



2022-2023 SURVEY RESULTS

Final

Report



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Table of Contents

<u>About O'Neill Sea Odyssey</u>	2
<u>Research Methodology</u>	3
<u>Survey Design and Methodology</u>	3
<u>Demographic Data Collection</u>	4
<u>Data Analysis</u>	4
<u>Data Highlights</u>	5
<u>Results</u>	6
<u>Student Participation and Demographics</u>	6
<u>Website and Teaching Materials</u>	12
<u>Program Ratings</u>	13
<u>Student Environmental Awareness</u>	15
<u>Conclusions</u>	19
<u>Appendix I: Open-Ended Survey Responses</u>	21
<u>Appendix II: Survey Instruments</u>	26
<u>Teacher/Group Leader Survey</u>	26
<u>Student Survey</u>	28
<u>About the Researcher</u>	

About O'Neill Sea Odyssey

O'Neill Sea Odyssey (OSO) is a 501(c)3 non-profit organization founded in 1996 by wetsuit innovator and surfer Jack O'Neill. A living classroom was created onboard a 65-foot catamaran sailing the Monterey Bay National Marine Sanctuary. OSO offers a three-hour program where 4th through 6th-grade and special education students from schools in Santa Cruz, Santa Clara, Monterey, and San Benito Counties receive hands-on lessons in marine biology, marine ecology, and navigation. The program is conducted onboard the Team O'Neill catamaran with follow-up lessons at the shoreside Jack O'Neill and Harry Hind Education Center at the Santa Cruz Harbor. Since its inception, OSO has served over 123,000 students.



OSO program outcomes are as follows; 1) students will increase their awareness of threats to watersheds and the ocean, 2) students are more likely to protect the Monterey Bay and ocean, and 3) students will advocate for ocean and watershed stewardship to their families and friends. The OSO program has been designed to foster awareness of environmental stewardship and personal responsibility among program participants. This is done by delivering an interactive curriculum that emphasizes the connections between land and sea through a multi-disciplinary approach including ecology, biology, and mathematics.

The OSO website (<http://www.oneillseaodyssey.org/>) provides extensive curriculum and learning materials designed to introduce students to the topics they will be learning in the program. Teachers and group leaders are encouraged to use these materials with their students before attending the program and afterward as follow-up activities.

Thanks to the generous support of donors, OSO is free of charge. Students earn their way into the program by completing a Student Action Project. This project is intended to build on the OSO curriculum and encourage students to take actionable steps toward protecting the coastal environment. A Student Action Project could be a broad range of activities such as a native plant restoration project, beach or creek cleanup, school recycling project, or a letter-writing campaign in support of a local environmental cause. Teachers and group leaders are required to submit evidence of their Student Action Project.

COVID-19 impacted data collection between March 2020 to December 2021 due to Shelter-in-Place (SIP) orders. Before March 2020 and after December 2021, two surveys were administered to the groups participating in the program. Teachers and group leaders were asked to fill out a survey after participating in the program to get their feedback on the organization and effectiveness of the program, program materials, and the OSO website. The Teacher Survey was revised for the 2013-14 program

cycle. A second survey was read aloud to students asking them (by a show of hands) about their knowledge of, and attitudes toward, the environment. This survey was administered to the students before and after the program, and thereby measured the amount of change in their environmental awareness. The Student Survey was revised in March 2014.

Research Methodology

Survey Design and Methodology

In prior years, separate surveys were designed and distributed to different groups of program participants: group leaders, teachers and parents, students, and the OSO crew. For over 10 years, two surveys have been utilized: one was distributed to the teachers/group leaders, and another was administered to the students. Both the Teacher Survey and Student Survey were revised in 2013-14. Each survey is described below, and copies are provided in Appendix II: Survey Instruments.

Teacher/Group Leader Survey



Teachers and group leaders were asked to complete a short survey after attending the OSO program. They were asked to evaluate the program based on how much they thought the students learned from each of the program areas—three topics taught on the boat portion of the program and three topics covered in the classroom portion—and one question asking them to rate the students' overall learning experience. Teachers/group leaders rated these program areas using a scale ranging

from learned a lot, learned somewhat, to did not learn at all.

Teachers/group leaders were asked several questions about the OSO website and the pre-trip materials. They answered whether they had used the teaching materials provided before taking the trip, which online resources they used before the trip, which teaching materials were most helpful in the classroom, and whether they intended to use any of the online Learning Center or Teacher Packet materials in the classroom after the trip. Finally, they were asked open-ended questions about whether any additional topic areas would be helpful to include in the Sea Odyssey experience and if they had other comments.

Student Survey

The Student Survey was designed to be read aloud to the students and was administered to them before *and* after attending the program. Students were asked to raise their hands and close their eyes if they agreed with the questions (indicating a “yes” response), and the number of raised hands for each question was tallied.

The Student Survey included six questions. Three questions asked about their general knowledge:

- The ocean is important to my health.
- I know where storm drains lead.
- Most ocean pollution comes from land.

Three questions asked about their behavior:

- I pick up trash from the ground.
- I turn off the lights when I leave the room.
- I share what I know about protecting the environment and ocean with my friends and family.

After attending the program, students were also asked to raise their hands if they agreed with the same three general knowledge questions, if they plan to do the three behaviors listed above, and if it was their first time on a boat in the ocean.

Demographic Data Collection

In addition to filling out the survey, teachers/group leaders were asked to provide the name of their school or group, the number of students in their group, and the grade level(s) of their students.

Data Analysis

In this report, most of the data in the analyses came from the OSO Teacher/Group Leader and Student Surveys. However, student ethnicity, level of English fluency, and enrollment in free or reduced-price meal programs were estimated using percentages obtained from Dataquest and the California School Dashboard (Dashboard). For each school group, these percentages were applied to the total number of students in that group to estimate the number of students with these demographics.



Some of the questions in the Teacher/Group Leader Survey were open-ended. Participants were asked to provide comments and suggestions for additional topics to be covered. Although these open-ended questions are not evaluated in this report, all the responses are provided in Appendix I.

A census approach was used for both the Teacher/Group Leader and Student Surveys. In this type of survey approach, every teacher and student who participated in the program also answered the surveys (as opposed to giving the surveys to only a sample of the participants).

Note that demographic data was not available for every group and not every group answered all the survey questions. For this reason, the number of groups or students reported in some analyses may differ from the total number of groups and students that participated

Data Highlights

Demographics

Between July 2022 and March 2023, 133 groups participated in the OSO program, representing 3,242 students. Group sizes ranged from 4 to 34 students, with an average group size of 24.

The majority of groups came from Santa Cruz County (41%), Santa Clara County (28%), and Monterey County (25%).

Approximately 88% of groups were of students between 4th and 6th grade, the program's target population.

Over half (54%) of students indicated it was their first time on a boat in the ocean.

Based on population estimates, 75% of the students were Hispanic or Latino, 12% were White, 8% were Asian, Filipino, or Pacific Islander, 1% were African American, less than 1% were American Indian or Alaska Native, and 3% were of another race/ethnicity.

The majority (73%) of students received free or reduced-price meals.

Approximately 68% of participating groups were lower income groups, 24% were middle income groups, and 8% were higher income groups.

Website Use

Sixty-six percent of all teachers/group leaders reported that they had used the online teaching materials provided on the website before their trip, and the vast majority of the teachers (92%) intended to use the online teaching materials in the classroom after the trip.

When asked which online resource the teachers/group leaders used, 88% used the pre-trip education materials (teacher packets) followed by 69% using the safety and important information on the website. The online resource that teachers/group leaders identified as most helpful was the pre-trip education materials (81%).

Program Ratings

In every topic area, the vast majority of teachers/group leaders (between 93% and 99% indicated that their students had "learned a lot."

Of the three topics learned on the boat, 98% of teachers/group leaders thought students had "learned a lot" in the Ecology station, while 96% of teachers/group leaders thought students had "learned a lot" in the Marine Science and Navigation stations.

Of the three topics learned in the classroom, the vast majority of teachers/group leaders said that students had "learned a lot" in the Marine Science station (96%), followed by the Ecology (94%) and Navigation stations (93%).

Nearly all (99%) of the teachers/group leaders reported that their students had "learned a lot" from the overall learning experience.

Student Environmental Awareness

The Student Survey showed that the OSO program was effective in promoting substantial increases in students' environmental awareness. Before participating in the OSO program, an average of 67% of students agreed with the survey questions overall. After attending the program, this percentage increased to 87%.

