



o'neill sea odyssey

2010-2011 survey results
november 2011



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Executive Summary

Demographics

- Between July 2010 and June 2011, 182 groups participated in the O'Neill Sea Odyssey program, representing 4,852 students. Group sizes ranged from 6 to 36 students, with an average group size of 27.
- The majority of groups came from Santa Cruz County (48%), Santa Clara County (36%), and Monterey County (10%).
- Approximately 97% of groups were of students between 4th and 6th grade, the programs target population.
- One in ten students (10%) had attended the program previously.
- Based on population estimates, 43% of the students were Hispanic or Latino, 31% were White, 12% were Asian, Filipino, or Pacific Islander, 2% were African American, less than 1% were American Indian or Alaska Native, and 11% were of another race/ethnicity.
- It was estimated that 52% of the students attending the OSO program did not have English as their primary language, a slight increase since 2006-07 (45%).
- Roughly half (47%) of students were receiving free or reduced price meals.
- Approximately 30% of participating groups came from "lower income" communities, 32% came from "middle income" communities, and 38% came from "higher income" communities.

Website Use

- Most teachers/group leaders (85%) they had visited the Sea Odyssey website before their trip.
- More than two-thirds (67%) of all teachers/group leaders reported that they had used the online teaching materials provided on the website before their trip, and of those 97% felt that the teaching materials enhanced the students' learning of the topics.
- Most teachers (90%) intended to use the online teaching materials in the classroom after the trip.

Program Ratings

- In every topic area, the vast majority of teachers/group leaders (between 94% and 99%) indicated that their students had "learned a lot."
- Of the three topics learned on the boat, most of teachers/group leaders thought that the students had "learned a lot" in the "Marine Science station" (98%), closely followed by the "Sailing & Navigation station" (97%), and "Ecology station" (96%).
- Of the four topics learned in the classroom, most teachers/group leaders again said that students had "learned a lot" in the "Marine Science station" and the "Follow-up and Discussion" (98%), closely followed by the "Ecology station" (97%) and the "Sailing and Navigation station" (94%).
- Nearly all teachers/group leaders (98%) 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 76% of students agreed with the survey questions overall. After attending the program, this percentage increased to 93%.
- When student surveys were divided by income level, results showed that all groups of students increased their environmental knowledge after attending the program yet the "lower income" students' agreement started higher than the other two income groups and showed the greatest increase.

About O'Neill Sea Odyssey

O'Neill Sea Odyssey (OSO) was incorporated in 1996 by wetsuit innovator and surfer Jack O'Neill as a nonprofit organization to provide unique ecology, navigation, and marine sciences learning experiences to regional students in grades 4 through 6. Since this time, more than 50,000 students have participated in the three-hour, hands-on learning event aboard the

program's 65-foot catamaran in the Monterey Bay National Marine Sanctuary and follow-up lessons in the Education Center at the Santa Cruz Harbor. After participating in the program, students are required to perform a community service project.

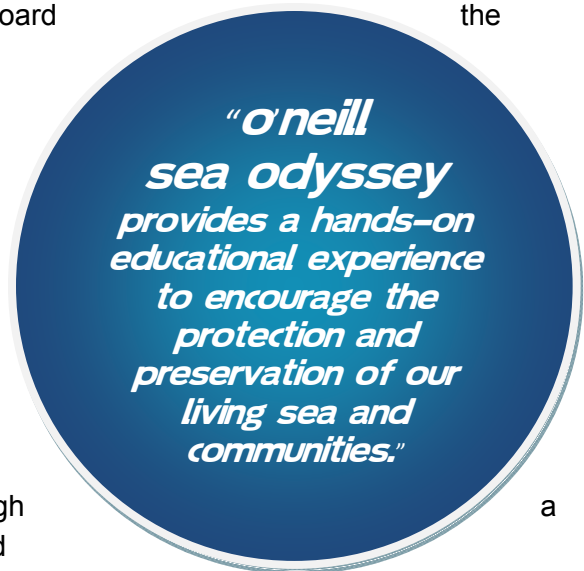
The primary purpose of the program is to foster awareness of environmental stewardship and personal responsibility among program participants. This is done by delivering an interactive curriculum that emphasizes the connections between land and sea through multi-disciplinary approach including ecology, biology, and mathematics.

The OSO website (<http://www.oneillseaodyssey.org/>) provides extensive curriculum and learning materials that are 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 afterwards as follow-up activities.

