E/V Nautilus Education Opportunities

The Nautilus Exploration Program
The Nautilus Exploration Program was founded in 2008 by Dr. Robert Ballard and is conducted by the Ocean Exploration Trust. Our international program centers on scientific exploration of the seafloor launched from aboard the Exploration Vessel (E/V) Nautilus, a 64-meter research vessel. In addition to conducting scientific research, the Nautilus Exploration Program offers its expeditions to explorers on shore via live video, audio, and data feeds from the ship. We also bring educators and students of all ages aboard E/V Nautilus during expeditions, offering them hands-on experience in ocean exploration, research, and communications.

Our Goals

- To explore areas of the ocean that have never been explored before, seeking out new discoveries in the fields of geology, biology, maritime history, archaeology, and chemistry
- To conduct all scientific research to the highest international academic standard
- To push the boundaries of ocean engineering, technology, education, and communications
- To share our expeditions with explorers around the world via live telepresence
- To serve as role models for the next generation of scientists, engineers, and educators
- To spread the excitement of ocean exploration and turn everyday viewers into explorers
The Nautilus Corps of Exploration
The international Nautilus Corps of Exploration consists of scientists, engineers, communicators, educators and students. Our primary objective is to explore the ocean seeking out new discoveries in the fields of geology, biology, maritime history, archaeology, and chemistry while pushing the boundaries of engineering, technology, education and communications. We aim to share our story and our science with explorers around the world from aboard E/V Nautilus; and we aspire to serve as STEM role models for the next generation of scientists, engineers and educators.

The Nautilus 2013 Expedition Season
Scientists aboard Nautilus will explore geological, archaeological, and biological aspects of the Gulf of Mexico and Caribbean Sea in 2013 using multibeam sonar, remotely operated vehicles, and telepresence technology. The 2013 Nautilus Exploration Program season will be roughly four months in the field, including an expedition during the summer, and an expedition in the fall. The Ocean Exploration Trust, which conducts the Nautilus Exploration Program, will announce ports of call and waters to be explored in February 2013.

Deadline for All Applications: March 1, 2013
www.oceanexplorationtrust.org
Program Descriptions

The Nautilus Exploration Program provides multiple opportunities for hands-on experience aboard E/V Nautilus and at the University of Rhode Island. Our Honors Research Program is available to junior and senior high school students for an authentic research experience both at sea and ashore. Various at-sea internships in science and engineering are available for undergraduate and graduate students. Our Educator at Sea Program is available for formal and informal educators interested in science communications. Selected applicants become members of our Corps of Exploration for 2013 and most will have the opportunity to work aboard Nautilus for a 2-4 week period. All participants engage in education and outreach activities.

Honors Research Program - see HRP Packet for details
Applicants: High school students who are U.S. citizens. Must at least 17 years old and have completed sophomore year of high school at time of participation.
Commitment: 7 weeks on shore, ~1-2 weeks of which will be spent at sea (sea-time not required)

Ocean Science Internships - see Intern Packet for details
Applicants: Undergraduate and graduate students studying oceanography, including biology, geology, and archaeology, or related fields. Spring 2013 graduates are eligible to apply.
Commitment: 2-4 weeks at sea

Seafloor Mapping Internships - see Intern Packet for details
Applicants: Undergraduate and graduate students with interest in seafloor mapping and ocean exploration. Spring 2013 graduates are eligible to apply.
Commitment: 2-4 weeks at sea

Video Engineering & Filmmaking Internships - see Intern Packet for details
Applicants: Undergraduate and graduate students with interest in video engineering and/or filmmaking. Spring 2013 graduates are eligible to apply.
Commitment: 2-4 weeks at sea

ROV Engineering Internships - see Intern Packet for details
Applicants: Undergraduate and graduate students with interest in ocean, mechanical, or electrical engineering, or a related field. Spring 2013 graduates are eligible to apply.
Commitment: ~4-5 weeks at sea

Educator at Sea Program - see EAS Packet for details
Applicants: Formal and informal educators associated with a school or informal education venue.
Commitment: 2-4 weeks at sea, plus a required 4-day communications workshop in Rhode Island

