22nd Annual







••••• About the BLB •••••

Host Institution:

MIT Sea Grant College Program

Regional Coordinators:

Thomas Consi (MIT Sea Grant College Program)
Lori Tsuruda (People Making a Difference*, MIT '89)

Chief Moderator: Richard Rigazio (U.S. Navy Retired)

Chief Science Judge: Carolina Bastidas (MIT Sea Grant College Program)

Chief Score Keeper: Sam Elder (MIT PhD '18)

The Massachusetts Blue Lobster Bowl is one of the 25 regional NOSB competitions held this year. The BLB is designed to inspire and challenge high school students, while testing the competitor's knowledge of marine sciences. Seventeen teams from around the Commonwealth compete for the regional championship title and opportunity to advance to the NOSB National Finals competition.

Game Play

Each match pits two teams of four students against one another in an academic quiz bowl format. Competitors use a buzzer system to respond to rapid-fire multiple-choice and short-answer questions read by a Moderator. Additionally, teams work collectively to produce answers to complex "Team Challenge Ouestions."

Tournament Format

During the first phase of the competition 16 teams compete in three divisions in a *Round Robin Tournament*, each team playing all other teams in its division. Following the Round Robin, eight teams advance to a *Single Elimination Tournament*, and the winner of the final round is our regional champion.

McDowell Science Challenge

The teams that do not compete in the Single Elimination Tournament will compete for the McDowell Award for Excellence in Academic Collaboration and Problem Solving. The McDowell Science Challenge is a competition element added in 2014 to strengthen and test students' problem solving skills.

About the Blue Lobster Bowl Massachusetts Regional Ocean Sciences Bowl





National Ocean Science Bowl (NOSB)

The National Ocean Sciences Bowl (NOSB) is a national academic competition for high schools on topics related to the study of the oceans. The NOSB is a nationally recognized and highly acclaimed high school academic competition that provides a forum for talented students to test their knowledge of the marine sciences including biology, chemistry, physics, and geology.

The NOSB is supported by the Consortium for Ocean Leadership and was launched in 1998, during the Year of the Ocean, to further its mission of supporting and expanding ocean science education. Since its inception, the competition has grown to include 25 regional competition locations with 300-350 schools and more than 2,000 students participating annually.



States involved in the regional NOSB Competitions.

The winning team from each of the regional competitions advances to the NOSB Finals Competition held in a different location each year.

2019 NOSB Finals Competition ••

Location: Washington, D.C.

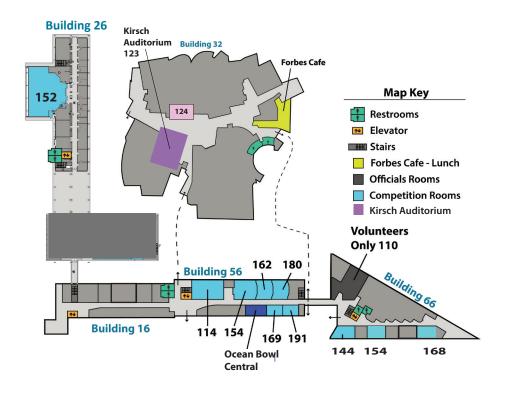
Date: April 11-14

Theme: Observe the Ocean: Secure the Future



Campus Map

All events take place on the first floor.



Schedule



9:20 am Coach Check-In & Team Photos (Lobby at entrance to 32-123)

10:00 am Opening Session (32-123 Kirsch Auditorium)

Stage 1 Round Robin (classrooms in Buildings 56 and 66)

10:20 am		(16 Teams)				
	Round 1	Divis	ion 1 Divis	ion 2 D	ivision 3	3
11:15 am	Round 2					
12:00 pm	Round 3					
12:45 pm	Lunch (Forbes Cafe	e in l	Building 32)			
12:55 pm	Graduate Student	t Par	nel Q&A (B	uilding 3	2, Roon	n 124) limited space
1:30 pm	Round 4					
2:15 pm	Round 5					
3:00 pm	Student Speaker e	ь Se	eding Anno	ounced (.	32-123)	
	(top 8 teams)			(remaini	ng tean	ıs)
Stage 2	Single Elimination (Building 56)	n		well Sci		hallenge
3:30 pm	Round 6					
4:15 pm	Round 7		МСДС	owell Sci	ence C	hallenge
5:00 pm	Championship M	atch	(32-123)			
5:45 pm	Awards Ceremony	y (32	2-123)			

Competition Rules Overview

The Blue Lobster Bowl follows the official rules of the National Ocean Sciences Bowl (www.nosb.org). Below are some of those rules.