Student groups are required to complete a community service project to earn a trip on the OSO. A community service project encompasses a broad range of activities such as native plant restoration, beach or creek cleanup, homeless garden projects, community environmental awareness projects, school recycling programs, and letter-writing campaigns for environmental causes. Teachers and group leaders are required to submit proof of completion of a community service project, which can be done via the OSO website.

During the July 2010 - June 2011 program cycle, 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. A second survey was read aloud to the students that asked 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.

OSO has undertaken the analyses of these two 2010-11 surveys and other program data for use in evaluating the program, further planning, and developing funds for program expansion or replication.



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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 the last five years, two surveys have been utilized: one was distributed to the teachers/group leaders, and another was administered to the students. 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 O'Neill Sea Odyssey (OSO) program. The current survey for teachers/group leaders has been used since the spring of 2006 and refined the prior survey to better address significant areas of interest.

In this survey, teachers/group leaders were asked to evaluate the program based on how much they thought the students learned from each of the program areas, including three topics taught on the boat portion of the program, four 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." In a "Yes/No" question, they were then asked if the presentations were presented at an age-appropriate level.



In a combination of "Yes/No" and open-ended questions, teachers/group leaders were then asked several questions about the OSO website and program materials available from it. They answered whether they had visited the OSO website before the trip, if they had used the teaching materials provided there before taking the trip, how they used the website Learning Center or Teacher Packet materials in the classroom *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.

They were asked if the teaching materials enhanced the students' learning of the topics, and if they had any suggestions for improving these teaching materials. Finally, they were asked if they had any additional comments.

Student Survey

The current version of the Student Survey was first used in the 2006-07 program cycle, and was modified only slightly so that most of the questions were in the present tense ("Do you..." vs. "Will you..."). 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 if they agreed with the questions (indicating a "yes" response), and the number of raised hands for each question were

tallied. During 2010-11, students were asked to put their heads down on the desk before raising their hand. This allowed the students to have anonymity when responding.

The Student Survey included six “Yes/No” questions. Two questions asked about their general knowledge: if the students knew a lot about plants and animals in the ocean, and if they knew a lot about things that are bad for rivers, oceans, and the environment. Four questions asked about their behavior: do they not pour oil and chemicals down storm drains or onto the ground, do they not throw garbage on the ground, do they recycle, and will they share their knowledge with friends and family.

Demographic Data Collection

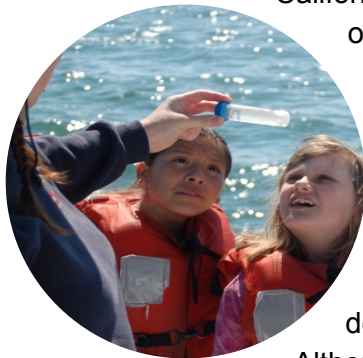
In addition to filling out the survey, teachers/group leaders were asked to provide the name of their school or group, the number of students in their group, and the grade level(s) of their students. To determine the number of repeat participants, when students first arrived they were asked by a show of hands if they had previously participated in the OSO program.

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 the DataQuest database of the

California Basic Educational Data System (CBEDS). Using DataQuest, OSO

obtained the percentages of each of these demographics for each school participating in this program. 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, suggestions, and to describe their experiences with the OSO website's educational materials.

Although these open-ended questions are not evaluated in this report, all of the responses are provided in Appendix I: Open-Ended Survey Responses.

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). When a census approach is used, statistical testing is unnecessary since, by default, any difference by itself is already significant.

For this reason, targeted statistical analyses were not necessary for evaluating the significance of the Student Survey results. Since this survey used a census approach, all differences between pre- and post-program survey results were significant by default, and differed only in magnitude.

Note that demographic data were not available for every group, and not every group answered all 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.