Deadline for All Applications: March 1, 2013
www.oceanexplorationtrust.org
Exploration Vessel *Nautilus*

E/V *Nautilus* is a 64-meter exploration vessel with 17 permanent crew and berthing for a 31-member rotating Corps of Exploration. The ship carries with it two Remotely Operated Vehicles (ROVs) named *Hercules* and *Argus* that explore the seafloor in real-time online via our telepresence technology. A new hulled-mounted multibeam system will be installed during winter 2013. The ship also has a Data Lab and Wet Lab for processing digital data and physical samples. As part of our effort to share our expeditions with students and colleagues, we stream video from our ROVs and various locations on the ship live on our website [www.nautiluslive.org](http://www.nautiluslive.org).

Living conditions for our Corps of Explorers on EV *Nautilus* consist of shared rooms with bunk beds and some accommodations require shared showers. We share three meals a day in a group dining room. *Nautilus* also has an outdoor patio area and a state-of-the-art indoor lounge with exploration viewing monitors. Limited WiFi internet is available in common areas for personal use and several landline telephones are provided in public spaces.
E/V Nautilus is a working scientific research and exploration sea-going vessel. While the ship offers many of the comforts and conveniences of home (such as hot showers, telephones, and internet), it is also a difficult working environment consisting of tight living quarters, incredibly long hours, and hot and cold temperatures. You will be living aboard a ship with a small team of people who are far from home, some of whom have many years of sea-going experience and some who do not. Many areas on the ship can be dangerous during operations and while underway and you will be expected to adhere to all safety regulations. Our crew also cannot predict the weather, but strives to keep E/V Nautilus sailing in calm seas. As a selectee, you will not be able to pick your exact dates of sail, your specific travel arrangements, your bunkmates, or your working shift (watch) hours. Selectees are required to sign a medical waiver attesting they are fit and healthy for working aboard a research vessel.

Our Nautilus leadership team strives to make every member of the Corps of Exploration’s experience a safe and enjoyable one. If you are selected to sail with us, you can expect to have an incredible one-of-a-kind experience and you will get to work side-by-side with exceptional shipmates from all over the world. The Nautilus Exploration Program has brought over 100 interns and educators aboard during the past 4 years, the majority of whom had never gone to sea before, and some of them have returned to work aboard Nautilus in various positions.

If you are interested in any of our intern or fellowship opportunities, we encourage you to apply! For more information, please visit www.oceanexplorationtrust.org

Deadline for All Applications: March 1, 2013
www.oceanexplorationtrust.org
Educator at Sea Program Packet

The *Nautilus* Educator At Sea Science Communication Fellowship Program aims to train formal and informal educators in basic Science Communication. Educator at Sea positions entail 2-4 week periods working aboard E/V *Nautilus* as communicators of the expedition. From aboard *Nautilus*, Educators at Sea use our Nautilus Live website to share our expedition with global audiences on shore. They further participate in interactive presentations with student groups and public audiences to engage people of all ages in scientific exploration. An equally important aspect of the program is bringing the expedition back home to local student populations and communities after our Educators have joined us at sea.

Sailing with *Nautilus* also offers Educators at Sea opportunities to deepen their understanding of how science, technology, mathematics, and engineering (STEM) apply to real-world situations, especially as they relate to ocean exploration. Educators are invited to witness every aspect of the expedition to make it come alive for *Nautilus* Live viewers by interacting with and interviewing various members of the expedition team and observing operations on deck, in the control van and in onboard labs. As a result, Educators at Sea bring real-world applications of STEM back into their classrooms, organizations and local communities.

Educators at Sea also network with their peers and expedition team members from prominent ocean research institutions and universities to create STEM-focused lesson plans for use with their students. They can then leverage these relationships and experiences to create plans linked to national and local teaching standards and advance *Ocean Literacy Essential Principles and Fundamental Concepts*. Through this Fellowship, Educators at Sea may be offered opportunities to join other research vessel affiliated with the *Nautilus* Exploration Program.