Please respect the integrity of the competition and the considerable effort made by team and officials in preparing for this event. Spectators are welcome in competition rooms but may not:

- Enter or leave a room during a match
- Take pictures, notes, or any recordings in the competition room
- Grade papers, solve puzzles, read, doodle, use phones, tablets, computers or Apple watches, or listen to music
- · Communicate with each other or competitors during matches
- Talk in the halls outside competition rooms during matches



Officials' Roles

Moderator: Runs the room and asks the questions

Science Judge: Rules on science challenges Rules Judge: Ensures rules are followed Time Keeper: Times the match Score Keeper: Tallies team scores

Science Room Graders: Grade Team Challenge Questions (TCQs) and resolve science challenges

Runners: Move communications to and from Ocean Bowl Central and control traffic in/out of competition room during matches

Competitors

Each team has one captain, three players at any given time, plus at least one coach. During the break, a team's alternate player may rotate in for a six-minute buzzer half.

Match Format

Each match is composed of two, 6-minute, rapid-fire buzzer segments, two team challenge questions (TCQs), and a break.

Buzzer Questions

Players buzz in to answer toss-up, multiple-choice questions. If a student is recognized by the moderator but the answer is incorrect, the Moderator gives the opposing team a chance to respond. If the answer is correct, the team gets a chance to answer a bonus question. Teams may consult up to 20 seconds on bonus questions, but only the team captain may give the answer. Bonus questions may be multiple-choice or short answer.

Players can respond to multiple choice questions using the letter (W, X, Y, Z) or the word answer, exactly as specified, with the exception of articles such as "a," "an," and "the." Anything else is unacceptable. The first answer stated is the one that counts.

During toss-up questions, consultation among team members is NOT allowed.

Competition Rules Overview

If the Moderator has said the format (i.e., multiple-choice) of a toss-up question and a player "blurts" an answer without buzzing in or without being recognized by the moderator, his/her team loses its opportunity to answer the toss-up question.

Buzzer Use

The buzzer is used only for toss-up questions. If a player buzzes in before the Moderator has completely read the question and all possible answers, the Moderator will recognize the player (and announce an interrupt) and the player can answer the question. If the answer is acceptable, the team earns 4 points and the chance to answer the bonus question. If the answer is unacceptable, the team loses 4 points and the question can be read in its entirety to the opposing team.

Timing

After each toss-up question is read, teams have 5 seconds to buzz in. After being recognized, a player must begin his/her response within 3 seconds. After each bonus question is read, the team captain must start his or her answer within 20 seconds. Teams are allowed 2-5 minutes to respond to TCQs, depending on the complexity of the question.

Scoring

Toss-up question: 4 points
Bonus question: 6 points
Interrupt, recognized, but answered
incorrectly: -4 points
Blurt answer, unrecognized: 0 points; team
loses chance to answer the question

Challenges

Active players (not audience members, alternate players, coaches, or officials)

TCQ: 0-20 (partial credit possible)

may challenge the rules or scientific answers to a toss-up or bonus question before the Moderator begins reading the next question's format. The Time Keeper stops the clock, officials confer, and the appropriate Judge makes the ruling. If unsatisfied with this ruling, student may re-challenge before the next question, in writing; Ocean Bowl Central, whose rulings are final, will rule.

Players may not challenge TCQs.

Team Challenge Questions (TCQs)

Two, handwritten short response TCQs are asked during each match to test teams' critical thinking and collaboration skills.