Results

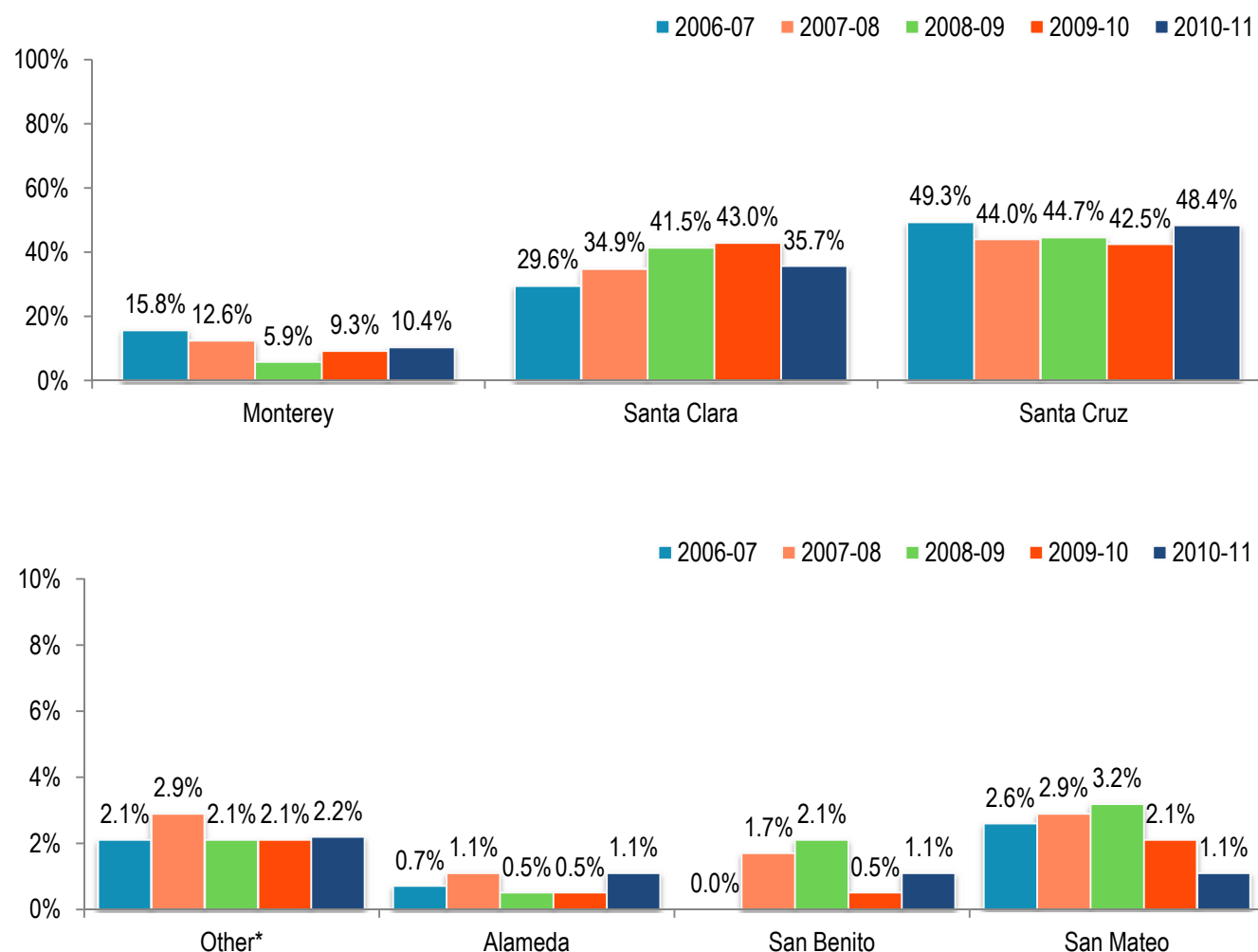
Student Participation and Demographics

Between July 2010 and June 2011, 182 groups participated in the O'Neill Sea Odyssey program, representing 4,852 students. Group sizes ranged from 6 to 36 students, with an average group size of 27.

Counties of Origin

Some groups came from as far away as Stanislaus County and Contra Costa County but most came from Santa Cruz County (48%), Santa Clara County (36%), and Monterey County (10%). Between 2006-07 and 2010-11, these three counties have continued to be the most frequent origins of groups.

Figure 1: Participating Group's County of Origin



Source: 2006-09: Data provided by O'Neill Sea Odyssey (2006-07 N=152 groups, 2007-08 N=175 groups, 2008-09 N=188 groups, 2009-10 N=193).