When student surveys were divided by income level, results showed that all groups of students increased their environmental knowledge after attending the program. The students from lower (66%) and middle (66%) income groups generally had lower overall levels of agreement before the program started than the higher income groups (84%). By the end of the program, all income groups agreed (between 86% and 94%)

Results

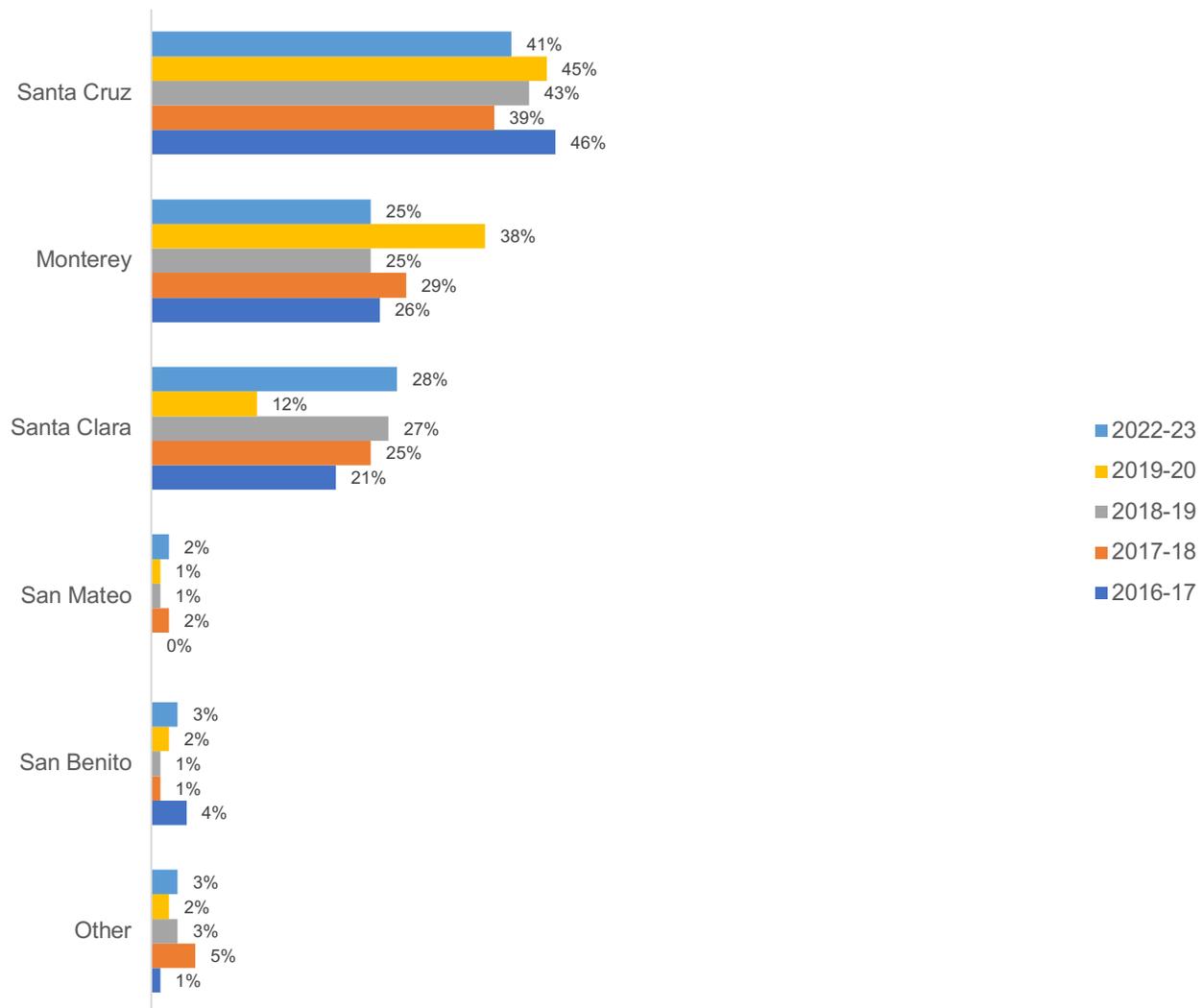
Student Participation and Demographics

Between July 2022 and March 2023, 133 groups participated in the OSO program, representing 3,242 students. Group sizes ranged from 4 to 34 students, with an average group size of 24.

Counties of Origin

Most groups came from Santa Cruz County (41%), Santa Clara County (28%) and Monterey County (25%). Between 2010-11 and 2022-23, these three counties have continued to be the most frequent origins of groups.

Participating Group's County of Origin



Source: O'Neill Sea Odyssey (2022-23 N=133 groups; 2019-20 N=112 groups; 2018-19 N=209 groups; 2017-18 N=207 groups; 2016-2017 N=201 groups; 2015-16 N=202 groups; 2014-15 N=205 groups; 2013-14 N=201 groups; 2012-13 N= 205 groups; 2011-12 N=197 groups; 2010-11 N= 182 groups).

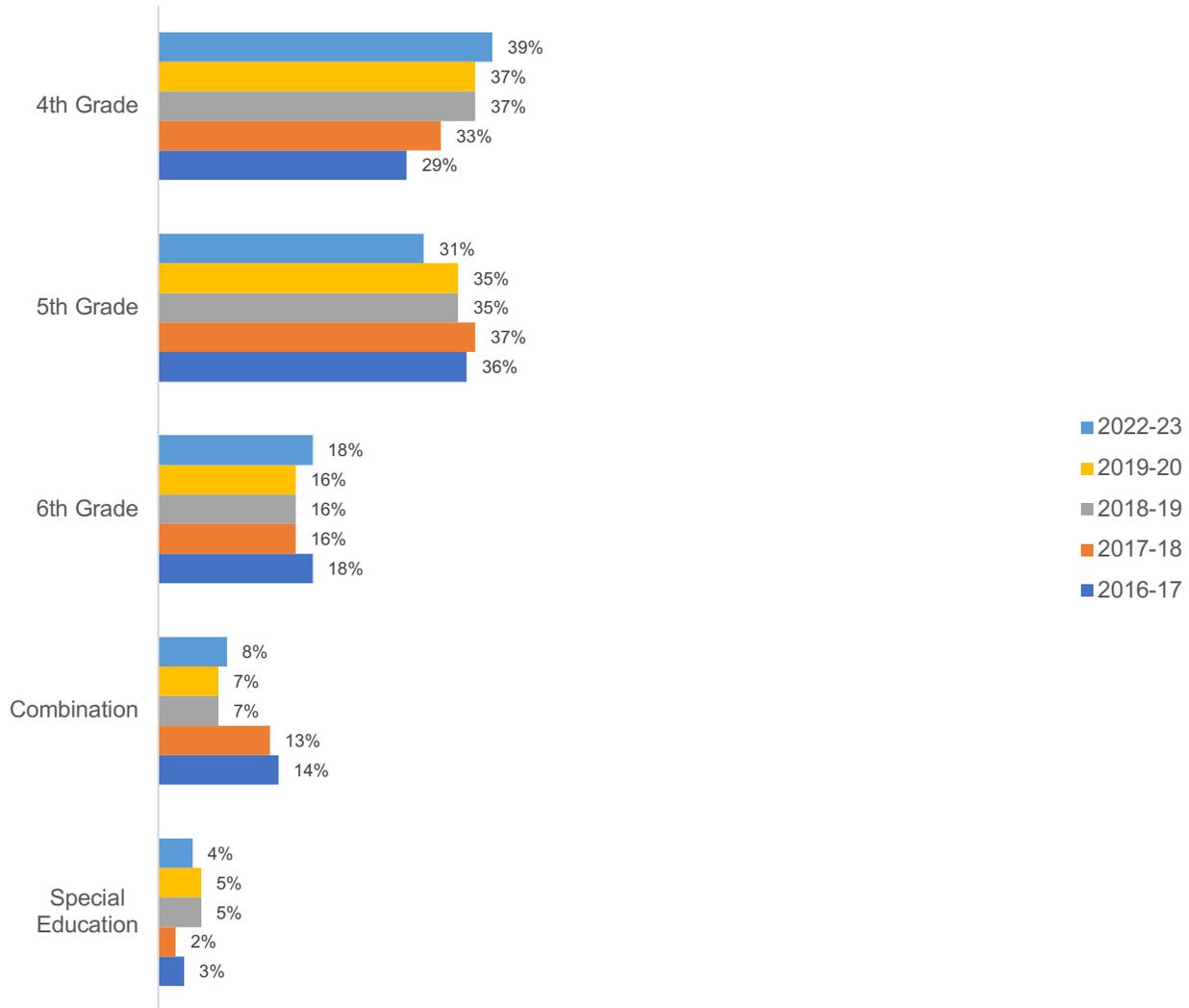
* "Other" counties differ by year but include the counties of Alameda, Contra Costa, Nevada, Sacramento, San Francisco, San Joaquin, Sonoma, Stanislaus, Yolo, and those where no information was available.

Grade Levels

OSO's target population is students in 4th through 6th grades. In 2022-23, the majority of groups were in this grade range (88%) and the highest percentage of groups were from 4th grade (39%), followed by 5th grade (31%), 6th grade (18%), and combined 4-6th grade (8%).

Most groups of students participated through schools, although a few came from community centers and day camps.

