SCIENTIFIC OCEAN DRILLING

IODP School of Rock : An Enduring Legacy from Two Decades of IODP programming and 0pportunities in the U.S and Beyond

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U.S. Science Support Program

EGU

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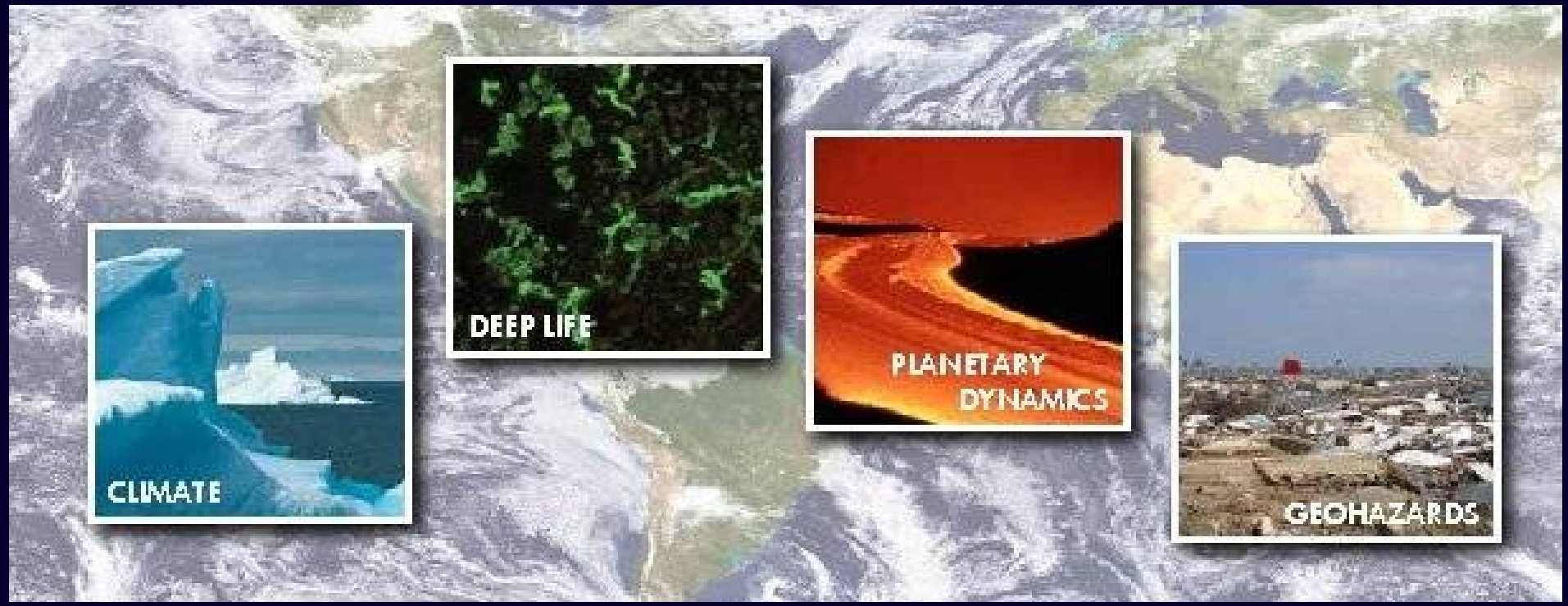
Drilling for Science

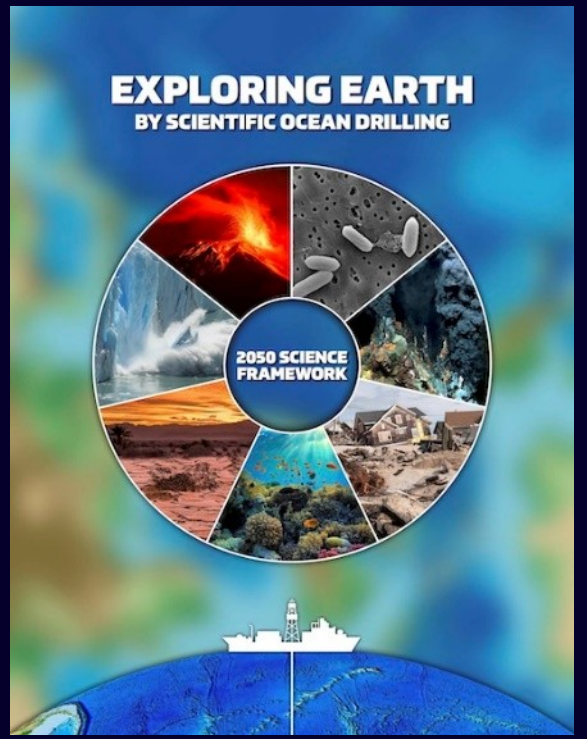
Scientists have been using drilling technology to understand Earth's history since 1958.