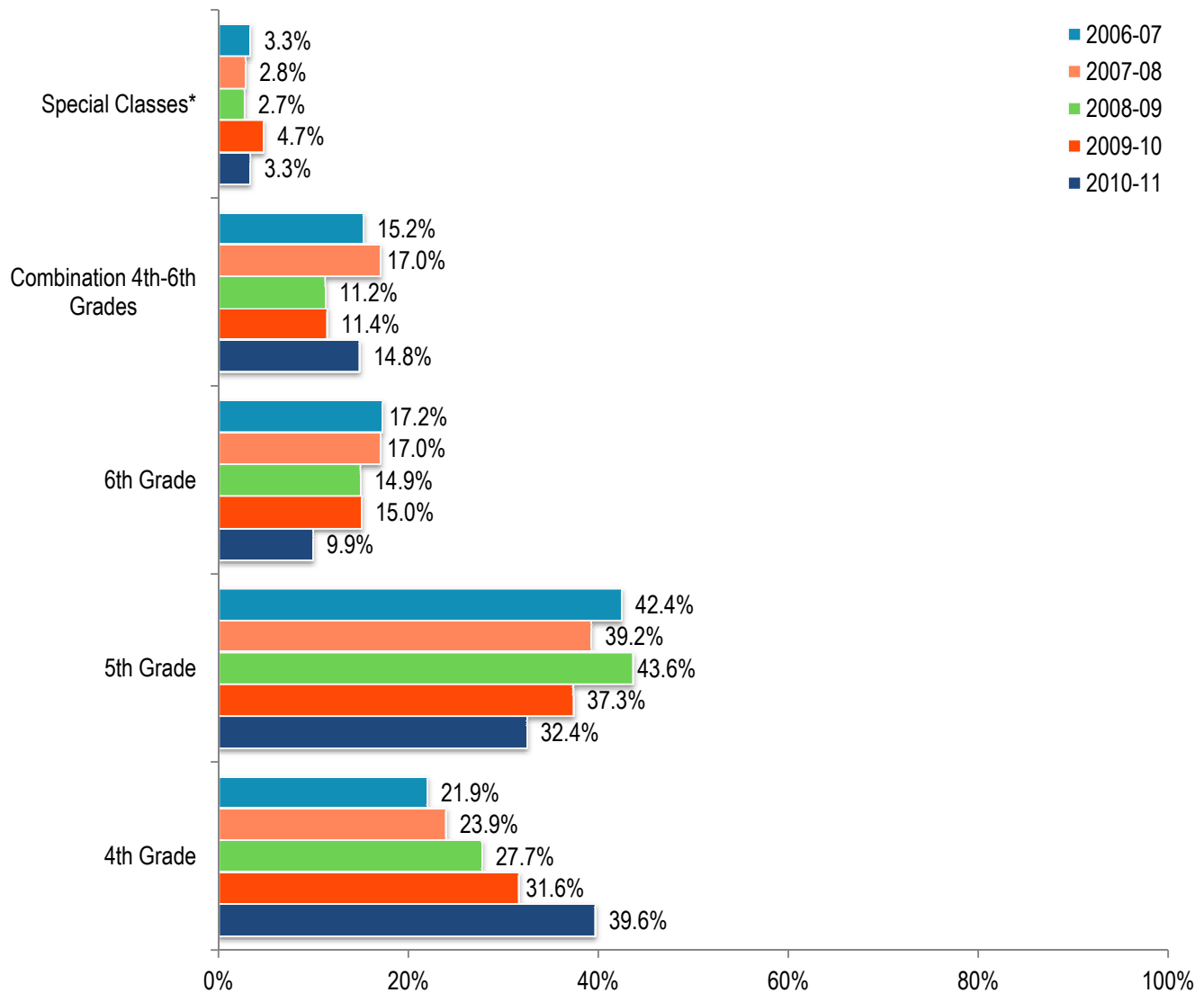
* "Other" includes the counties of Contra Costa, Sacramento, San Francisco, San Joaquin, Stanislaus, and Yolo.

Grade Levels

OSO's target population is students in the 4th through 6th grades, and in 2010-11, the vast majority of groups were in this grade range (97%). In 2010-11, the highest percentage of groups were from the 4th grade (40%), followed by 5th grade groups (32%), combined 4-6th grade groups (15%), and combination 6th grade groups (10%).

Most groups of students participated through schools, although a few came from community centers and children's organizations such as the Boys and Girls Club and the Junior Volunteers.