Grade Levels of Groups



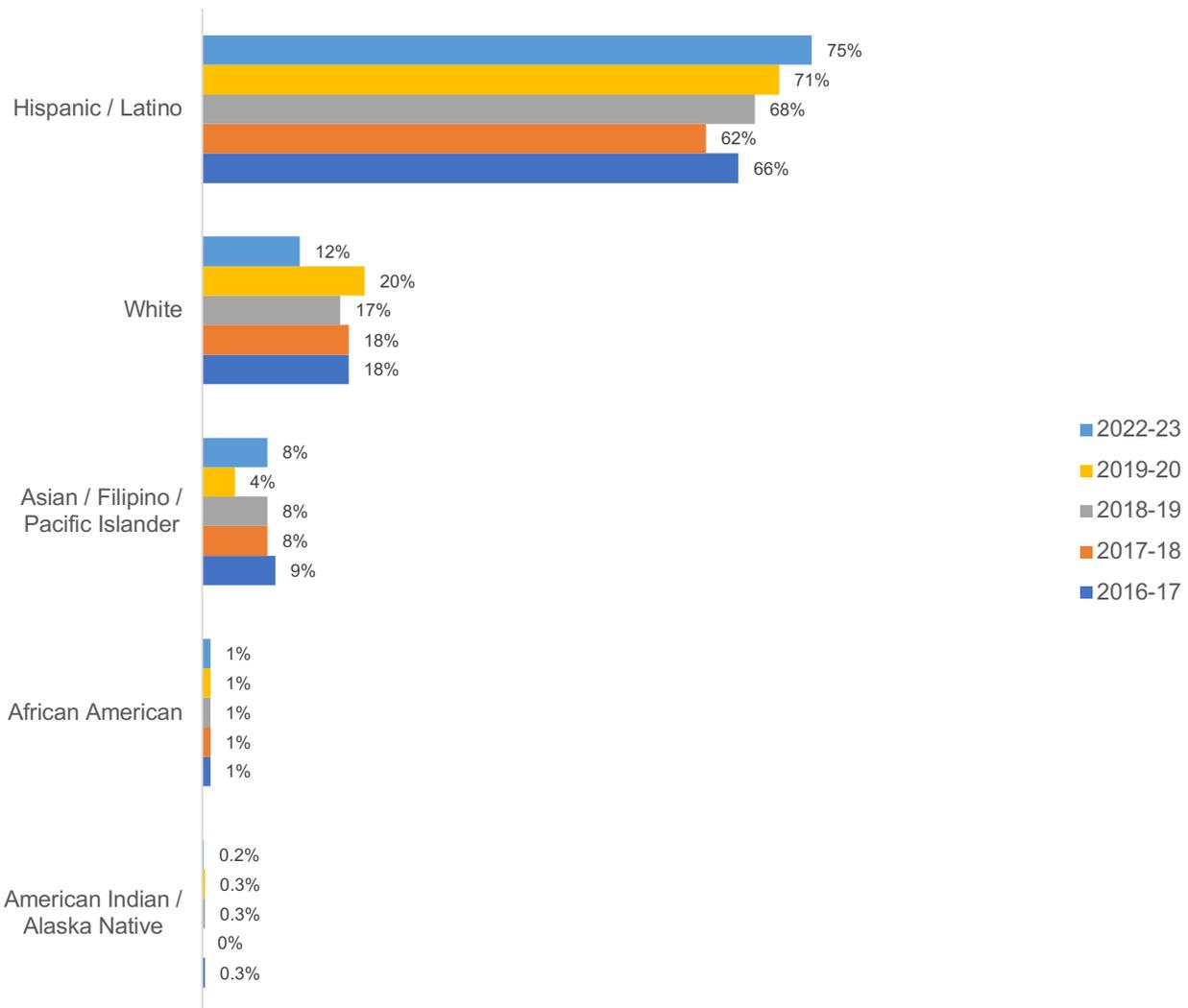
Source: O'Neill Sea Odyssey (2022-23 N=133 groups; 2019-20 N=112 groups; 2018-19 N=209 groups; 2017-18 N=207 groups; 2016-17 N=201 groups; 2015-2016 N=202 groups; 2014-15 N=205 groups; 2013-14 N=201 groups; 2012-13 N=205 groups; 2011-12 N=197 groups; 2010-11 N=182 groups).

* "Special Classes" refers to groups comprised of students in grades other than 4th through 6th.

Race/Ethnicity

The race/ethnicity of participants was estimated using percentages obtained from DataQuest and the Dashboard, based on the year and school name. In 2022-2023, it was estimated that 75% of the students were Hispanic or Latino, 12% were White, 8% were Asian, Filipino, or Pacific Islander, 1% were African American, less than 1% were American Indian or Alaska Native, and 3% were of another race/ethnicity.

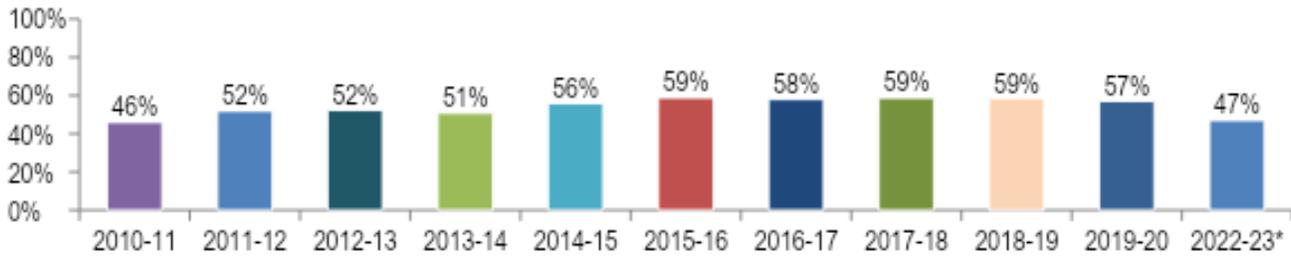
Race/Ethnicity of Students



Source: Data provided by O'Neill Sea Odyssey, collected from State of California Department of Education, California Basic Education Data System, DataQuest database (2022-23 N=3,190 students; 2019-20 N=2,902 students; 2018-19 N=5,539 students; 2017-18 N=5,222 students; 2016-17 N=5,276 students; 2015-16 N=5,281 students; 2014-15 N=5,519 students; 2013-14 N=5,201 students; 2012-13 N=5,442 students; 2011-12 N= 5,661 students; 2010-11 N=4,852 students). Note: The "Other" and "Multiple or No Response" categories are not shown in this figure. Percentages may not total 100% for this reason or due to rounding.

English as a Second Language

Percentage of Students Whose Primary Language is Not English



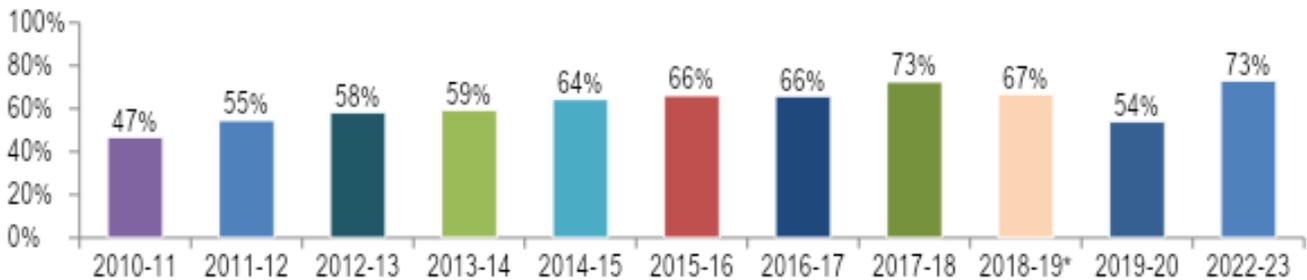
Source: Data provided by O'Neill Sea Odyssey, collected from State of California Department of Education, California Basic Education Data System, DataQuest database (2022-23 N=3,190 students; 2019-20 N=2,902 students; 2018-19 N=5,539 students; 2017-18 N=5,222 students; 2016-2017 N=5,276 students; 2015-16 N=5,155 students; 2014-15 N=5,427 students; 2013-14 N=5,201 students; 2012-13 N=5,276 students; 2011-12 N=4,863 students; 2010-11 N=4,852 students).
 Note: This analysis combines both English Learner (EL) and Fluent-English-Proficient (FEP) students.

* Note: FEP student data was not collected in 2022-23

Free and Reduced Price Meals¹

Enrollment in federal programs that offer free and reduced-price meals to students was used to estimate the percentage of students whose families meet the income eligibility guidelines for these programs. Based on the percentages obtained from DataQuest, in 2022-23, 73% of the students were receiving free or reduced-price meals.