- 1. During the Team Challenge portion of the competition, the audience must remain quiet and seated without reading or writing, even on the official programs.
- 2. Teams members are encouraged to work together on these questions; however, only the answer sheet submitted by each Captain will be taken to be graded in the science room.
- 3. Only answers written left-to-right, parallel to the question text will be considered.
- 4. If *n* multiple answers are requested, only the first *n* written answers will be considered.
- 5. We will only award points to a team that writes its complete school name and applicable team letter, the competition room building# and room#, and round# on the backs of its TCQ answer sheets.
- 6. TCQ scores will be revealed and added to overall scores before the second buzzer halves begin, regardless of when TCQs are administered.



Keep Track of the Competition! http://www.pmd.org/s/BLobster19.htm

Team Check In

Time: 9:20am - 9:45am *Who:* All Coaches

Location: Lobby Area in Front of Entrance to 32-123 Kirsch Auditorium

All coaches check-in their teams. Each coach must designate the four or five pre-registered students (who have photo identification with them) for each team that competes in the round-robin and single-elimination tournament. Team photographs will be taken immediately, before the opening session.

Note: For teams not progressing to the single-elimination tournament, all pre-registered students may compete in the science challenge.

Please have your official team photo taken immediately after you check in!

· · · · · Opening Session · ·

Time: 10:00am - 10:15am *Who:* All teams and coaches

Location: 32-123 Kirsch Auditorium

16 competing teams from 8 different Massachusetts schools (and 2-3 non-competitive (NC) school teams that will play during *bye* rounds) will

begin the competition with a welcome and overview of the day.

· Round Robin Competition

Time: 10:20am - 12:45pm and 1:30pm - 3:00pm

Who: All teams and coaches

Location: Buildings 56 and 66 (see division assignments on pg 12-14)

Teams *MUST* be in their assigned rooms ready to begin round 1 by 10:25am,

Late teams will forfeit this round.

All competing teams are divided into three divisions of 5 or 6 teams each. During the first stage of the competition, Round Robin, 5 rounds are played. During these first five rounds, teams will play one match with each team in their division.

Scoring

Teams accumulate points based on the number of wins, ties, and losses (not by raw points scored). Follow along with the competition by keeping track of scoring: $\sin = 2$ points; $\cos = 0$ points; i = 1 point





Advancing

The top two teams in each division plus the top two, third-placing "wildcard" teams will advance to an 8-team Single Elimination tournament for the 2019 Blue Lobster Bowl championship.

The remaining teams (and both Cape Cod teams) will compete for the McDowell Award for Excellence in Academic Collaboration and Problem Solving.

Tie Breaks

In case of a tie in the round robin results, the tie will be broken according to:

- Head to head win/loss record for the round-robin matches
- Average points scored per non-bye round
- A coin toss

"Wildcard" Team Selection

The three teams which finish in third place in each division will be ranked first by score and second by average points scored per non-bye round. The top two teams will join the Single Elimination tournament.

···· Lunch ···

Time: 12:45pm - 1:25pm

Who: All teams and coaches

Location: Forbes Cafe (Building 32)

During the Round Robin competition (between rounds 3 and 4), teams will break for lunch and the new "career event," a Graduate Student Panel Q&A.

Coaches must pick up and distribute pre-requested, special meals for each student who requested one *before* the whole team can process through the lunch line.

NOTE: Teams *MUST* be in their assigned rooms ready to begin round 4 by 1:30. If a team is not on-time, it will forfeit the round.



Graduate Student Panel Q&A

Time: 12:55pm - 1:25pm

Who: Interested students - First-come, first-serve due to limited space

Location: 32-124

Meet four of the graduate students who are officiating for the Blue Lobster Bowl.

Learn about their research interests, career paths, and aspirations.

Ask them about the things you cannot learn from typical recruitment materials.

···· Presentation · · ·

Time: 3:00pm - 3:30pm *Who:* All teams and coaches

Location: 32-123 Kirsch Auditorium

After the Round Robin Competition, all teams will gather for the student speaker and announcements about the remainder of the competition.

Student Speaker

John Michael Reyes is a fourth year undergraduate in Mechanical and Ocean Engineering at MIT. He studies marine robotics, with a focus on autonomy and sensing. Through his research he has worked on the Great Barrier Reef, and is currently working on several projects in autonomous environmental sensing. His aim is to use technology to monitor environmental health, so that the effects of climate change on the ocean and atmosphere can be better understood. His talk will focus on his current and past projects, and how they can help the environment.