Figure 2: Grade Levels of Groups



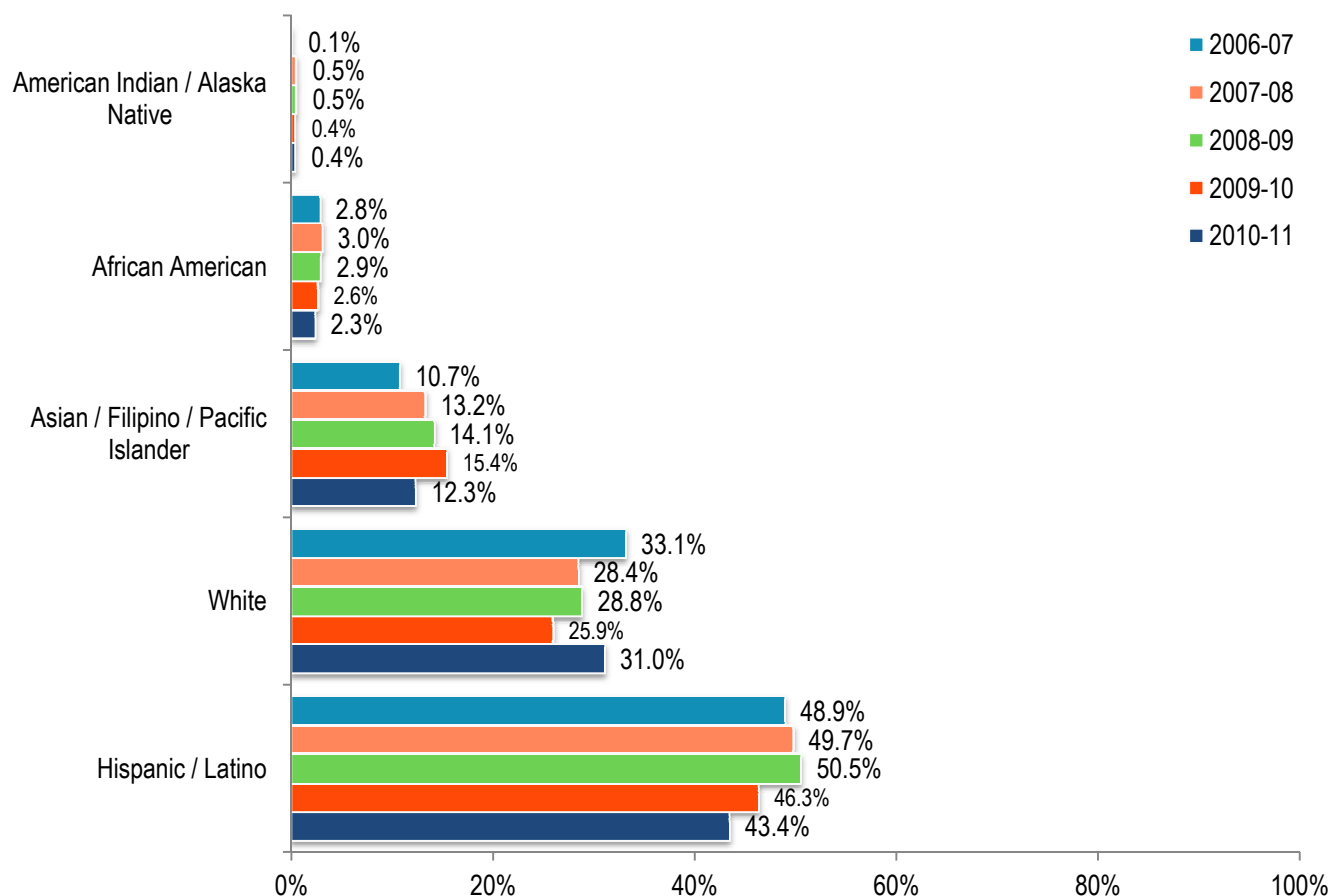
Source: 2006-09: Data provided by O'Neill Sea Odyssey (2006-07 N=151 groups, 2007-08 N=176 groups, 2008-09 N=188 groups, 2009-10 N=193 groups).

* "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 the DataQuest database of the California Basic Educational Data System (CBEDS), based on the year, school locations, and grade levels of the students. In 2010-11, it was estimated that 43% of the students were Hispanic or Latino, 31% were White, 12% were Asian, Filipino, or Pacific Islander, 2% were African American, less than 1% were American Indian or Alaska Native, and 11% were of another race/ethnicity. These percentages have stayed relatively the same since 2006-07.

Figure 3: 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 (2006-07 N=3,586 students, 2007-08 N=4,210 students, 2008-09 N=4,731 students, 2009-10 N=5,166 students, N=182 students).