Percentage of Students Receiving Free or Reduced Price Meals



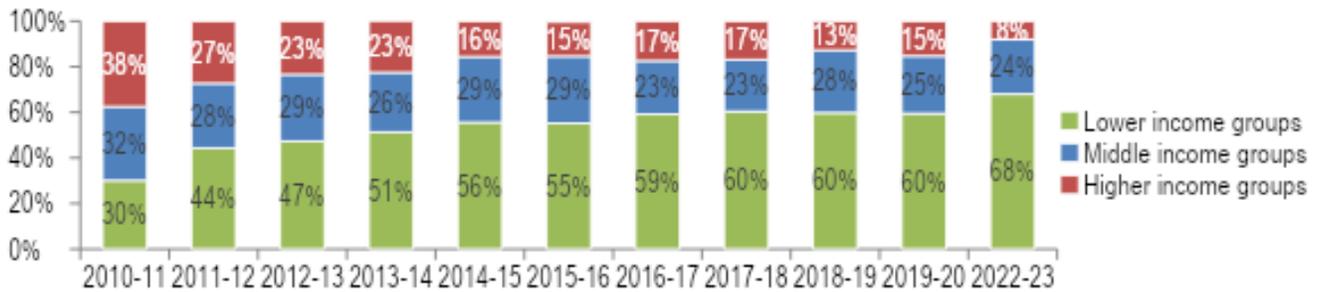
Source: Data provided by O'Neill Sea Odyssey, collected from State of California Department of Education, California Basic Education Data System, DataQuest database (2022-23 N=3,190 students; 2019-20 N=1,556 students; 2018-19 N=5,539 students; 2017-18 N=5,222 students; 2016-17 N=5,276 students; 2015-16 N=5,155 students; 2014-15 N=5,427 students; 2013-14 N=5,201 students; 2012-13 N=5,276 students; 2011-12 N=4,863 students; 2010-11 N=4,852 students).
 *Note: Recent changes in the way school districts calculate students receiving free and reduced priced meals may have had an impact on this result. For further detail, please see Appendix III.

The OSO program aims to make its learning experiences available to students from all economic backgrounds. The economic levels of the participating groups were estimated using the percentage of students receiving free or reduced-price meals at their school sites. Groups with less than 1/3 of their students receiving this benefit were considered higher income, and groups with more than 2/3 of their students receiving this benefit were considered lower income. Groups that fell between these extremes were considered middle income groups.

¹ Only groups that had data regarding the percentage of students receiving free or reduced price lunches were included in this analysis.

Using this method of analysis, approximately 68% of participating groups were classified as lower income groups, 24% as middle-income groups, and 8% as higher income groups in 2022-23.

Percentage of Groups Participating, by Income Level¹



Source: Data provided by O'Neill Sea Odyssey, collected from State of California Department of Education, California Basic Education Data System, DataQuest database (2022-23 N=3,190 students; 2019-20 N=2,902 students; 2018-19 N=209 groups; 2017-18 N=207 groups; 2016-17 N=201 groups; 2015-16 N=201 groups; 2013-14 N=195 groups; 2012-13 N=205 groups; 2011-12 N=194 groups; 2010-11 N=176 groups).

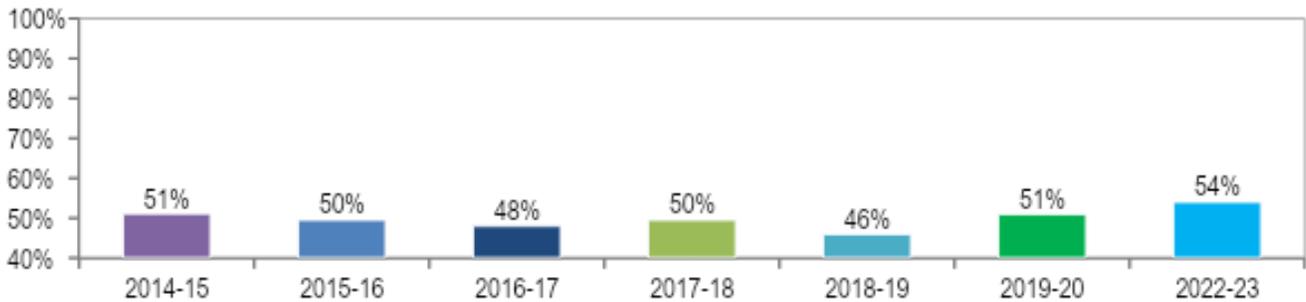
Note: Only groups that had data regarding the percentage of students receiving free or reduced-price meals were included in this analysis.

¹Income levels of the groups were estimated using the percentage of students receiving free or reduced-price meals in each group: In Higher Income groups, less than 33% of their students received this benefit; Middle Income groups had between 1/3 and 2/3 of their students receiving this benefit, and Lower Income groups had more than 2/3 of their students receiving this benefit.

Past Experience on a Boat

In 2014-15, OSO started asking students if their current experience was the first time they had been on a boat in the ocean. During the 2022-2023 year, 54% of students indicated this was their first time on a boat, a slight increase from past years.

Students Reporting this was their first time on a boat on the ocean



Source: O'Neill Sea Odyssey (2022-23 N=3,202 students; 2019-20 N=2,902 students; 2018-19 N=5,539 students; 2017-18 N=5,104 students; 2016-17 N=5,215 students; 2015-16 N=5,233 students; 2014-15 N=5,481 students).

Website and Teaching Materials

In 2023, OSO launched a new website where visitors can easily access information about the organization, news and events, impact, and ways to support OSO's mission. In May of each year, teachers submit a trip request form on the website for the following academic year. To make the most of their experience, teachers are encouraged to utilize a teacher packet and an expand your knowledge online learning center to introduce students to marine biology, ecology, and navigation concepts before their field trip. A trip planning guide is also available on the website to assist teachers before, during, and after their trip.

In their program material, OSO states that:

“...students who have been given an overview of their subjects before participating in the program benefit from a more in-depth educational experience.”

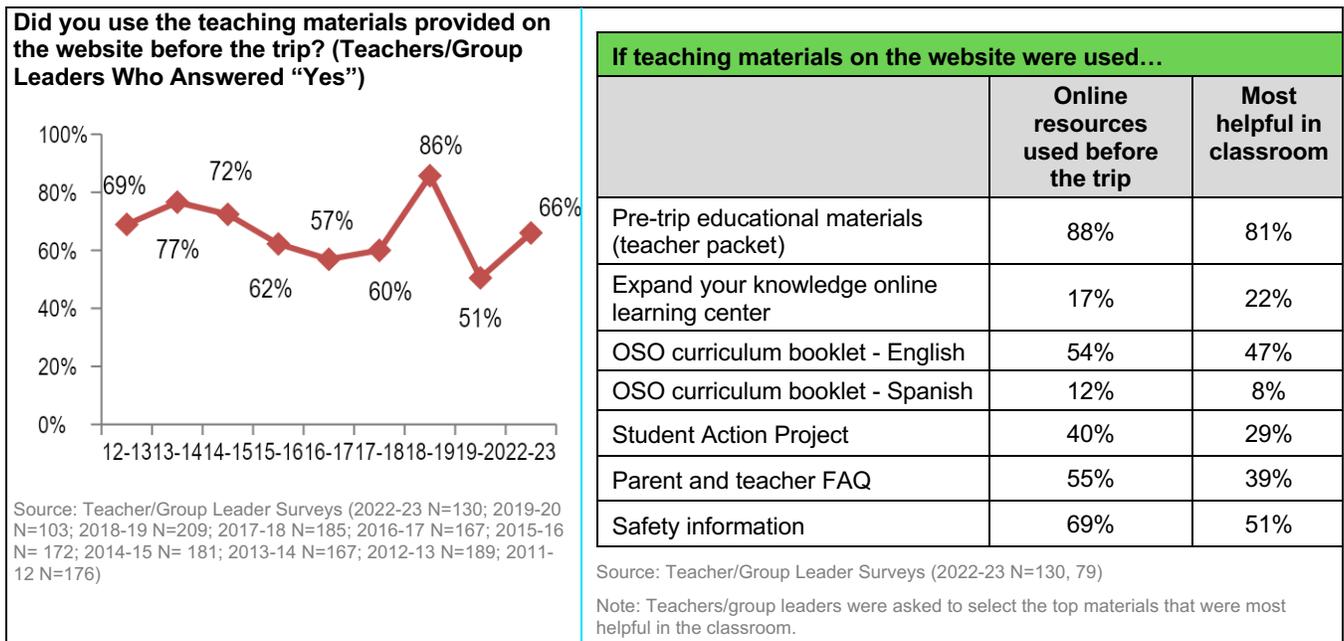
OSO, therefore, encourages teachers and group leaders to use the materials provided through the website with their students before participating in the program. Teachers/group leaders were asked additional questions about the teaching materials available on the website.

In 2022-23, 66% of all teachers/group leaders reported that they had used the online teaching materials provided on the website before their trip, an increase from 2019-2020.