Room Assignments

Following the presentation, all teams will receive room assignments for the remainder of the competition, The top eight (8) teams will be announced and will proceed to the Single Elimination Competition. Remaining teams will compete for the McDowell Award of Excellence.

If you are competing in single elimination tournament, write your room assignment on page 17.

Single Elimination Tournament

Time: 3:30pm - 5:00pm

Who: Top 8 teams and coaches

Location: Building 56

The eight advancing teams will compete for the Championship title in a Single Elimination Tournament. Two elimination rounds will be played yielding two winners who will go head-to-head in the Championship Round.



3rd - 8th place teams will be determined by the win/loss record and total scores (buzzer round points and TCQ scores) from the single elimination tournament only.

In case of a tie in the elimination rounds, a series of five toss-up questions will be used to break the tie. (Alternates cannot enter the game under this circumstance. *See rule #55*.)

·····McDowell Science Challenge····

Time: 3:30pm - 5:00pm

Who: Teams in Places 9-16 and Teams from Cape Cod

Location: 26-152

During the first half of the science challenge, teams will be introduced to a marine science topic as well as related tools and resources. During the second half of the challenge, teams will use their knowledge of ocean science and new skills and tools to work together to solve a real-world marine science challenge.

The team with the highest point total will receive the Judy McDowell Award for Excellence in Academic Collaboration and Problem Solving and passes to the Museum of Science donated by The MathWorks.

..... Championship Match

Time: 5:00pm - 5:45pm

Who: All teams and coaches

Location: 32-123 Kirsch Auditorium

All teams are required to watch the two remaining teams compete in the final match for the BLB 2019 Championship title, a team dinner donated by Legal Sea Foods, and passes donated by the New England Aquarium.

···· Awards Ceremony ···

Time: 5:45pm - 6:00pm

Who: All teams and coaches

Location: 32-123 Kirsch Auditorium

Following the Championship Match the 1^{st} - 8^{th} place standings are announced and trophies awarded to teams placing 1^{st} - 4^{th} place. The McDowell Award for Excellence in Academic Collaboration and Problem Solving is awarded.



Schedule: Stage 1

Round Robin Division 1

···· Division 1: Boston Harbor ····

Team	Wins	Losses	Ties	Score	Rank
Acton-Boxborough C					
Fitchburg A					
Lexington A					
Newton North C					
Newton South					
Non-Competitive (NC) Team		-			

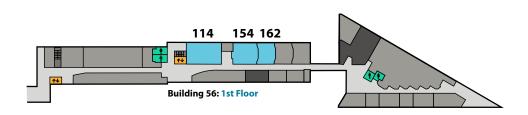
· · · Round Robin Schedule · · · ·

Round	Room 56-114	Room 56-154	Room 56-162
Round 1 10:30am	Fitchburg A NC Team	Acton-Boxborough C vs Lexington A	Newton North C vs Newton South
Round 2 11:15am	Acton-Boxborough C vs Fitchburg A	Newton South NC Team	Lexington A vs Newton North C
Round 3 12:00pm	Newton North C NC Team	Acton-Boxborough C vs Newton South	Fitchburg A vs Lexington A

Lunch (Forbes Cafe)

Round 4 1:30pm	Acton-Boxborough C vs Newton North C	Lexington A Vs NC Team	Fitchburg A vs Newton South
Round 5 2:15pm	Lexington A vs Newton South	Fitchburg A vs Newton North C	Acton-Boxborough C vs NC Team

· · · · Campus Map · ·



Schedule: Stage 1 Round Robin Division 2





· · · Division 2: Plum Island Sound · · · ·

Team	Wins	Losses	Ties	Score	Rank
Acton-Boxborough A					
Bristol A					
Fitchburg B					
Lincoln-Sudbury A					
Newton North B					
Non-Competitive (NC) Team				-	

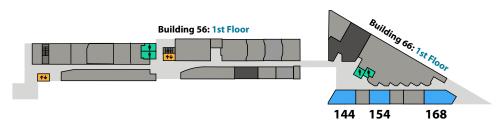
Round Robin Schedule ...

