Since its inception in 2003, **NOAA Science Camp** has evolved into a highly regarded, collaborative science program. More than 10 NOAA offices, Washington Sea Grant (WSG) and the Joint Institute for Study of the Atmosphere and Oceans (JISAO) partner to introduce middle and high school students to the multidisciplinary nature of research. Scientists and educators interact directly with camp participants to demonstrate how NOAA research addresses environmental issues on both local and international scales.

NOAA Science Camp

Washington Sea Grant 2018

NOAA Science Camp is a self-motivated, cumulative learning experience that is at the core of real-world science learning. Camp activities integrate NOAA science into high-quality educational materials through a curriculum that meets state education standards, as well as all Ocean Literacy Essential Principles. Complex concepts are presented in innovative and interesting ways that engage campers and demonstrate that science can be fun. Science activities are blended with other enriching camp experiences — playing field games, gaining confidence through team-building and fostering new friendships with fellow campers.

Assisting Underserved Youth

NOAA Science Camp partners with the University of Washington's JISAO to provide support for campers from underrepresented and underserved communities to attend camp. We work with programs such as Rainier Scholars, Solid Ground, MESA, and the Aleut Community of St. Paul Island Tribal Government to help with outreach to and recruitment of prospective campers who need support to attend camp. NOAA Science Camp offers full and partial scholarships to applicants who are eligible for free and reduced lunch programs. In 2018, JISAO's support made possible the attendance of 19 middle school students from Showalter Middle School in Tukwila, Washington. Additional scholarships were awarded with funds provided by WSG and NOAA.

Supporting NOAA Scientists

Students are not the only individuals to benefit from NOAA Science Camp sessions. When surveyed about their roles in the camp, the majority of NOAA scientists felt they gained

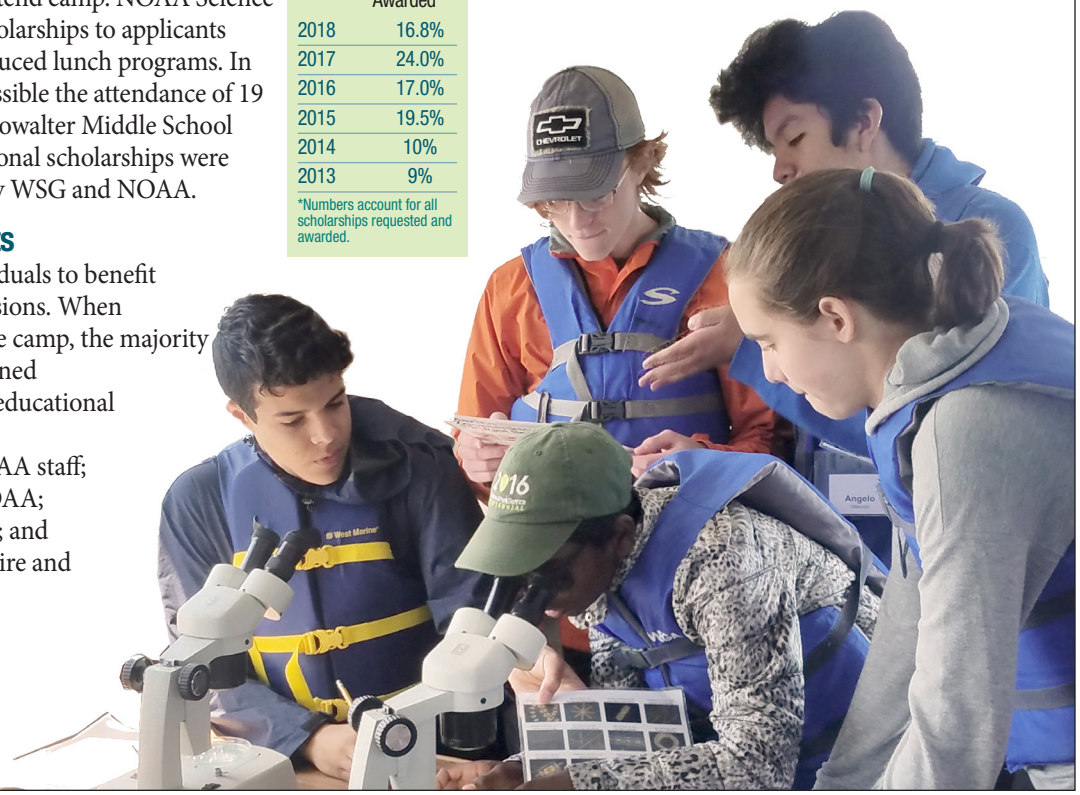
- improved ability to develop educational activities;
- greater connection with NOAA staff;
- deeper knowledge about NOAA;
- enhanced presentation skills; and
- increased motivation to inspire and engage campers in science.

