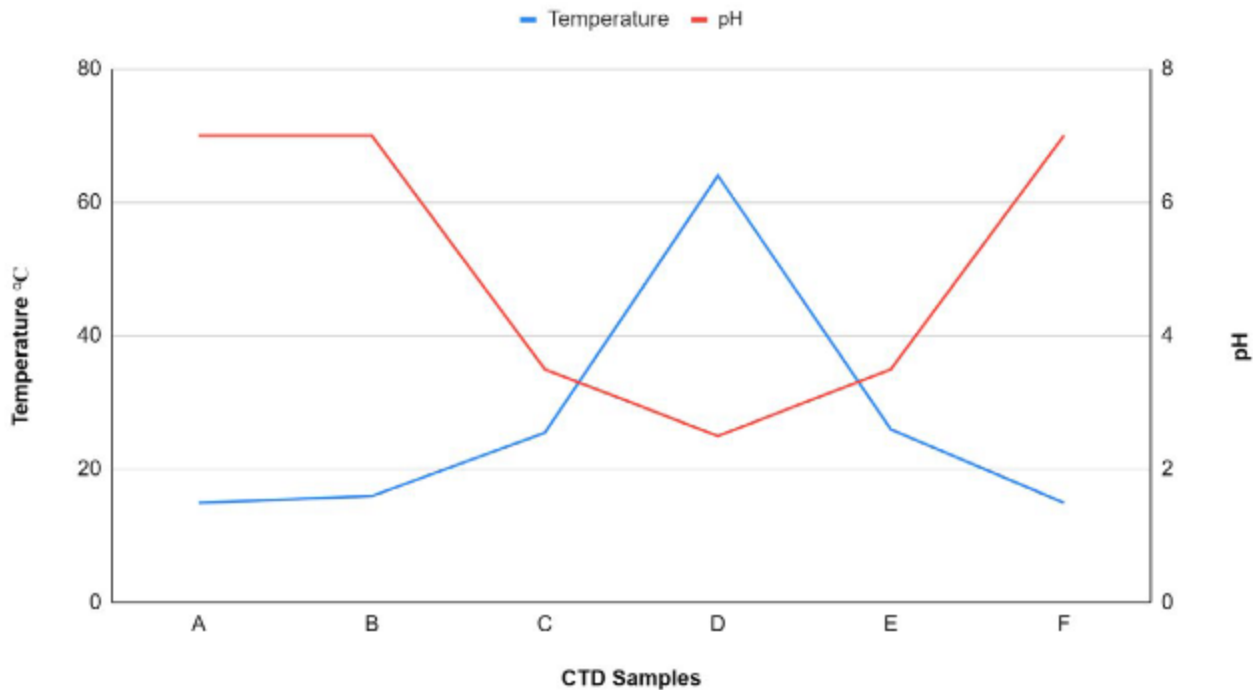
Collecting data and graphing results

Sample	Temperature °C	pH
A		
B		
C		
D		
E		
F		



Vents - Investigate

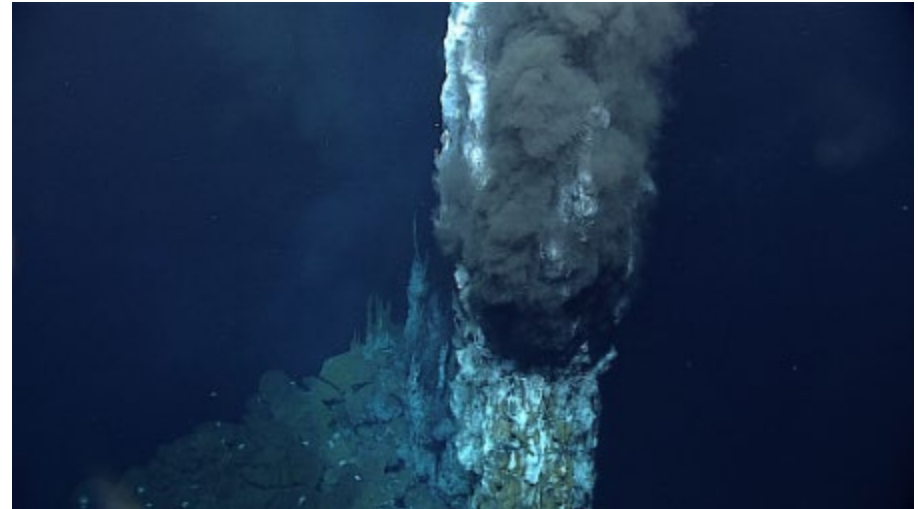
Temperature and pH for CTD Samples A-F



Vents - Put the Pieces Together



- Draw a model of how your data could indicate the presence of a hydrothermal vent and discuss with your group.
- **Include:**
 - Ship
 - A CTD sampling the water
 - **A-F** data points
 - Location in the water column where these samples could have been collected.
 - Vent location - based on you data



Vents - Put the Pieces Together



<https://www.youtube.com/watch?v=YDyWrwO4nJA&t=4s>