

# SUPPORTING TOMORROW'S OCEAN LEADERS



NATIONAL OCEAN  
SCIENCES BOWL®



# NATIONAL OCEAN SCIENCES BOWL

## What is the NOSB?

The National Ocean Sciences Bowl® (NOSB) is a nationally recognized and highly acclaimed high school academic competition. The NOSB provides a forum for talented students to **excel in science, technology, engineering, and math (STEM)** and introduces team members, their teachers and coaches, schools, and communities to ocean sciences as an interdisciplinary field of study and a possible career path. The program **engages the ocean science and technology research community** in pre-college education and **stimulates broad interest in – and excitement about – science and the ocean** as students learn ocean-related topics in physics, chemistry, biology, geology, geography, social science, technology, and policy. Each year, 25 regional competitions are held across the U.S., with the winner from each region advancing to the national finals competition. The location of finals changes each year to offer students new experiences, learning opportunities, and exposure to different regions, universities, and communities.

## Why an Ocean Sciences Bowl?

There are a number of academic opportunities available to high school students, including other competitions and general science programs. What makes the NOSB different and important?

The NOSB's focus on ocean sciences is the key. Ocean science has integral connections to our **understanding of global climate and weather, coastal resilience, food availability, national security, energy security, and our economy**. Ocean science is by nature multidisciplinary and provides an ideal platform for integrated STEM learning. In preparing for—and competing in—the NOSB, **students learn basic scientific principles and apply them to complex problems**, thereby enriching their STEM education and exposing them to ocean science topics not generally available in high school curricula. Finally, studying and working in the ocean environment pose challenges that foster **innovation, and the engineering and technology development** needed in our workforce.

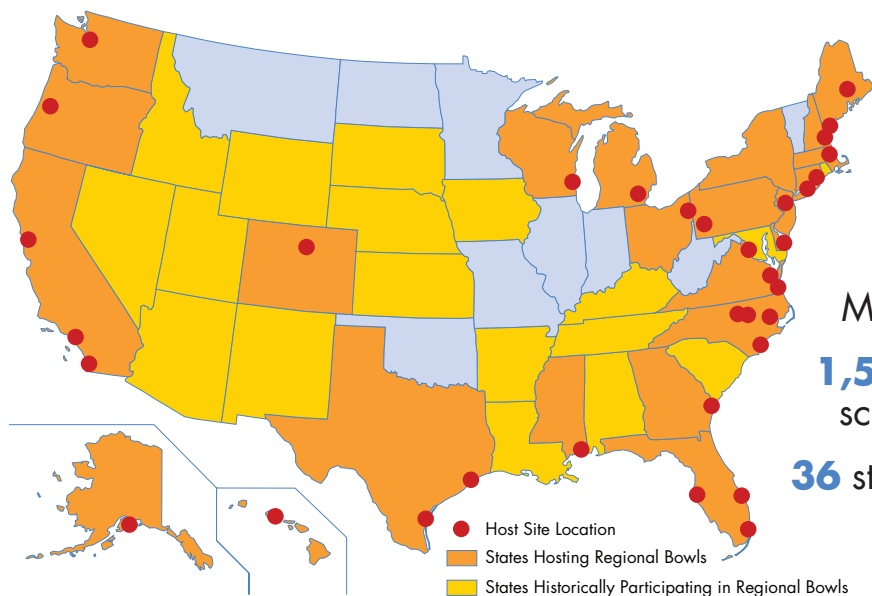
## Goals of the NOSB:

Develop STEM and ocean-literate citizens;

Foster use of the ocean as an interdisciplinary vehicle to teach science and mathematics;

Support the involvement of under-represented and diverse communities in the ocean sciences; and

Provide students with interactive education and skills for careers in the ocean sciences and other STEM fields.



## Who is involved each year?

**2,000** students per year (50% female, 50% male)

More than **350** individual high schools

**1,500** volunteers from the ocean science and technology community

**36** states plus the District of Columbia

## What the NOSB offers

The NOSB is more than just an academic competition and offers year-round academic elements and enhancements, including:

- Summer award trips that provide hands-on research experience;
- Scholarships to encourage NOSB alumni to continue their focus on STEM fields in college;
- A Science Expert Briefing to highlight the importance of science in policy decisions and students' ability to apply their knowledge to real-life issues;
- Professional development seminars to help teachers stay current on science research and teaching tools; and
- Career events to educate students on the variety of ocean-related career paths.