2018 HIGHLIGHTS

- NOAA Science Camp offered its 16th year of programming to engage youth in ocean and atmospheric science
- Campers shared their findings from their investigations of an environmental mystery to scientists, other campers, educators, and parents through oral, written and theatrical presentations
- A career speed-networking event introduced Junior Leadership Program (JLP) participants to 19 local scientists and organizations
- A teacher from Nome, Alaska, travelled to Seattle to observe camp and provide input on ways to infuse traditional ecological knowledge into NOAA Science Camp activities
- Through a partnership with a doctoral student from Cornell University, the JLP students gained hands-on experience conducting eelgrass wasting disease research. They collected samples in the field, scanned and processed them, and did an initial analysis of their data, giving them a snapshot of what it takes to conduct scientific research
- As a result of NOAA Science Camp's educational pipeline, all of the middle school camp assistants were JLP graduates, and one of our educators was a former middle school camper, a Junior Leader, and a camp assistant

Year	% Scholarships Awarded*
2018	16.8%
2017	24.0%
2016	17.0%
2015	19.5%
2014	10%
2013	9%

*Numbers account for all scholarships requested and awarded.



Eco-Detectives in Action

During the summer months, NOAA Science Camp typically offers two five-day camp sessions, each attended by approximately 50 middle school campers. In addition, the camp provides a two-week JLP for high school students to provide hands-on experiences in leadership, teambuilding, and inquiry-based research, as well as the opportunity to explore a variety of NOAA-related marine science careers. This year, the JLP collaborated with a doctoral student who studies seagrass wasting disease. They collected field samples from a local beach, learned how to process them, and had a chance to log and manipulate the data they collected and present some of their findings at the end of the two weeks.

In 2018, NOAA Science Camp partnered with Atlantis STEAM for a third year to design and build mini-ROVs. During this program, campers also had the opportunity to meet with NOAA's Office of Exploration and talked to ROV pilots aboard the NOAA ship *Okeanos Explorer* via live video feed. Next, campers built mini-ROVs under the guidance of Atlantis STEAM educators, then connected their experience with real-world research as they learned about underwater stereocamera design and deployment on-site at a NOAA Fisheries lab. At the end of the session, ROV campers tested their mini-ROVs by competing to complete tasks underwater.

NOAA Fisheries' Headquarters office provided 2018 funding in addition to the support provided by University of Washington's JISAO and Washington Sea Grant. This enabled NOAA Science Camp to maintain its full program of two middle school camp sessions, two weeks of the JLP and a three-day ROV mini-session.

A SNAPSHOT OF THE WEEK

Day 1-3

Campers travel in small groups to a variety of NOAA offices and participate in activities highlighting NOAA scientists, building skills that will serve them later in the week.

The "Mystery Environmental Scenario" is introduced to campers. Small groups meet to create hypotheses about the causes of the scenario.

Day 4

A "Mystery Environmental Scenario" continues. Individuals from each group are sent off to gather specialized NOAA science information that will help campers explain the causes and effects of the scenario events. They return to their original groups and report their findings.

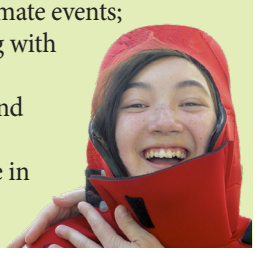
Day 5

Groups use scientific methods to solve the scenario and communicate their findings in an oral and visual presentation to campers, scientists, camp educators and families.

CAMPERS WORK ALONGSIDE NOAA SCIENTISTS

Campers have opportunities to:

- assess fish populations and create food webs;
- identify marine mammals by calls and markings, and examine bones from fish they consumed;
- analyze water samples and observe how buoys sample the ocean to help predict large-scale climate events;
- develop charting skills by practicing with marine navigation charts;
- learn about hazardous substances and respond to a hypothetical spill; and
- try on dive gear, and simulate a dive in a hyperbaric chamber.



NOAA SCIENCE CAMP BY THE NUMBERS

Sessions	2017	2018
Campers	151*	143 **
Girls (total)	60	68
Boys (total)	91	75
Cities Served	31	28
Schools Served	75	65
States Served	7	6
Countries Served	3	1
Participating NOAA Scientists	85	85

*Includes 21 Junior Leaders

**Includes 19 Junior Leaders

VALUABLE PARTNERSHIPS

NOAA*

Washington Sea Grant*

Joint Institute for the Study of the Atmosphere and Ocean*

NANOOS

Atlantis STEAM

MESA

Ocean Inquiry Project

Rainier Scholars

Salish Seas Expeditions

Showalter Middle School

University of Washington

NOAA OFFICES INVOLVED

NOAA Fisheries

- Headquarters**
- Alaska Fisheries Science Center
- Northwest Fisheries Science Center
- Office of Law Enforcement
- Restoration Center
- West Coast Regional Office

Office of Marine and Aviation Operations

- NOAA Diving Center

Office of Oceanic and Atmospheric Research

- Office of Exploration and Research
- Pacific Marine Environmental Laboratory

National Ocean Service

- Office of Coast Survey, Pacific Hydrographic Branch
- Office of Response and Restoration, Emergency Response Division and Assessment & Restoration Division

National Weather Service

- Seattle Forecast Office

* Funding and activity partners

** Funding partners

NOAA SCIENCE CAMP
Washington Sea Grant

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NOAA
U.S. DEPARTMENT OF COMMERCE

JISAO

Sea Grant
Washington