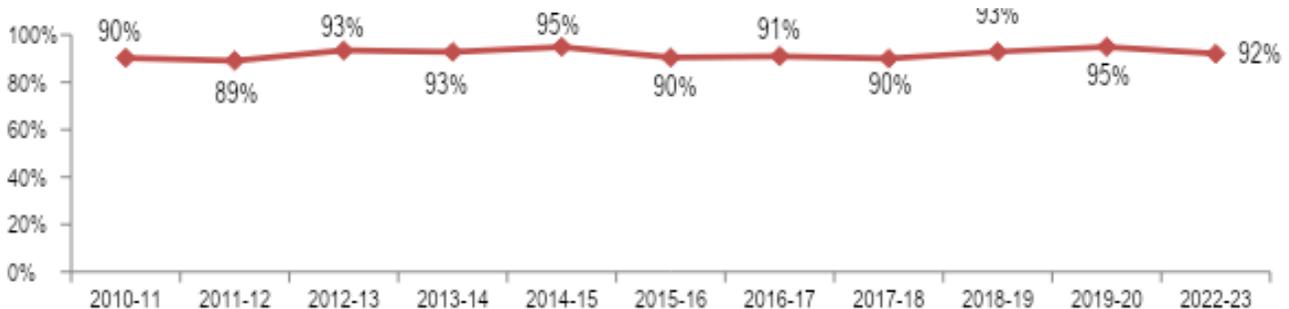
The online resources used most often by teachers were the pre-trip educational materials such as teacher packets (88%), safety and important information (69%), and parent and teacher FAQ (55%).

The vast majority (92%) reported that they intended to use the online teaching materials in the classroom after the trip. This result has stayed relatively stable over the past five years.

Use of Website Teaching Materials



Do you intend to use the Online Learning Center or Teacher Packet Materials in the classroom after the trip? (Teachers/Group Leaders Who Answered “Yes”)



Source: Teacher/Group Leader Surveys (2022-23 N=130; 2019-20 N=98; 2018-19 N=184; 2017-18 N=173; 2016-17 N=167; 2015-16 N=166; 2014-15 N=176; 2013-14 N=167; 2012-13 N=167; 2011-12 N=174; 2010-11 N=145; 2009-10 N=162; 2008-09 N=157).

Program Ratings

Teachers/group leaders were asked to give their feedback on the quality and effectiveness of several topics that were covered in the program. Teachers/group leaders were asked, "Thinking about the children in the group and what was presented to them today, how much do you think the children learned from the following?" Respondents could answer learned a lot, learned somewhat, or did not learn at all.

In every topic area, the vast majority of teachers/group leaders indicated that the students had "learned a lot." The percentage of teachers/group leaders who responded this way ranged from 93% to 99% across all topics.

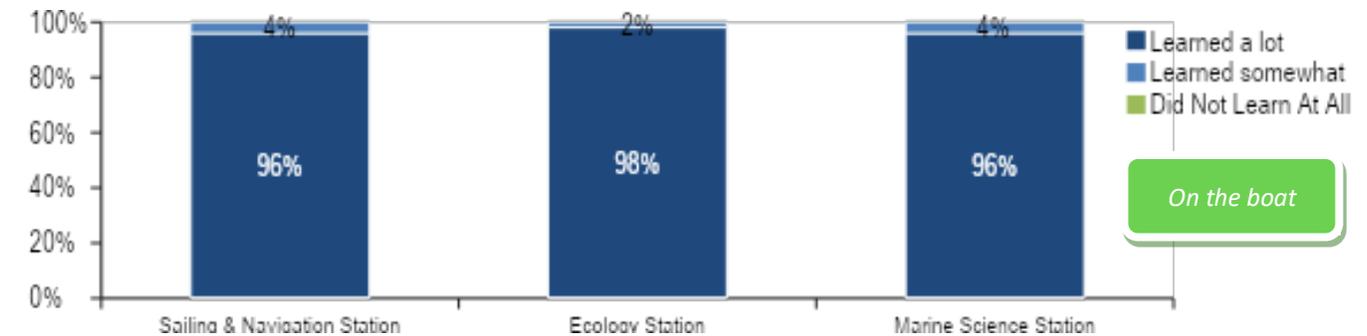
Of the three topics learned on the boat, between 96% and 98% of teachers/group leaders thought students had "learned a lot" in the Marine Science station, the Navigation station, and the Ecology station.

Of the three topics learned in the classroom, most teachers/group leaders again said that students had "learned a lot" in the Marine Science station (96%), followed by the Ecology (94%) and Navigation stations (93%).

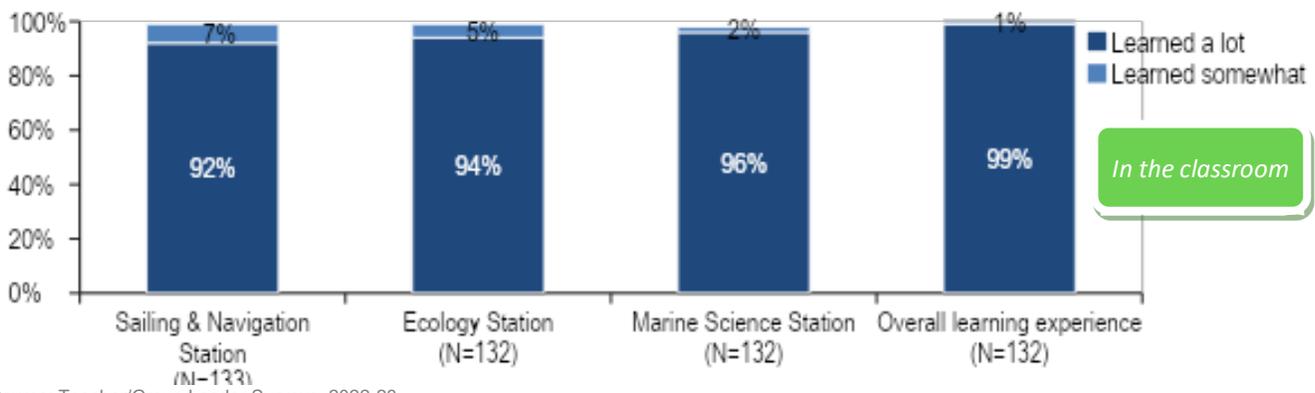
Nearly all of the teachers/group leaders (99%) reported that their students had "learned a lot" from the overall learning experience.

During the past twelve years (2010-11 to 2022-23), the percentage of teachers/group leaders who reported that the students had "learned a lot" has been consistently high. It is important to note that due to the already high ratings of these topic areas every year, it was extremely difficult to demonstrate any further improvement across years.

How much do you think the children learned from the following [Topic Areas]? (Percentage of Teachers/Group Leaders Who Gave These Responses), 2022-23



Source: Teacher/Group Leader Surveys, 2022-23.



Source: Teacher/Group Leader Surveys, 2022-23.

Comparison of Topic Areas (Teachers/Group Leaders Who Said the Children “Learned A Lot”)

	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2022-23
On the boat										
Navigation station	97%	94%	95%	94%	96%	97%	96%	97%	93%	96%
Ecology station	97%	98%	98%	96%	99%	96%	98%	98%	98%	98%
Marine science station	97%	96%	98%	98%	98%	97%	99%	99%	98%	96%
In the classroom										
Navigation station	94%	91%	95%	98%	92%	94%	92%	95%	96%	92%
Ecology station	97%	94%	97%	98%	100%	95%	97%	98%	96%	94%
Marine science station	97%	97%	96%	99%	98%	98%	98%	99%	99%	96%
Overall										
Overall learning experience	100.0%	99%	99%	100%	100.0%	100%	100%	100%	99%	99%

Source: Teacher/Group Leader Surveys, 2010-22.

