



Eyes on the Ocean



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Ever wonder how we know what we know about the world we live in? Consider the ocean...how do we learn about something so BIG and deep?



The ocean covers 71% of our planet and has an average depth of 3790 meters. Imagine mountains like Antarctica's Mt. Erebus, New Mexico's Baldy Mount, or Papua New Guinea's Mt. Hagen completely submerged!



What questions will YOU ASK?

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We know what we know because someone ASKED A QUESTION! That's the first step.



The Global Ocean Observing System is being developed to better understand the ocean and ultimately, safeguard people. We're learning from the successes AND failures of those who came before, from people like Matthew Maury, Benjamin Franklin, and George Stokes.

For a program like IOOS, liability is a big issue. If a boater gets injured because predicted 2 ft seas were actually 4 ft, who is to blame? Accuracy is important!



The importance of MATH: Research conclusions must be supported by statistics-we have to show they are precise and accurate. And able to be reproduced. Another scientist should get similar results, if all conditions are the same.

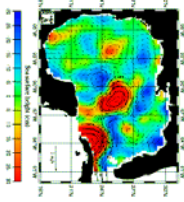
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Before we conduct research, we have to ORGANIZE what we know- or think we know- about the subject!



The U.S. contribution to studying the world ocean is the Integrated Ocean Observing System (IOOS). Before we build new monitoring systems, we have to inventory what we have and identify gaps in our knowledge.

An important area in advancing ocean forecasts is numerical modeling. There is a great need to collect oceanographic and meteorological information to "drive" the models.



What did we learn from our experiments? We have to determine if the information supports our ideas or hypotheses. Whether it does or doesn't, the discoveries often lead to new questions!

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Once we know what has been done, we ACQUIRE NEW INFORMATION by experimentation.



The U.S. is divided into 11 IOOS Regional Associations. Each has its own set of questions. Some are common to all areas, but others are unique. For example, Alaska may focus on ice floes while Gulf Coast states are more concerned about storm surge from hurricanes.

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