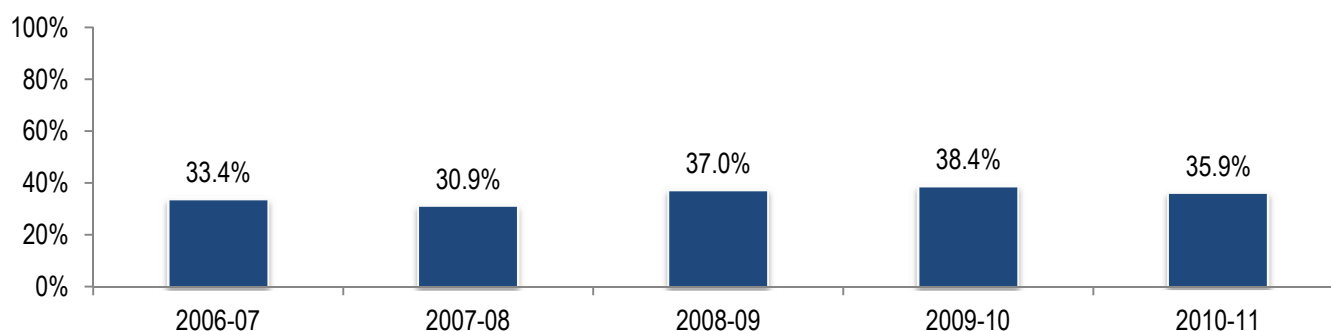
Note: The "Other" and "Multiple or No Response" categories are not shown in this figure. Percentages may not total 100% for this reason or due to rounding.

English as a Second Language

Two categories of English proficiency were examined using percentages obtained from the DataQuest database. One category was English Learner (EL), which described students whose primary language was not English, and who had been determined to lack the English language skills necessary to succeed in the school's regular instructional programs. The other category was Fluent-English-Proficient (FEP), which described students whose primary language was not English, but who had met the district criteria for determining proficiency in English.

In 2010-11, it was estimated that 36% of students attending the OSO program were English Learners (EL), and 14% of student participants were Fluent-English-Proficient (FEP), both percentages have remained relatively consistent since 2006-2007. When the two groups were combined (EL + FEP), the result showed that in 2010-11, 52% of the students attending the OSO program did not have English as their primary language, a slight increase since 2006-07 (45%).

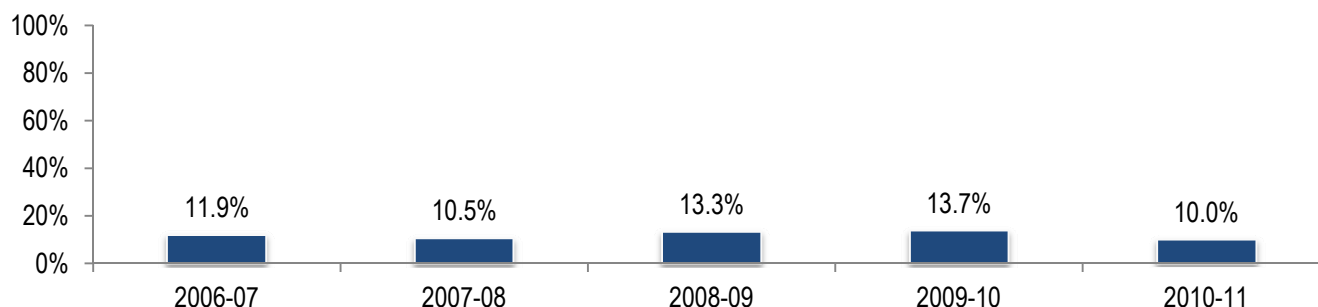
Figure 4: Percentage of English Learner (EL)¹ Students



Source: 2006–11: Data provided by O'Neill Sea Odyssey, collected from State of California Department of Education, California Basic Education Data System, DataQuest database (2005-06 N=2,838 students, 2006-07 N=3,239 students, 2007-08 N=4,210 students, 2008-09 N=4,678 students, 2009-10 N=4,817 students, 2010-2011 N=4,852 students).

¹ "English Learner" includes students for whom there is a report of a primary language other than English on the state-approved Home Language Survey and who, on the basis of the state approved oral language (grades K-12) assessment procedures and including literacy (grades 3-12 only), have been determined to lack the clearly defined English language skills of listening comprehension, speaking, reading, and writing necessary to succeed in the school's regular instructional programs.