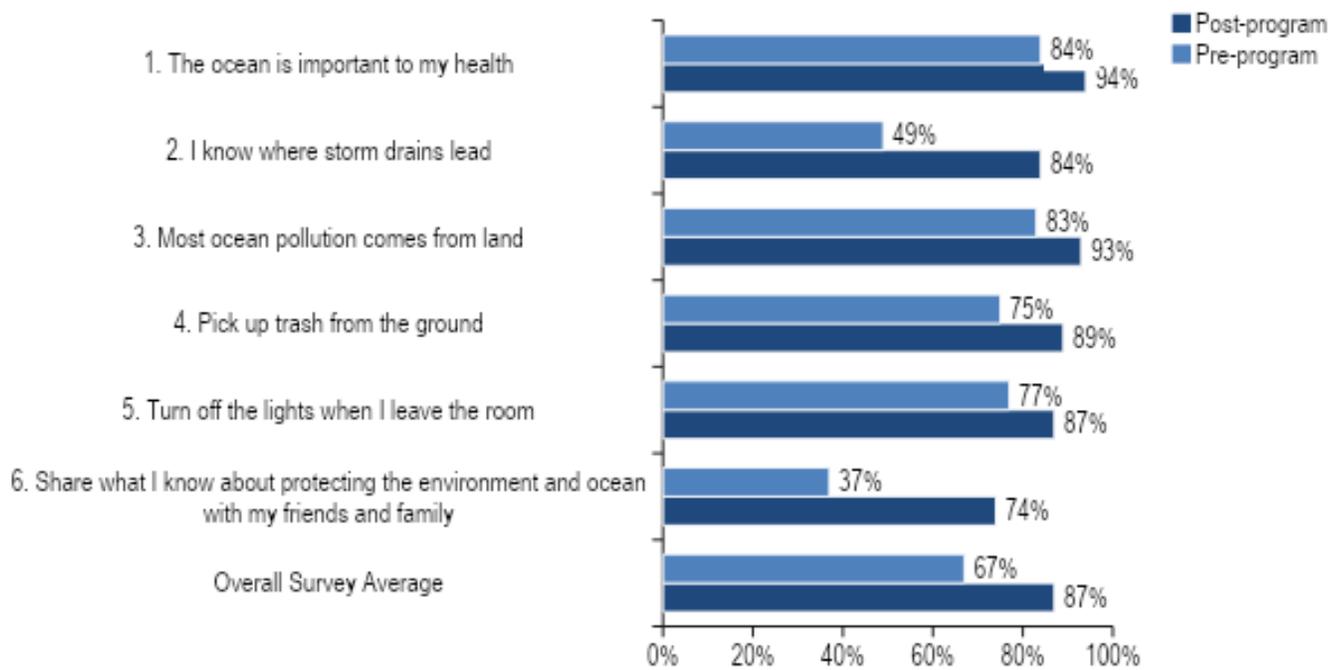
Student Environmental Awareness

The Student Survey was read aloud to the students and was administered both before and after the program. The Student Survey included six questions regarding their general knowledge about the ocean and their future behavior regarding protection of the environment, energy conservation, and intention to share their knowledge about how to protect the environment with others. Students were asked to raise their hands and close their eyes if they agreed with the questions and the number of raised hands for each question was tallied.

The results showed that there were considerable changes in students' attitudes toward the environment after participating in the OSO program. Before participating in the OSO program, an average of 67% of students agreed with the survey questions overall. After attending the program, this percentage increased to 87%.

For each of the six individual survey questions, there were increases in the percentage of students who agreed with them after participating in the program. The largest increases occurred with Question 6, "Share what I know about protecting the environment and ocean with my friends and family," a net increase of 37%.

Percentage of All Students Who Agreed with Survey Questions, Pre- and Post-Program, 2022-23



Source: Student Surveys, 2022-23 (N=3,190 students).

Effects of Economic Background

The Student Survey results were also analyzed to determine whether the economic background of students had any effect on their environmental awareness, both before and after participating in the program.

The first step was to determine how to identify students' economic backgrounds. As only limited information was collected about the groups attending the program, it was decided to use the percentage of students receiving free or reduced price meals as an estimate of the group's economic level. This percentage was then used to divide the groups into three income categories. Groups with less than 1/3 of their students receiving free or reduced price meals were considered higher income groups and groups with more than 2/3 of their students receiving this benefit were considered lower income groups. Groups that fell between these extremes were considered middle income groups.

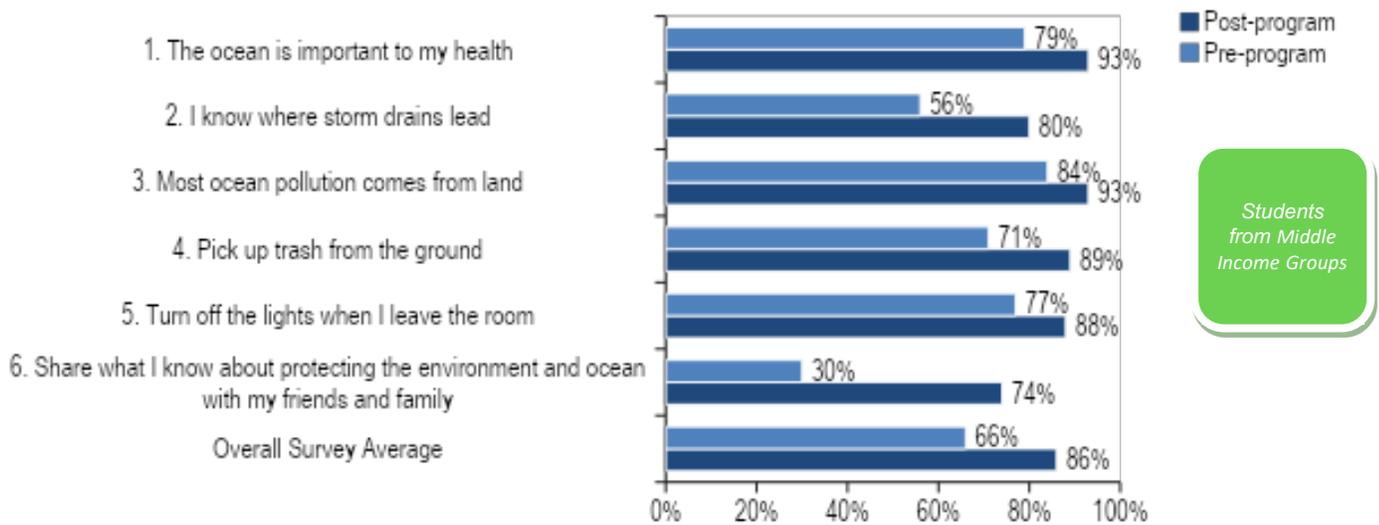
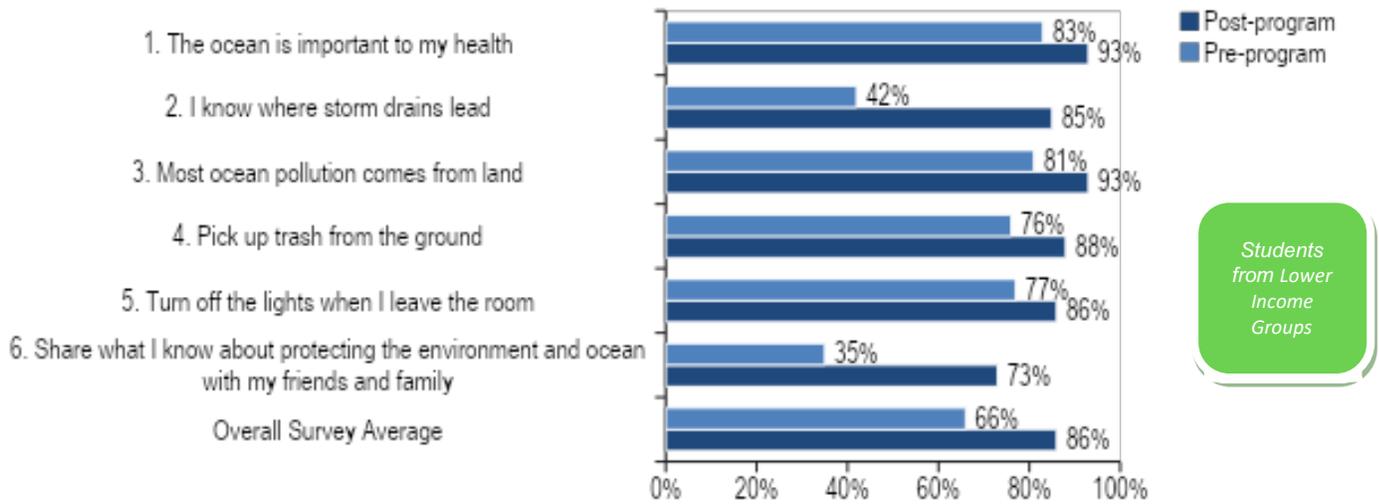
The following figures present the survey results for the students in lower, middle, and higher income groups. When these income categories were analyzed separately, all groups showed increases in the percentages of students who agreed with the survey questions after participating in the program. However, there were interesting differences between the groups.

The most interesting findings were the amount of change and effectiveness of the OSO program in teaching and encouraging environmentally-conscious behavior, relative to the groups' economic background. Before the program began, a smaller percentage of students from lower (66%) and middle income (66%) groups agreed with the survey questions overall, compared to students from higher income groups (84%). After participating in the program, the students from lower and middle income groups increased agreement to similar levels as their high income peers. After participating in the program, 86%, 86% and 94%, respectively, of students from lower, middle, and higher income groups agreed with the survey questions.

When specific survey questions were examined, the question that showed the largest difference related to economic background was Question 6, "Share what I know about the protecting the environment and ocean with my friends and family." For this question, students from lower and middle income groups demonstrated a greater amount of change between pre- and post-program surveys (net change of 38% and 43%, respectively) compared to students from higher income groups (net change of 20%).

