Float Overview

Essential Question: How is climate change affecting the ocean?

What is a float?

- A biogeochemical float that spends its life drifting through the ocean, changing depth and collecting data at programmed intervals.
- It is battery-powered and hosts a suite of chemical and optical sensors.

What is GO-BGC?

- Global Ocean Biogeochemistry Array
- A project to build a global network of chemical and biological sensors that will monitor ocean health.
- A global robotic network of profiling floats carrying chemical and biological sensors that will revolutionize our understanding of ocean biogeochemical cycles, carbon uptake, acidification, deoxygenation, and ecosystem health.

What is SOCCOM?

- The Southern Ocean Carbon and Climate Observations and Modeling project
- A multi-institutional program focused on unlocking the mysteries of the Southern Ocean and determining its influence on climate.

GO-BGC
Global Ocean Biogeochemistry Array

What do GO-BGC and SOCCOM do to collect and release data?

- Release floats into the ocean to collect data through sensors.
- This data is then compiled into the data system, where it can be accessed by the public.
- As part of the Adopt-a-Float program, teachers and students will have access to data for their float, as well as the option to be in contact with the scientist in charge of their float.

How many floats have been/will be deployed?

- 500 floats will be deployed over a 5 year period
- These floats are being funded by the National Science Foundation (NSF).

What type of data do the floats collect?

- Oxygen
- pH levels
- Nitrate
- Chlorophyll fluorescence
- Particle abundance
- Irradiance
- Temperature
- Salinity
- Pressure
- Date

Why is this ocean data important?

- To understand how the climate is changing the ocean properties.
- To understand why ocean health is changing.
- The ocean plays an important role in regulating the carbon cycle.
- This data allows us to better understand ocean health and what things are affecting the carbon cycle and how the ocean is being affected by climate change.
- To understand how humans are affecting the ecosystem and how we can help protect the many ecosystems on Earth.

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