Round	Room 66-144	Room 66-154	Room 66-168
Round 1 10:30am	Newton North B NC Team	Fitchburg B vs Lincoln-Sudbury A	Acton-Boxborough A vs Bristol A
Round 2 11:15am	Fitchburg B vs Newton North B	Acton-Boxborough A NC Team	Bristol A vs Lincoln-Sudbury A
Round 3 12:00pm	Bristol A NC Team	Acton-Boxborough A vs Fitchburg B	Lincoln-Sudbury A vs Newton North B

Lunch (Forbes Cafe)

Round 4 1:30pm	Bristol A ys Fitchburg B	Lincoln-Sudbury A NC Team	Acton-Boxborough A vs Newton North B
Round 5 2:15pm	Acton-Boxborough A vs Lincoln-Sudbury A	Bristol A vs Newton North B	Fitchburg B vs NC Team

· Campus Map ·





Schedule: Stage 1

Round Robin Division 3

···· Division 3: Buzzards Bay ·····

Team	Wins	Losses	Ties	Score	Rank
Acton-Boxborough B					
Bristol B					
Lexington B					
Lincoln-Sudbury B					
Newton North A					
Non-Competitive (NC) Team					

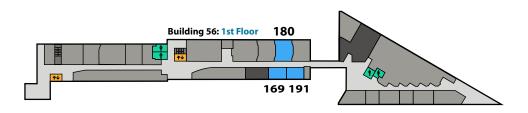
· · · Round Robin Schedule · · · ·

Round	Room 56-169	Room 56-180	Room 56-191
Round 1 10:30am	Lincoln-Sudbury B vs Shepherd Hill	Bristol B vs Lexington B	Acton-Boxborough B Vs Newton North A
Round 2 11:15am	Bristol B vs Lincoln-Sudbury B	Newton North A Shepherd Hill	Acton-Boxborough B vs Lexington B
Round 3 12:00pm	Acton-Boxborough B Vs Shepherd Hill	Bristol B vs Newton North A	Lexington B vs Lincoln-Sudbury B

Lunch (Forbes Cafe)

Round 4 1:30pm	Acton-Boxborough B vs Bristol B	Lexington B vs Shepherd Hill	Lincoln-Sudbury B vs Newton North A
Round 5 2:15pm		Acton-Boxborough B vs Lincoln-Sudbury B	

· · · · · Campus Map · ·





Congratulations to all NOSB seniors heading off to college or employment next year. We hope that you will continue to be involved in the program and stay in touch regarding your future careers. Now that you are a program alumnus, here are some tips for staying connected with the NOSB at the regional and national levels:

REGIONAL OPPORTUNITIES

Volunteer at a regional competition

Visit the competition map at **www.nosb.org** to find bowl dates and contact information.

Be sure to tell the bowl's regional coordinator that you are a NOSB alumni AND if you've volunteered at any other bowls.

Serve as a mentor to new teams

Email your regional bowl's coordinator to see if they can match you up with a new team.

NATIONAL OPPORTUNITIES

Join the NOSB Alumni Group on LinkedIn Follow NOSB on social media

Facebook: National Ocean Sciences Bowl

Twitter: @NOSBRocks
Instagram: @NOSBRocks

Receive our newsletter: http://bit.ly/NOSBNews

Serve as a competition question writer or reviewer

Participate each year in our past participant tracking study no matter your current major or field

Provide an Alumni Spotlight

As you start your career, tell us where you are working and the job you perform, as well as the NOSB's impact on your personal and/or professional life. We'll share your story online and in Ocean Leadership's Ocean News Weekly.

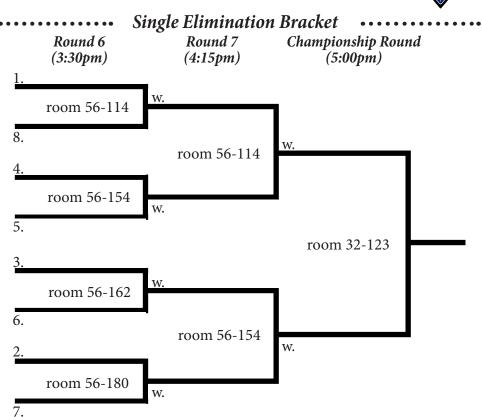
Email nosb@oceanleadership.org for more information.