*"Coming from the landlocked state of Idaho, I had no background, education, or interest in the realm of marine science... While I would have never considered it just 16 months ago, I am now quite interested in pursuing oceanography studies after high school, and I again credit that entirely to [the NOSB] and its dedicated volunteers and coordinators."*

— Nate Marshall, 10th grade student, Idaho (NOSB Salmon Bowl)



## The NOSB helps inspire students to pursue careers in scientific fields:

“...the National Ocean Sciences Bowl takes learning outside of the classroom in ways I never imagined. I have seen how many things I [learn] sitting at a desk apply to the real world. This program has gotten me **motivated to pursue a career in a scientific field more than anything I experienced in a classroom.**”

– Esther Gland, 10th grade student, Wisconsin (NOSB Lake Sturgeon Bowl)

“The **NOSB played a huge part in my development** as a person and as a scientist, and I wouldn’t be where I am today without it.”

– Elizabeth Sibert, alumna, Massachusetts (NOSB Blue Lobster Bowl),  
current PhD Candidate in oceanography at the Scripps Institution of Oceanography

“I walked into my high school wanting to be a neurologist, and now I will be walking out as someone **wanting to work in marine policy and environmental studies.**”

– Amanda Fontenot, 11th grade student, Texas (NOSB Dolphin Challenge)

“[A lot of students at our school] are interested in science but don’t necessarily have a career path in mind. And for many, the **National Ocean Sciences Bowl has ignited a passion**, has directed them toward personal discovery, and they’ve taken up the mantle, if you will, of ocean science and ocean defense as a career.”

– Mark Tohulka, coach, Florida (NOSB Manatee Bowl)

## The NOSB’s Impact

**A long-term study of NOSB alumni recently found:**

**45%** percent of graduates are employed in an occupation or organization that is clearly STEM related

**41%** agreed that participating in the NOSB influenced their career choice

**39%** indicated the NOSB influenced their choice of college major

**97%** of current NOSB students believe that oceans affect humans who live anywhere on the planet, even in the middle of the country

**33** schools and districts have implemented a marine science class directly due to their high schools’ participation in the NOSB

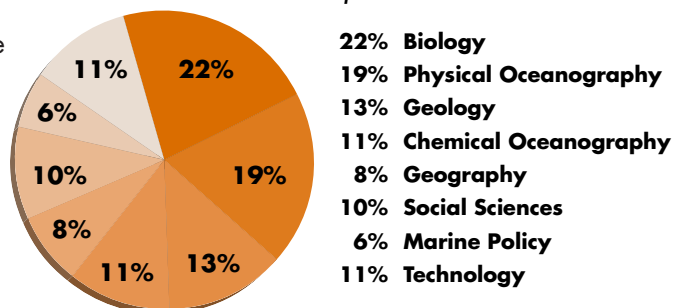
“The NOSB is a lighthouse in the effort to excite and motivate students to fulfill their potential and carry America into the 21st century as the world leader in sciences, technology, math, and citizenship. In the 13 years that I have had the pleasure to work with the NOSB, I have seen the impact that this program brings to students ... We are truly succeeding in education when we excite students, and the NOSB excites students.”

– Mel Hall, coach,  
Mississippi (NOSB Hurricane Bowl)

## The NOSB’s Interdisciplinary Focus

The NOSB’s competition questions reflect the interdisciplinary nature of the ocean sciences, providing students the opportunity to deeply learn principals in the four core sciences, as well as technology, geography, policy, and social sciences. Increasing our technology content represents an opportunity for industry engagement. Each year, a thematic emphasis, such as ocean acidification or marine renewable energy, cuts across all disciplinary topics.

NOSB Question Topics 2010-17



*“Eric and I are especially excited about **the promise of our next-generation** of ocean scientists and the important work that the National Ocean Sciences Bowl is doing to lead that effort. The **NOSB has been instrumental** in developing the math and science skills students need to excel in college and confidently pursue degrees in marine science.”*

*– Wendy Schmidt, philanthropist and ocean advocate*



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The NOSB is a program of the Consortium for Ocean Leadership. For more information about the NOSB, visit [www.nosb.org](http://www.nosb.org) or contact:

Kristen Yarincik, NOSB Director

Consortium for Ocean Leadership

1201 New York Avenue, NW, 4th Floor, Washington, DC 20005

+1 (202) 448-1237

[kyarincik@oceanleadership.org](mailto:kyarincik@oceanleadership.org)

*The NOSB is a 501(c)3, your support can be focused toward the general program, to specific regions, or toward academic scholarships and educational experiences.*



National Ocean Sciences Bowl



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