- Project Mohole (1958 -1966)
- Deep Sea Drilling Project (1966 - 1983)
- Ocean Drilling Program (1983 - 2003)
- Integrated Ocean Drilling Program (2003 - 2013)
- International Ocean Discovery Program (2013 – 2024)
- IODP3 and Onwards?

Major Science Themes

- Using records of past climate and ocean change to inform the future;
- Exploring deep life, biodiversity, and environmental forcing of ecosystems;
- Understanding deep Earth processes and how they impact Earth's surface;
- Investigating geological processes and hazards that occur on human time scales.





School of Rock history

- Since 2005, the School of Rock Program has aimed to:

- provide educators with increased knowledge of the International Ocean Discovery Program (IODP), Earth science, and scientific ocean drilling processes, while highlighting related STEM careers.
- assist educators in becoming familiar with how IODP Earth science research relates to science education standards and societal relevance
- create a cadre of ambassadors for IODP throughout the education community

A Flexible Model

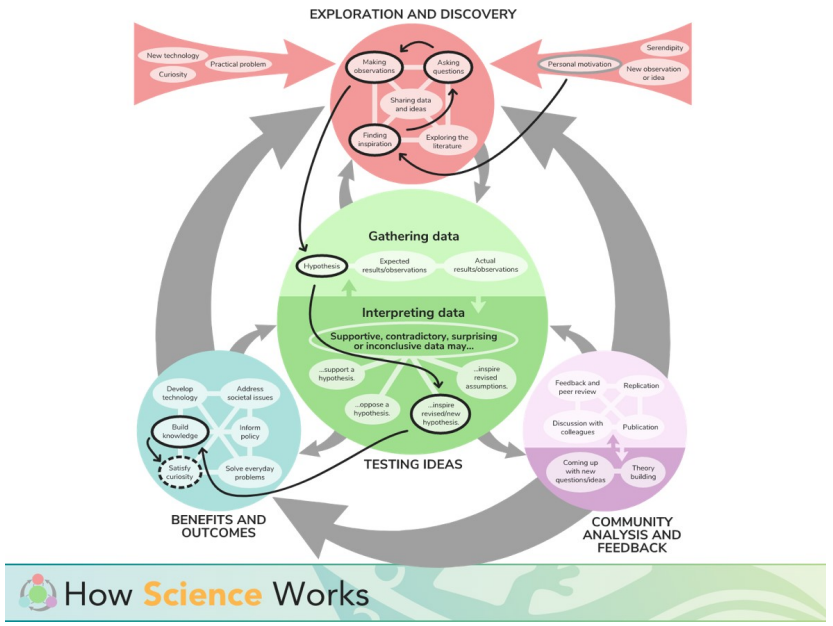
- We tried to do it on the ship: transits and tie-ups
- Otherwise, at a port call or university
- Or the Gulf Coast Repository
- And online, School of Rock (SOR) 2020!!

School of Rock 2018, New Zealand

- Collaboration with ANZIC (Australia and New Zealand IODP Consortium)
- Encourages use of UC Museum of Paleontology resources to communicate how science works

School of Rock 2019, San Diego

- Gulf of California geology and JOIDES Resolution port call
- Shore-based field trips led by scientists from Scripps Institution of Oceanography
- Emphasis on the evidence for deep sea sedimentation from coastal exposures