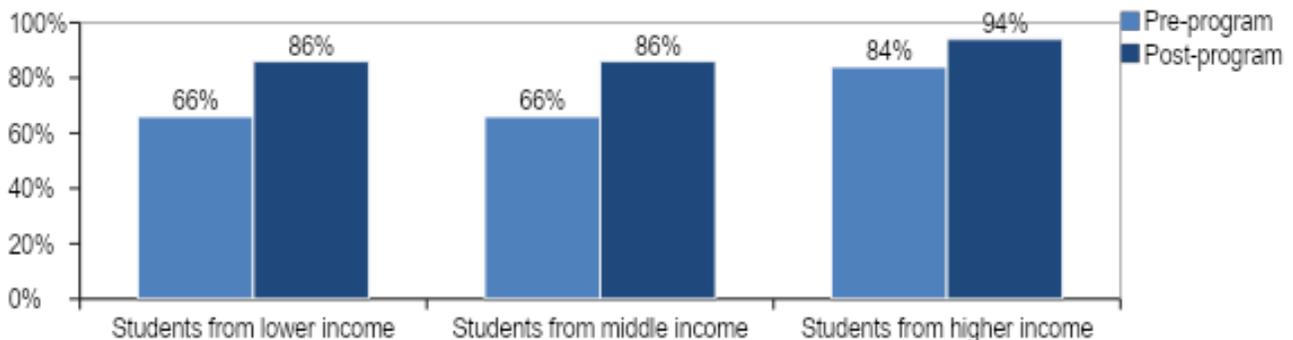
Overall, most students, regardless of economic status, reported that they would share their knowledge about protecting the environment with their friends and family, were more confident in their knowledge of where storm drains led, and reported that they would behave in ways to protect the environment after participating in OSO.

Percentage of Students Who Agreed with Survey Questions, Pre- and Post-Program, by Income Level, 2022-23



Source: Student Surveys (2022-23. Lower income students: N=2,153, Middle income students: N= 778, Higher income students: N=259.)
 Note: Only groups that had data regarding the percentage of students receiving free or reduced price meals were included in this analysis.

Students' Overall Survey Averages, Pre- and Post-Program, by Income Level, 2022-23



Source: Student Surveys (2022-23. Lower income students: N=2,153, Middle income students: N= 778, Higher income students: N=259.)
 Note: Only groups that had data regarding the percentage of students receiving free or reduced price meals were included in this analysis.

Conclusions

Student Participation and Demographics

During the 2022-2023 program cycle 133 groups participated in the OSO program, representing 3,242 students. The average group size was 24.

The demographics of the groups and students who participated in the OSO program were similar to previous years. The majority of groups came from Santa Cruz, Monterey, and Santa Clara Counties (94%), and the majority of groups (88%) were comprised of students in the 4th through 6th grades. Over half (54%) of all students indicated it was their first time on a boat in the ocean.

It was estimated that over two-thirds (75%) of the students were Hispanic or Latino, 12% were White, and 13% were of other races/ethnicities. The percentage of English Learners (EL) was 47%.

Over two-thirds of students (73%) were receiving free or reduced-price meals. By using the percentage of students receiving free or reduced-price meals in each group as an estimate of the group's economic level, it was determined that approximately 67% of participating groups came from lower income communities. Please refer to page 10 for more information.



Website and Teaching Materials

Two-thirds (66%) of teachers and group leaders indicated that they used the website materials with their students *before* participating in the program. The vast majority of teachers (92%) reported that they intended to use the online teaching materials in the classroom after the trip, similar to past years.

Open-ended response questions in the survey asked teachers/group leaders to suggest any topic areas that would be helpful to include in the Sea Odyssey experience and if they had any additional comments. The responses to these questions are available in Appendix I.

Program Ratings

Based on the Teacher/Group Leader Survey results, the OSO program was evaluated extremely positively. In every topic area, the majority of teachers/group leaders (93% to 99%) indicated that the students had “learned a lot.” Nearly all of the teachers/group leaders (99%) reported that their students had “learned a lot” from the overall learning experience.

Student Environmental Awareness

The Student Survey showed that there were substantial changes in students' environmental knowledge and behavior after participating in the program. Before participating in the OSO program, an average of

67% of students agreed with the survey questions (indicating that they knew a lot about the ocean and storm drains and behaved in environmentally responsible ways), which increased to 87% after attending the program.



The Student Survey results were also analyzed to see whether economic background had any effect on student survey responses. Student groups were divided into three income levels (lower, middle, and higher) and all three income groups' survey responses were analyzed.

Similar to 2019-2020, all income groups saw improvement in their agreement with the overall survey results. Before the program began, lower, middle, and high-income groups agreed with the survey questions overall (all three groups were between 66% and 84%). After participating in the program, students from all income groups demonstrated similar levels of improvement, agreeing between 86% and 94% of the time.

Summary

Overall, the program was very well attended by the target population of students; the program materials were frequently used; and the program was very highly regarded by teachers/group leaders. In addition, Student Survey results suggest that the OSO program succeeded in bringing all students to a higher level of environmentally-conscious behavior and knowledge despite some factors (such as economic background) that may have limited how much environmental awareness a student had before attending the program.

Appendix I: Open-Ended Survey Responses

What additional topic areas do you think would be helpful to include in the Sea Odyssey experience?

- You have this down! Keep up the awesome topics already covered
- We did not because we have testing for report cards
- Ways for kids to slow cc. I.e. turn off lights, don't waste food, eat mostly plants
- Waves are part of 4th grade NGSS standards. so that would be fun.
- The packets are all data. a lot has changed since some of it was written.
- The experience was perfect
- The 3 Focus areas seem like the perfect amount of content.
- Thank you very informative!
- Sustainable fishing and responsible shopping for seafood
- Star navigation, handheld magnifier for plankton collection
- Some Spanish language support
- Slide shows of Monterey marine life
- Reducing plastic use
- Perfect as is
- Ocean pollution and ocean trash. but everything was great!
- None- more info/project ideas for teacher when we go home :) if they are there sorry I missed it
- None- I didn't see the curriculum booklet. I will check it out for next year
- More videos that go more in depth with vocabulary support
- More on what students can do to improve ocean ecosystems
- More integration of the sea lions in educational programs since they have such a major present through this trip.
- More information on the animals we actually see.
- More info on national parks and sanctuaries.
- More connections to global warming
- Monterey Bay history
- Microscope to see micro organisms (Oops – you do have it! Marine science station)
- Maybe more information about the impact of agriculture on our watershed.
- Maybe more info about the sanctuary and what it is
- Maybe just more specific details about the ecosystem we see around this area
- Maybe a little history of Jack O'Neill
- Loved everything
- Love the program as it is. Provides many learning opportunities.
- It was perfect!
- It was perfect
- Incorporate info to science teacher in the power Valley school District they teach our science curriculum outreach is needed
- I'm not sure. It seems pretty comprehensive and makes a lot of connections to other classroom learning. Perhaps for 4th grade, more emphasis on plant/animal structures & functions. Ecosystems is now for 5th grade.

- I think you definitely cover a great deal so I really wouldn't or I couldn't think of anything else
- I think the content was just great.
- I think nothing needs to be added. this is an amazing opportunity for our students.
- I loved it just the way it is
- I love the whole experience is unbelievably fantastic!
- I don't know how you could fit in any more... they learn so much! But years ago there was some information about the great pacific garbage patch.
- I can't think of anything
- How to tie a knot
- Historical information about sail boats? Or navigation.
- Hatchery- fish farm pros/ cons
- Hard to say... very impressed with what you do!
- Great variety of topics
- Great program
- Great experience
- Great as is!
- Great as is
- For fifth grade everything you guys did is perfect
- Food chains
- Everything was perfect! :)
- Everything was perfect :)
- Everything was nicely planned and presented
- Everything was great!
- Everything was great!
- Everything was great!
- Everything was covered!
- Climate change
- Are there more ocean friendly products the kids might use
- All great!
- All are great!
- Action plan for students to help marine life
- About O'Neill himself and why he helped special ed
- A topic about what we consume as in materials clothes because we as a society consume without thinking about where all of the waste ends up.
- A bit more about pollution? Also 4th grade Science standards include science about waves.

Do you have any additional comments?