Deadline for All Applications: March 1, 2013
www.oceanexplorationtrust.org
What's Included
Applicants who are selected as 2013 Educators at Sea will be provided full travel to and from the ship in the Caribbean Sea from their current city of residence. Educators at Sea will be provided with room and board in the form of shared cabins with bunks and three full meals per day.

Educators at Sea will also be provided with full travel and training materials associated with the Science Communication Workshop, May 6 – 9, 2013. The Workshop will also provide JASON Project and Immersion Learning curricula and activity ideas.

If needed, substitute fees for the workshop and while educator travels to and from the expedition will be provided. Fees are reimbursed at the rate of the substitute pay in the district for up to a maximum of $200.00/day, and proof of payment must be submitted with a reimbursement form.

Timeline
- January 15, 2013 – Application Process Opens
- March 1, 2013 – All Applications Due
- March 11 - 22, 2013 – Interviews with Select Applicants
- March 29, 2013 – 2013 Educators at Sea Announced
- May 1, 2013 - Educators must have a valid passport
- May 6-9, 2013 – Science Communication Workshop in Rhode Island
- June 1 - November 30, 2013 - Educators spend 1-3 weeks at sea on an OET field program. Educators’ seagoing dates will be determined by OET staff.

Deadline for All Applications: March 1, 2013
www.oceanexplorationtrust.org
Application Materials

- **General Application Form**
  - Complete the online application form at:
  - [www.oceanexplorationtrust.org/generalapplication](http://www.oceanexplorationtrust.org/generalapplication)

- **Cover Letter/Essay**
  - Statement of why you want to be an Educator at Sea / Science Communication Fellow and what qualities you bring to the team. Include how you will bring this experience back to your students and your district or organization, as well as local community. Focus on tangibles.
  - 2 pages max, minimum 12-pt font
  - pdf file to be named: lastname_firstname_letter.pdf

- **Resume**
  - 2 pages max, minimum 12-pt font
  - pdf file to be named: lastname_firstname_resume.pdf

- **Two letters of recommendation**
  - One letter from an administrator or supervisor
  - One letter from a current or recent student
  - Recommendations should be emailed directly from your recommender to eas@oceanexplorationtrust.org

- **Recent color photograph**
  - Image file to be named: lastname_firstname_photo.jpg

- **Statement of Understanding signed by both you and your administrator**
  - pdf file to be named: lastname_firstname_admin.pdf

- **Online video chat interview for selected finalists March 11-22, 2013**

- All files should be converted to PDFs separately before emailing. Word documents and other file types will not be accepted. Be sure to name all files as indicated above.

- All application materials must be submitted by March 1, 2013.

Please see the following full description pages of the fellowship for important additional information, including application requirement details and summary of position duties.

**Program Contact**

For questions and to submit your application, please contact eas@oceanexplorationtrust.org

This program is sponsored by Bechtel, the Office of Naval Research, and private sponsors.
Requirements

- Attend a week-long training workshop on May 6-9, 2013 at the University of Rhode Island Graduate School of Oceanography with travel days on Sunday, May 5th and the afternoon or evening of Thursday, May 9th, 2013. Please be advised, educators must attend all portions of this training in their entirety to be considered for this program.

- Join the Corps of Exploration aboard E/V Nautilus or another oceanographic research vessel for anywhere between 10-30 days during the 2013 field season. Expedition dates will fall between June 1 and November 30. Educators must be flexible and should understand that dates will not be assigned until after acceptance into the program, and that expedition scheduling will be determined by OET.

- Serve a one-year term from May 2013 - May 2014 to help guide and shape the program and contribute input throughout the year.

- Participate in pre-expedition and end-of-season conference calls / debrief sessions. Some of these may occur during school hours or after hours.

- Engage their student populations in exploration-related programming during their one-year term of service. They are also required to submit an original lesson plan and description of how they used exploration programming with their students.

- Participate in all assessments of the program. This will include, but is not limited to, phone debriefs, verbal and written evaluations about the program to include student, statistical information as well as educational impact and growth. This may also include pre- and post-assessment surveys to be completed by both the educator and his / her students.

- Lead at least two presentations after returning from sea to share their experience and generate enthusiasm and participation within the educator’s organization and community.