•		
	Single	Science
Division 1. Poston Hankon	Elimination	Challenge
Division 1: Boston Harbor Team	Seed	
Acton-Boxborough A C		
Fitchburg A		
Lexington A		
Newton North C		
Newton South		
Diri ani il la	1	
Division 2: Plum Island Soun		
Team	Seed	
Acton-Boxborough A		
Bristol A		
Fitchburg B		
Lincoln-Sudbury A		
Newton North B		
Division 3: Buzzards Bay		
Team	Seed	
Acton-Boxborough B		
Bristol B		
Lexington B		
Lincoln-Sudbury B		
Newton North A		
Shepherd Hill		

Schedule: Stage 2







2019 BLB Teams

•••• Full Varsity Rosters

Acton-Boxborough Regional High School A

Nancy Young - Coach Damon Brown Noah Chinitz Collin Cooper Basil Sousounis Katrina Sousounis

Bristol County Agricultural High School A

Emily Perry - Coach Abigail Bruno Hannah Bruno Alexander Cameron Madison Kruger Jessie Power Nicole Simas

Fitchburg High School A

Laura Bolick - Coach Nevin Arsenault Samuel Boudreau Kato Bouthsarath Vence Henry Toua Vang

Lexington High School A

Janice Compton - Coach Brendan Cantwell Sachiv Chakravarti Jeremy Fleming Fayza Jaleel Jonathan Jiang Jasper Nevis Ashwin Padaki

Lincoln-Sudbury Regional High School A

William "BJ" Pegram - Coach Seamus Frey Kevin Ji Lisa Samoylov Parker Simon Camille Slattery

Newton North High School A

Sally Johnson - Coach August Betts-O'Rourke Grace Lam Marguerite McCarthy Laura Schmidt-Hong Andrew Trias

Newton South High School

Paul Kim - Coach Lucille Dutton Kyle Hooker David Kim Kiran Mak Skye Tausig

Shepherd Hill Regional High School

Justin Sauvageau — Coach Chase Abbott Edison Doko Davone Keovongmanysar Emily Waterhouse

2019 BLB Teams



..... Full Junior Varsity Rosters .

Acton-Boxborough Regional High School B

Michael Romano - Coach Viraj Lawande Nicholas Michaelidis Jack Post Aidan Rybicki Malcolm Verrilli

Acton-Boxborough Regional High School C

Katelyn Saaristo - Coach Bertalan Gyimesi Nikhil Krishnamurthy Paul Michaelidis Samuel Seepersaud

Bristol County Agricultural High School B

Elizabeth Savage - Coach Emma Forgit Mackenzie Rumson Hope Siddall Alleynah Souza Analise Thompson Alexis Wells

Fitchburg High School B

Ann Taft - Coach Julia Boudreau Ava Gagne Justine Gaynor Marguerite King Michaela Wakefield

Lexington High School B

Kari Darling - Coach Sunwoo Baik Lewis Hwang Yul Kim Parvati Kodendera Edward Lacson Beverly Liu Kristina Wong

Lincoln-Sudbury Regional High School B

Regina Shopiro - Coach Taiki Aiba Reetom Gangopadhyay Zoe Liu Fiona Prendergast Alison Quirk Caitlyn Sams Valerie Ungaro

Newton North High School B

Russell Morin - Coach Skyler Bohnert Austin Chen Emily Davis-Morin David Genis Abigail Lau Emily Ng

Newton North High School C

Curtis Betts - Coach Yossie Lebedev Cher Li David Li Yesha Thakkar

·····"Non-Competitive" Rosters ····

NC Cape Cod Academy Abby Wood - Coach

Peter Saltsman Assistant Coach

Lucas Guo Jacky Haowen Crystal Lin William Liu George Zhao Sam Zhili NC Nauset Regional High School

Rydell Welch Coach

Liam Brister
Liam McCarthy O'Hara

Kieran Norton

2019 Volunteers

Thank you to all of our dedicated Blue Lobster Bowl volunteers, without whom the competition would not be possible.