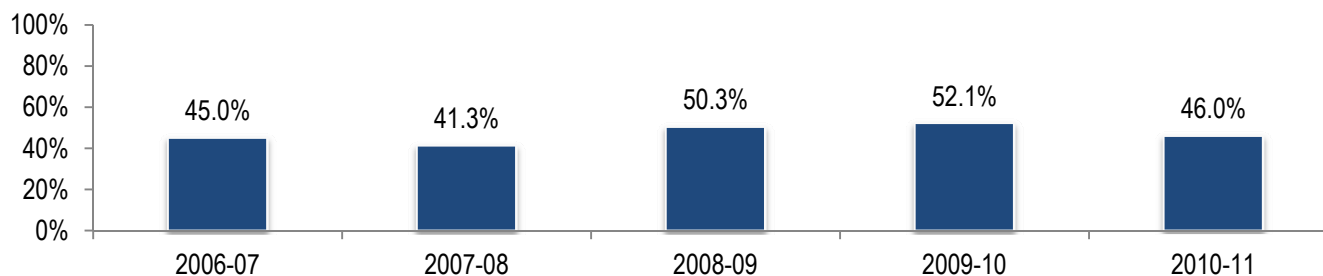
Figure 5: Percentage of Fluent-English-Proficient (FEP)¹ Students



Source: Data provided by O'Neill Sea Odyssey, collected from State of California Department of Education, California Basic Education Data System, DataQuest database (2006-07 N=3,156 students, 2007-08 N=4,210 students, 2008-09 N=4,678 students, 2009-10 N=4,817 students, 2010-2011 N=4,852 students).

¹ "Fluent-English-Proficient" includes students whose primary language is other than English and who have met the district criteria for determining proficiency in English (i.e., those students who were identified as FEP on initial identification and students re-designated from Limited-English-Proficient (LEP) or English learner (EL) to FEP).

Figure 6: Percentage of Students Whose Primary Language is Not English



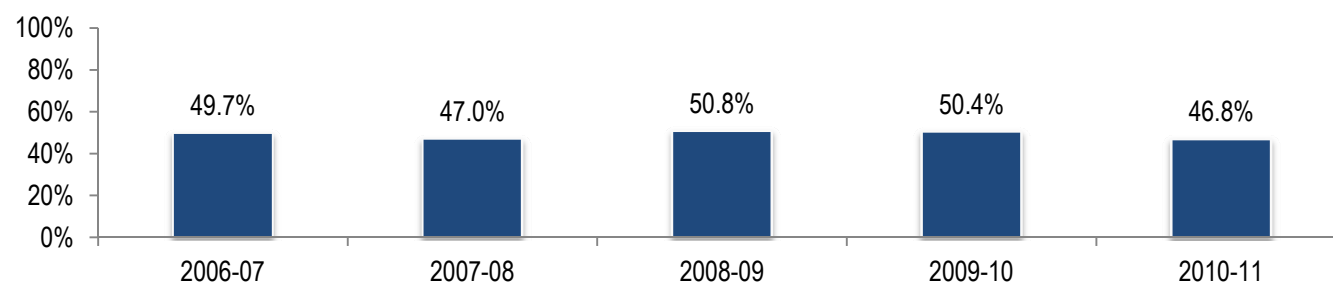
Source: Data provided by O'Neill Sea Odyssey, collected from State of California Department of Education, California Basic Education Data System, DataQuest database (2006-07 N=3,239 students, 2007-08 N=4,210, 2008-09 N=4,678, 2009-10 N=4,817 students, 2010-2011 N=4,852 students).

Note: This analysis combines both English Learner (EL) and Fluent-English-Proficient (FEP) students.

Free and Reduced Price Meals

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 the DataQuest database, in 2010-11, 47% of the students who attended the OSO program were receiving free or reduced price meals, a slight decrease from previous years.