- Help disseminate press releases and/or announcements related to his/her participation in the program.

- Educators will conduct themselves in a professional manner and serve as exemplary role models for future explorers.

Deadline for All Applications: March 1, 2013
www.oceanexplorationtrust.org
Selection Criteria

- **Experience.** Public and private school educators, community youth service organization educators, and museum educators are all welcome to apply. Prior experience with the JASON Project or Immersion Learning curriculum helpful but not required. Concentration in science and engineering, or related areas, at the middle school and high school levels is preferred but not required.

- **Communications.** Strong written and verbal communication skills. Should be comfortable speaking in front of the camera or enthusiastic about learning.

- **Teamwork.** Strong interpersonal-relationship skills and ease while moderating discussions and Q & A sessions with team members with whom educators have had little to no prior contact. Should enjoy working with others in team settings and be open to new collaborations, ideas, and activities. Able to work independently, and able to adapt to ever-changing conditions while at sea.

- **Technical.** Excellent technical skills and be well versed in PC, Mac, and MS Office, and willing and able to learn new technologies. Should be familiar with taking, editing, and managing digital photographs on web-based platforms.

- **Language.** Must be fluent in English (in speaking and writing). Fluency or some familiarity in a second language is helpful but not required.

- **Health.** Must be physically and mentally capable of meeting the demands of living and operating aboard a working exploration vessel, and must be able to live in close quarters with other expedition team members.

- **Travel.** Must hold a current passport or have one by May 1, 2013. There is no citizenship requirement, but your citizenship may be taken into account due to international travel and foreign visa requirements. Must be comfortable with international travel and travelling independently.

The Ocean Exploration Trust encourages a diverse pool of applicants and does not discriminate on the basis of race, color, national origin, ancestry, sex, or age.
Science Communication Workshop

May 6 - 9, 2013 at the Graduate School of Oceanography, University of Rhode Island

Educators will participate in a four-day training workshop at the URI Graduate School of Oceanography. During this time, educators will:

- Receive training manual(s) and information packets designed to guide each educator to perform his/her duties while out at sea, and to be well-informed ambassadors of the ocean exploration mission, program goals, and educational outreach throughout his/her term.

- Participate in a series of training classes and sessions led by professionals from various expedition-related fields designed to model the roles and responsibilities Educators at Sea will have while at sea. These sessions will also provide educators hands-on practice conducting their on board duties.

- Meet expedition scientists and other members of the expedition team, and participate in discussions about the expedition research and mission.

- Become familiar with using the Nautilus Live website platforms. Training includes, but is not limited to, general navigation of the website, providing live audio updates, and accessing live, incoming questions.

- Receive on-camera training, and guidance on how to facilitate and participate in live interactions and interviews.

- Tour the Inner Space Center (ISC), a facility at the URI Graduate School of Oceanography that utilizes telepresence technologies to connect the world to exploration projects in real-time. The ISC facility includes a Mission Control room utilized by scientists, engineers, and students who work directly with teams of researchers aboard Nautilus and other ships of exploration. The ISC additionally includes a Studio and Production Room used by broadcast, education, and outreach professionals who create and deliver educational content about the exploration projects.

- Have access to JASON and Immersion curricula and time to collaborate with fellow Educators at Sea to link activities to Nautilus Live.

- Discuss and plan how to bring Nautilus Live related programming back into the classroom.

Deadline for All Applications: March 1, 2013
www.oceanexplorationtrust.org
Statement of Understanding

The following statement of understanding must be read and signed by both the applicant and his/her principal or president if the applicant is a school, college, or university educator. If the applicant is not a school, college, or university educator, this statement of understanding must be read and signed by the head of the applicant’s organization or facility, a supervisor or administrator who can best represent the wishes or agreement(s) of the applicant’s organization.

If I am selected for the 2013 Educator at Sea Fellowship, I understand and agree that I will:

- Commit one year of service, from May 2013 – May 2014, to help plan, shape, and assess the Educator at Sea Program. This may include conference calls, webinars and e-mails and will require me to provide feedback and input when needed on various program aspects.