- All is great! Thank you for having us!
- Always a fantastic experience!
- Always a great experience and awesome hands-on activities throughout the trip! Very knowledgeable staff! Thank you, guys, so much!
- Always a great time, always accommodating. Thank you!
- Amazing adventure every time. The kids are so lucky to have experienced this program!
- Amazing program and instructors as usual!
- An amazing learning opportunity for all!
- An awesome overall experience!
- As always, this has been a great experience for the kids.
- Awesome and wonderful!
- Awesome like always.
- Awesome! Life changing for local youth.
- Did not have enough time. We were late, but students learned and were engaged with the time we had.
- Ecology station was a bit verbose for our English learners. Needed a bit more interaction and a focus on a few key vocabulary words hooked to context.
- Everything was amazing! Staff was great! My students really enjoyed their experience!
- Everything was great! Couldn't find teaching materials online!
- Excellent and worthwhile, as always. Instructors are awesome!
- Excellent Job!
- Fantastic experience and great staff. WE are very lucky to receive such generosity.
- Fantastic experience! It was great having a bilingual instructor! One of my students greatly benefited!
- Field trip was great, very engaging and educational!
- Great as per usual.
- Great Day! We've been learning a lot about Monterey Bay. It was good to see things we've talked about in person.
- Great experience, thank you!
- Great job! Thank you!
- Great job! Thank you!
- Great Trip!
- Great trip! Thank you!
- Hands on the boat was great! The entire experience has been amazing and my whole class and I are so thankful.
- Hope to be back again next school year!
- I especially liked the focus on plastic pollution. We really liked watching the videos on your website as well!
- I think you guys are doing amazing work! Thank you!
- I wasn't the regular teacher, so I didn't use the online curriculum activities. The trip was awesome as always!
- In the classroom, a little more hands on activities (discovery approach vs. lecture) Nevertheless, great classroom session. I distributed your online learning materials to our home school parents.
- It was a great experience for my students. Thank you for everything!
- It was a great trip!
- It was a unique experience! Very organized and content rich!
- It was great!

- It was great! Thank you!
- It was such a rich experience. So much learning for our students!
- Maybe if running late, the ecology discussion should be the thing cut short and not the opening of the sail. Should try to always have that as part of the experience.
- More hands-on activities would keep the students more engaged, particularly on the boat with all the cool views.
- My students love everything about the trip! It's a once in a lifetime experience! Thank you!
- N/A
- One of our boys was very afraid at first, but after he was halfway through the experience, he began to love it!
- Outstanding program. Presenters managed my squirrely 6th graders skillfully and positively. The kids were 100% engaged. Thank you so much.
- So Awesome! We are going to do the online resources today!
- Students really enjoyed the field trip. Great experience for them!
- Such a beautiful and special experience for students. Thank you!
- Thank for you an awesome trip! We watched the virtual program on YouTube!
- Thank you for an amazing day!
- Thank you for having us. Thank you also for helping with a student having a hard time. Everyone was kind and professional.
- Thank you for the opportunity!
- Thank you for the work you do!
- Thank you for this amazing experience. May students loved every minute!
- Thank you for this opportunity! The kids love the marine bio station.
- Thank you so much for everything that you do!
- Thank you so much for helping inspire many generations of ocean stewards!
- Thank you so much! The kids loved it!
- Thank you!
- Thank you!
- Thank you!
- Thank you!
- Thank you! Excellent marine learning! We will always remember this awesome field trip!
- Thank you! Great trip!
- Thanks for an awesome learning experience. My students were engaged as always!
- Thanks for the great experience. For our community service project, we will be checking the school perimeter drains for debris.
- The boat was awesome. It was a first for many of our students.
- The experience was amazing! All students were happy!
- The kids were really into it. Seeing them react to the activities was great.
- The Sea Odyssey experience was great, and my students enjoyed it and learned a lot. Thanks!
- The staff is amazing! Patient and excited about sharing knowledge. Love the new scheduling procedure.
- The students had such a great time and so did all the adults. Thank you so much!
- This is a fabulous program! Well worth it. Thank you all so much!
- This is a wonderful program. Thank you for the opportunity.
- This is always such a wonderful trip. I so appreciate this experiential field trip; my students learn so much.

- This is an amazing trip, the staff is very knowledgeable, kind and patient. A Spanish station would have been amazing to show the students how they can use their bilingualism. But truly incredible. Thank you!
- This is an excellent experience for the students. It ties in really well with our curriculum. I like that real scientific language is used.
- This is one of the best field trips ever. An amazing and valuable experience for the students. We continue to talk about this trip all year. We are able to relate our learning from today to new learning. Thank you so much!
- This is such an amazing experience for the students. Thank you!
- This was a GREAT experience for students! I really appreciate your help covering the cost of buses. The environmental education is so important and made real for students.
- We had a really great time! Thank you so much!
- We love this experience and learn so much! Thank you!
- We love this field trip and the kids really appreciate being able to go on the boat.
- We really appreciate this free educational program. Really a treasure for our community. Thank you
- We really enjoyed the trip. It was very engaging for my students and so important for them. Thank you!
- Wonderful program. Thank you for giving our students this opportunity.
- Wonderful trip and very educational!
- Wonderful, important experience.
- Wonderful, positive instructors. Very informative. Loved our trip!
- Wonderfully run! So many smiles and memories!

Appendix II: Survey Instruments

Teacher/Group Leader Survey

Teachers and group leaders were asked to fill out a short survey after attending the Sea Odyssey program. Earlier versions of the Teacher/Group Leader Survey were administered in previous years and were refined to reflect the significant topics of interest.



School name: _____
 Date: _____

TEACHER/GROUP LEADER SURVEY

We would appreciate your comments on your Sea Odyssey experience. Please take a few minutes to complete this very important survey.

Thinking about the children in the group, and what was presented to them today, how much do you think <u>the children learned</u> from the following?	Learned a lot	Learned a little	Did not learn at all
On the boat:			
1. Sailing & Navigation station: electronic technology and other tools for navigation.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Ecology station: Sanctuary characteristics, marine life and habitats.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Marine science station: life cycles, food station, balance that helps maintain life in the sea.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In the classroom:			
4. Sailing & Navigation station: Latitude, longitude, and basic geometry as it relates to navigation.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Ecology station: water cycle and watershed, ocean pollutants, solutions to pollution.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Marine science station: plankton identification food web information	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Overall learning experience	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Please turn page over to complete the survey questions.



8. Did you use the teaching materials provided on the website before the trip?

- (1) Yes (2) No (Skip to Question 11)

9. If yes, please check the box to indicate which online resources you used before the trip.

- a. Pre-trip educational materials (teacher packet)
- b. Expand your knowledge online learning center
- c. OSO curriculum booklet- English
- d. OSO curriculum booklet - Spanish
- e. Community service project help
- f. Parent and teacher FAQ
- g. Safety and important information

10. If you used the online resources, which materials were the most helpful in the classroom?
(Please select your top 3).

- a. Pre-trip educational materials (teacher packet)
- b. Expand your knowledge online learning center
- c. OSO curriculum booklet- English
- d. OSO curriculum booklet - Spanish
- e. Community service project help
- f. Parent and teacher FAQ
- g. Safety and important information

11. Do you intend to use the online Learning Center or Teacher Packet materials in the classroom after the trip?

- (1) Yes (2) No

12. What additional topic areas do you think would be helpful to include in the Sea Odyssey experience?

13. Do you have any additional comments?

Thank you for taking the time to complete this important survey.

Student Survey

The Student Survey used in this program cycle was modified from previous versions and refined to reflect topics of interest. This survey was designed to be read aloud to the students and was administered to them before *and* after attending the program. Students were asked to raise their hands and close their eyes if they agreed with the questions (indicating a “yes” response), and the number of raised hands for each question were tallied.



School name: _____
 Date: _____
 Number of Students: _____

STUDENT SURVEY

Please conduct the survey verbally and count a show of hands for positive responses.

1) Raise your hand if you agree with the following:

	Pre Trip	Post Trip
The ocean is important to my health		
I know where storm drains lead		
Most ocean pollution comes from land		

2) Raise your hand if: (Pre measures current behavior and Post measures planned future behavior)

	"I ..." Pre Trip	"I plan to..." Post Trip
Pick up trash from the ground		
Turn off the lights when I leave the room		
Share what I know about the protecting the environment and ocean with my friends and family		

3) POST ONLY – Raise your hand if you agree with the following:

	Post Trip
This was my first time on a boat on the ocean	

Appendix III: Data Clarification

There is a possibility, beginning in 2018-19, that the statistic is artificially low due to the implementation of a new meals program at the district level called the Community Eligibility Provision (CEP). The CEP is a federal program that provides free meals for students at schools, but it does not work the same way as the FRMP. The FRMP numbers are based on a form that is filled out by parents when the student is enrolled that asks about their income level. The CEP is implemented based on an audit of the community surrounding the school and a measure of how many people in the area use assistance programs (like SNAP and welfare and other forms of assistance). Due to the implementation of the CEP, many low-income schools are no longer keeping accurate FRMP data since the program is being phased out slowly. The OSO program has done over a year's worth of research into this issue and has spoken to statisticians at the California Department of Education for confirmation. Based on this research, there is the possibility that FRMP data is inaccurate and that the percentage of low-income students in the program is higher than displayed.

About the Researcher

Applied Survey Research (ASR) is a social research firm based in Santa Cruz County. ASR is dedicated to helping people build better communities by creating meaningful evaluative



and assessment data, facilitating information-based planning, and developing custom strategies. ASR has more than 30 years of experience working with public and private agencies, health and human service organizations, city and county offices, school districts, institutions of higher learning, and charitable foundations. Through community assessments, program evaluations, and related studies, ASR provides the information that communities need for effective strategic planning and community interventions.

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