Kween Agba Alia Al-Hai Carolina Bastidas Tina Bergstrom Jennifer Blackmon Alexandra Cao Felicia Chen William Coney Catherine Cooper Ira Cooper Sarah Damassa Kat Deabill Sam Elder Aidan Evans-Strong Cleo Falvey Ken Finkelstein

Cleo Falvey Ken Finkelstein Patrick Flanagan Roger Fu Albert Garcia Noah Germolus Evelyn Goroza Evan Howard

Brian Kennedy Ian Lai Scott Lakin David Lassila Joshua Leung Julia Leung Diane Li Iade Lin Sabrina Liu Hannah Mark Christopher Miller Laura Morse Tyler O'Keefe Roshan Padaki Allison Patton Evan Patton Ian Paul Timothy Puopolo Samuel Rafter Elaine Rigazio Rick Rigazio

Ianice St. Clair Elizabeth Sanford Solveig Schilling Kathleen Schwind John Seay Cassandra Seltzer Matthew Shorter Elizabeth Sibert Noah Singer **James Smith** Katherine Sottilare Suzanne Stickley Kevin Sutherland **Lauren Thomas** April Thwin mrn Tomusiak Cici Wang Zhishan Wang Alvssa Wren Alex Yoo Rachel Zhang Aric Zhu

· · · · Share Your Feedback with NOSB •

Neal Rosen

Students https://www.surveymonkey.com/r/NOSB19Rstu https://www.surveymonkey.com/r/NOSB19Rcoa https://www.surveymonkey.com/r/NOSB19Rvol



APPLY FOR A NATIONAL OCEAN SCIENCES BOWL SCHOLARSHIP!



hotos courtesy of NOAA

The National Ocean Scholar Program offers tuition assistance (up to \$1,000) to rising college freshmen planning to major in an ocean science related field.

To be eligible, students must:

- have participated in the National Ocean Sciences Bowl (NOSB®) at least once during high school.
- be graduating from high school this year.
- be planning to pursue a post-high school degree in an ocean related field this coming fall.

Application materials are online and due 5/10/19.
www.nosb.org/opportunities/national-ocean-scholar-program

For more information or questions please contact Ocean Leadership at **nosb@oceanleadership.org**.

The NOSB is a program of the Consortium for Ocean Leadership



Sponsor Organizations

· · · MIT Sea Grant College Program •

Founded in 1966 by Congress, the National Sea Grant College Program is a network of 33 programs working to promote the conservation and sustainable development of our marine resources through research, education, and outreach. Sea Grant is funded by the U.S. Department of Commerce's National Oceanic and Atmospheric Administration (NOAA).



The Massachusetts Institute of Technology was designated as a Sea Grant College in 1976, the first private institution of higher learning to be appointed as such. Our rigourous research program, dedicated outreach programs and integrated educational projects are aimed at providing real-world solutions to coastal questions and at helping to inspire the coastal stewards of tomorrow.

·• People Making a Difference®•

People Making a Difference (PMD) promotes informed and responsible volunteerism by involving people in meaningful, one-time, hands-on work that meets the needs of local



Do Something Good Learn Something New Make New Friends

charities and by assisting companies and charities in building successful community involvement programs.

Consortium for Ocean Leadership

The Consortium for Ocean Leadership is a Washington, D.C.-based nonprofit organization that represents leading public and private ocean research and education institutions, aquaria and industry with the mission to advance research, education, and sound ocean policy. The organization also manages ocean research and education programs in areas of scientific ocean drilling,



ocean observing, ocean exploration, and ocean partnerships.

Special Thanks & Sponsors

Thanks to Noah Germolus *G* and Evan Howard *PhD '17* for developing and implementing this year's McDowell Science Challenge.

Special thanks to Diane Alicea for her administrative support without which the competition would not be possible.

Thanks to Kathleen Schwind '19 and Kevin Sutherland *G* from the Northeast Regional Middle School Science Bowl for their collaboration and cross-support.

Special appreciation to MIT Biological Engineering, Chemical Engineering, and Mechanical Engineering for their generosity and support.



2018 - 2019 SPONSORS



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PEOPLE MAKING A DIFFERENCE

Do Something Good Learn Something New Make New Friends

www.pmd.org











Protecting the blue planet



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