- Be available between June 1 - November 30, 2013 to join the expedition team for anywhere from 10-21 days on board E/V Nautilus or another oceanographic research vessel.

- Be available to participate in the Science Communication Workshop, May 6 – 9, 2013 at the Graduate School of Oceanography with travel days on May 5 and the evening of May 9.

- Be available to participate in pre-expedition conference calls and/or webinars (dates TBD) and a post-expedition debriefing conference at the end of the Nautilus 2013 expedition season (date TBD).

- Support the Nautilus Live and partner websites. Activities may include: providing audio updates, writing blogs, taking photographs, facilitating online question-and-answer sessions, and participating in live, interactive events. There may be other ways to support the website to be determined by the Ocean Exploration Trust.

- Coordinate at least one live, interactive event with my school or organization. I understand, and my administrator understands, that this will involve at least one other educator and / or an IT contact at my school or organization to help during both testing and actual event times.

- Participate in all Educator at Sea assessments to include both verbal and written feedback. Assessments may range from brief phone calls or e-mail questionnaires to formal comprehensive evaluations completed online.

- Participate in all student-based assessments to evaluate student impact as a result of my participation in the Educator at Sea Program. This will involve student participation.

Deadline for All Applications: March 1, 2013
www.oceanexplorationtrust.org
Develop and submit an exploration-related lesson plan.

Give at least two presentations to school and/or local community groups upon return from sea to share experiences.

Help disseminate press releases and/or announcements related to his/her participation in the program.

Conduct myself in a professional manner and serve as a role model for future explorers.

Generate enthusiasm and participation in exploration-related programming within my district or organization to the best of my ability.

**Applicant Agreement**

I, ____________________________, understand the above commitments outlined in the Statement of Understanding and will fully comply if selected.

Signature: ____________________________ Date: ______________________

**Principal / Supervisor Agreement**

I, ____________________________, have fully read and understand the Statement of Understanding signed by the applicant and give full consent for the applicant to participate in the Educator at Sea Program if selected. I further agree to:

- Release time (if applicable) for the applicant to participate in the Science Communication Workshop, May 6-9, 2013.
- Support the applicant in all aspects of the program as outlined in this statement.

Signature: ____________________________ Date: ______________________

E-mail: ____________________________ Phone: ____________________________

* It is recommended that the principal or administrator retain a copy of the information packet and a copy of this Statement of Understanding for his/her records.

**Deadline for All Applications: March 1, 2013**

www.oceanexplorationtrust.org
Administrator / Supervisor Letter of Recommendation

Application for Educator at Sea: Science Communication Fellowship 2013

The following letter of recommendation should be written by one of the applicant’s administrators or supervisors. Note, this may but does not necessarily have to be completed by the same individual who signed the Statement of Understanding. This form MUST be sent with the letter or the letter will not be reviewed.

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<td>Name of supervisor:</td>
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<td>Supervisor’s title:</td>
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<td>School/organizational web address:</td>
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LETTER: Please include a letter of recommendation for the applicant that describes the following: length of time you have known applicant and in what capacity, applicant’s communication and interpersonal skills, and overall qualifications for this opportunity.

Please submit this form and your letter of recommendation from your own e-mail account by March 1, 2013 to eas@oceanexplorationtrust.org.

Deadline for All Applications: March 1, 2013
www.oceanexplorationtrust.org
Student Letter of Recommendation
Application for Educator at Sea: Science Communication Fellowship 2013

The following letter of recommendation should be completed by one of the applicant’s students. This form MUST be sent with the letter or the letter will not be reviewed.

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<td>Name of recommending student:</td>
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<td>Student’s grade or age:</td>
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<td>Name of school/organization:</td>
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<td>Student’s phone:</td>
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Please state how many years you have known the applicant and in what capacity:

LETTER (to be written by the student): Please send a letter of recommendation that describes why the applicant is a great teacher and role model, and anything else you’d like to include.

Please submit this form and your letter of recommendation from your own (or your parent’s) e-mail account by March 1, 2013 to eas@oceanexplorationtrust.org.

Deadline for All Applications: March 1, 2013
www.oceanexplorationtrust.org