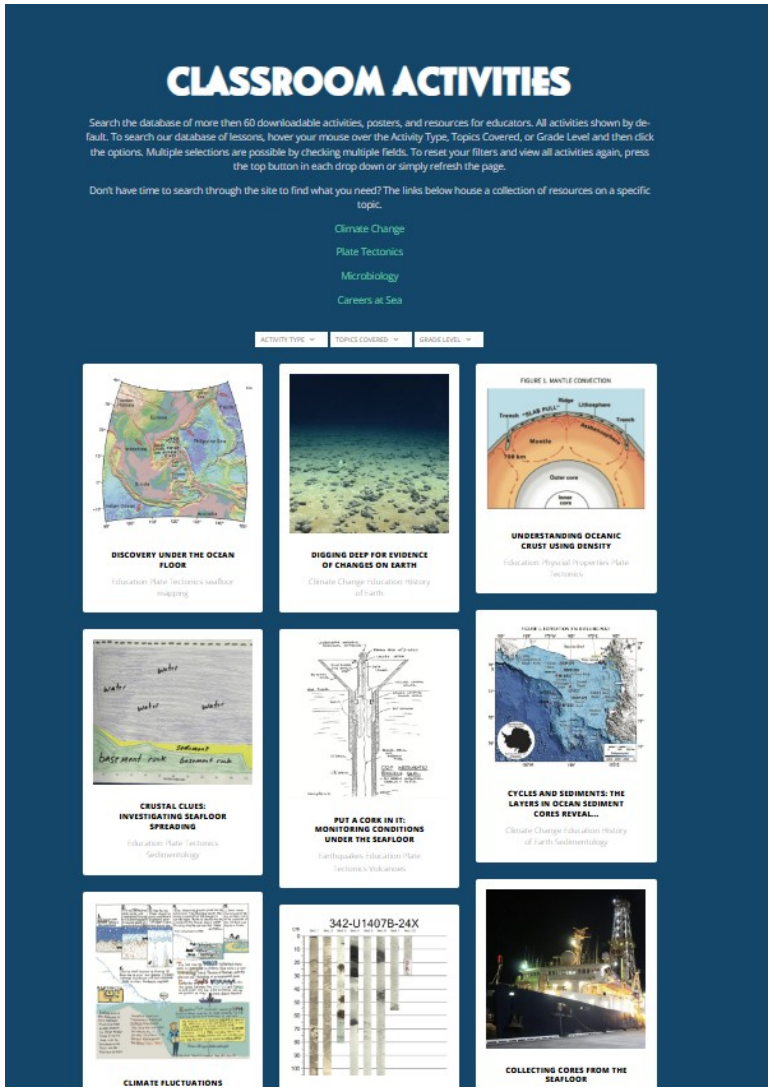


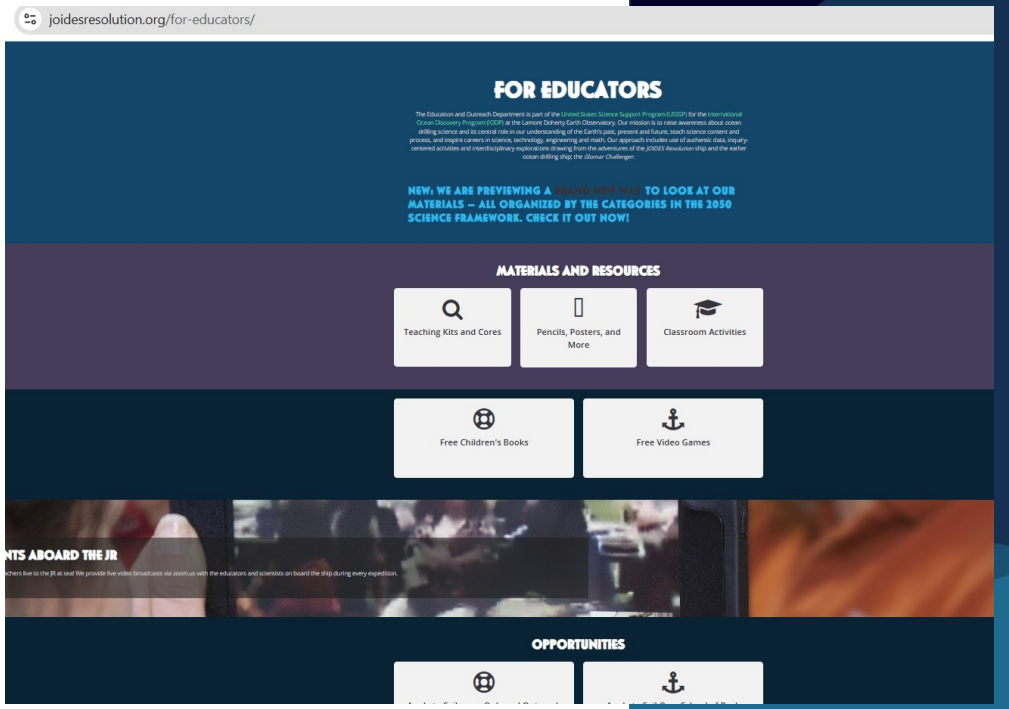
October 2023 School of Rock

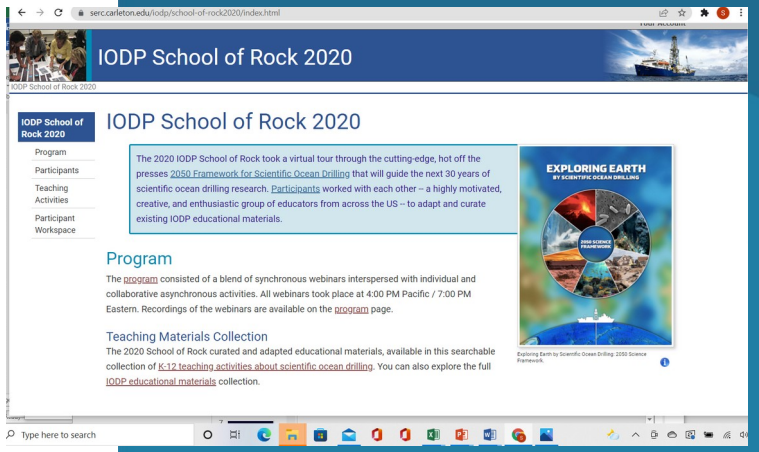
- The 2023 program was a new collaboration among:
  - U.S. Science Support Program
  - American Geosciences Institute
  - Morehouse Center for Excellence in Education and Atlanta University Consortium (AUC) Data Science Initiative
  - *JOIDES Resolution* Science Operator

School of Rock and Learning Activities

www.joidesresolution.org







Some data from School of Rock

Retrospective Survey of all School of Rock Alumni

Sent to 202 program alumni, 114 responses (56% response rate)

Expedition location:

- Ship-based 65%
- Land-based 27%
- Virtual 8% (2020 only)

USE OF TOOL KIT

Which of the following have you done since the School of Rock program?	Not at all	Once	More than once
Continued your connection with IODP	7%	22%	70%
Continued your connection with your SOR cohort	13%	14%	72%
Developed curricula to be posted on the *JOIDES Resolution* website	53%	31%*	16%*

**significantly more likely to be ship-based than land-based or virtual, ≤.05.*

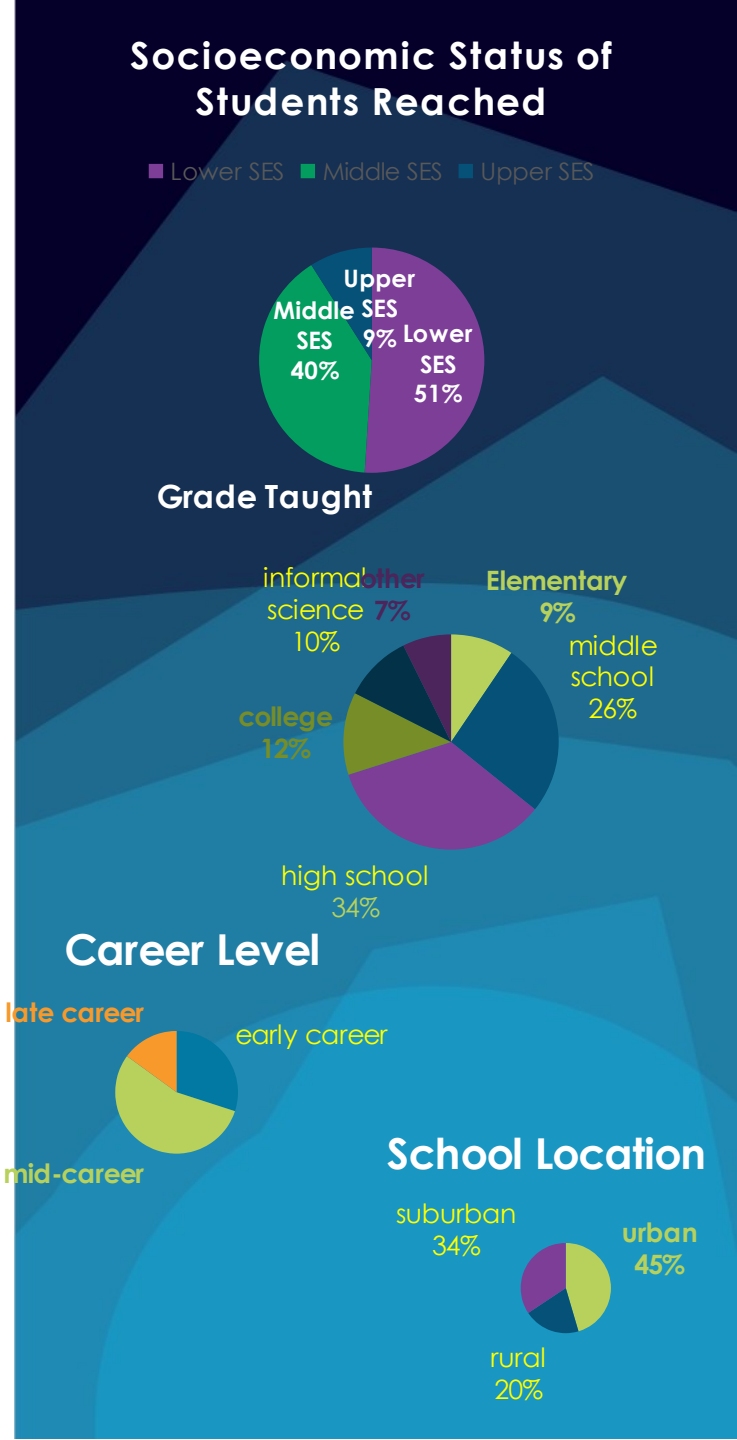
Key Findings

Educators rated SOR as having impacted the **content they taught their students**; over two-thirds of participants rated this area of impact an "8" or higher on a 0-10 scale, and 21% rated this area a perfect "10."

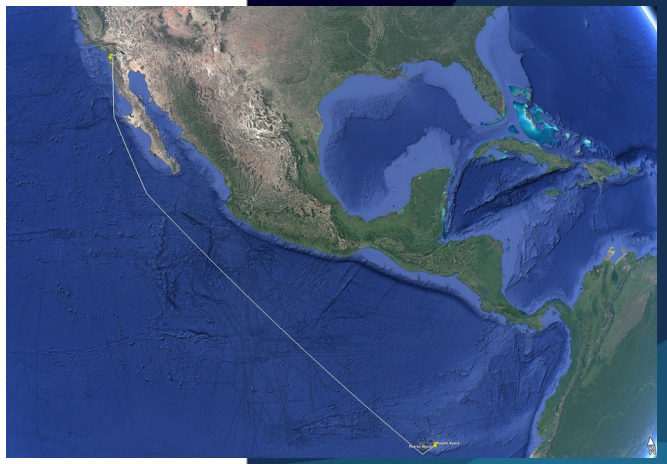
Educators rated SOR as having impacted **the way they teach their students;** almost half of participants rated this area of impact an "8" or higher on a 0-10 scale, and 19% rated this area a perfect "10."

Over half of the educators (55%) said that the program **helped them increase their use of real data** with their students; 20% rated this measure a perfect "10."

Most participants thought that **SOR was much better than other professional development programs** in which they have participated; 61% rated SOR a perfect "10" on this measure.



What's Next for School of Rock?



This summer:

- July on the *R/V Langseth*, San Diego to Galapagos
- Collaboration with Lamont Doherty Earth Observatory
- *In the steps of Darwin: the geological and natural history of the Ring of Fire and the Galapagos Islands*

AND

- August at the Gulf Coast Repository in College Station, TX
- *Using Legacy Cores to Enhance Collaborations between Scientists and Educators*

What else could we do together? We are open to collaborations!

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Thank You!