Figure 7: Percentage of Students Receiving Free or Reduced Price Meals

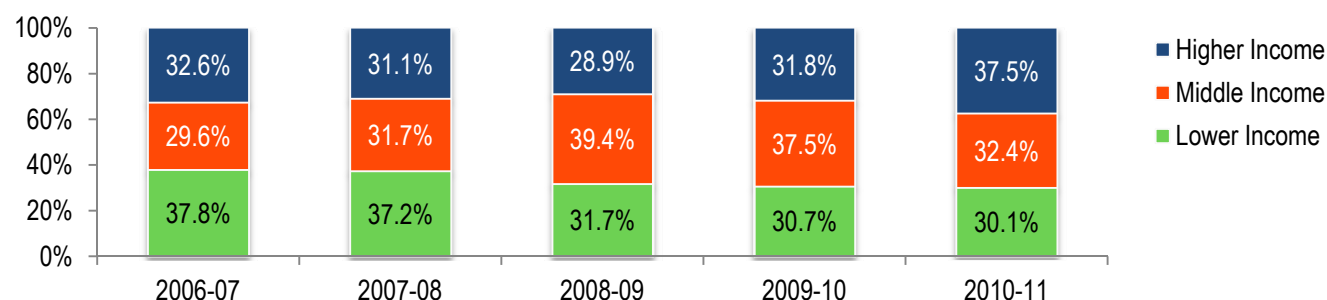


Source: Data provided by O'Neill Sea Odyssey, collected from State of California Department of Education, California Basic Education Data System, DataQuest database (2006-07 N=3,583 students, 2007-08 N=4,210 students, 2008-09 N=4,776, 2009-10 N=4,866 students, 2010-2011 N= 4,727).

The OSO program aims to make its learning experiences available to students from all economic backgrounds. The economic levels of the communities from which participating groups came were estimated using the percentage of students receiving free or reduced price meals.¹ 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.”

Using this method of analysis, approximately 30% of participating groups came from “lower income” communities, 32% came from “middle income” communities, and 38% came from “higher income” communities. During the last five years, the percentage of groups from “lower income” communities has decreased slightly, with corresponding increases in the percentages of groups from “middle” and “higher income” communities.

Figure 8: 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 (2006-07 N=135 groups, 2007-08 N=164 groups, 2008-09 N=180 groups, 2009-10 N=192 groups, 2010-2011 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.

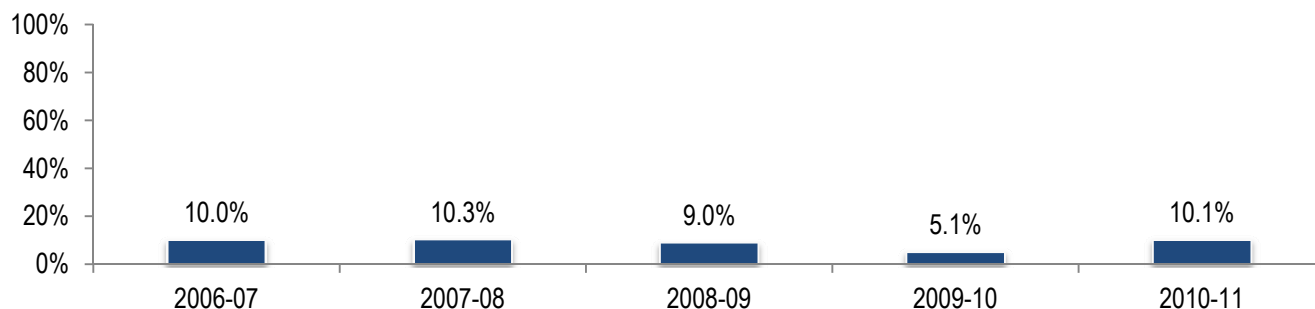
¹ Income levels of the groups were estimated using the percentage of students receiving free or reduced price meals in each group: In Higher Income groups, less than 33% of their students received this benefit; Middle Income groups had between 1/3 and 2/3 of their students receiving this benefit, and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

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

Repeat Students

In 2010-11, 10% of students had previously participated in the OSO program. The percentage of students repeating the program has stayed relatively stable since 2006-07, with slight decrease in 2009-10.

Figure 9: Percentage of Students Repeating the Program



Source: 2006-09: Data provided by O'Neill Sea Odyssey (2006-07 N=3,969 students, 2007-08 N=4,210 students, 2008-09 N=3,777 students, 2009-10 N=4,767 students 2010-2011 N= 4,852 students).

Website and Teaching Materials Use

In 2002, OSO launched an extensive website to inform potential visitors about the program, cultivate volunteers, and encourage sponsorships. Once a trip is planned, teachers can log in to the website to get pre-trip information and documents such as a program overview, discussion of learning goals, and a teacher packet. The 52-page teacher packet includes information and activities to help prepare students for the trip, including topics on marine biology, ecology, and navigation. The “View Data from Past Trips” function on the site allows teachers and students to see, and learn, what other classes have done for their community service project.

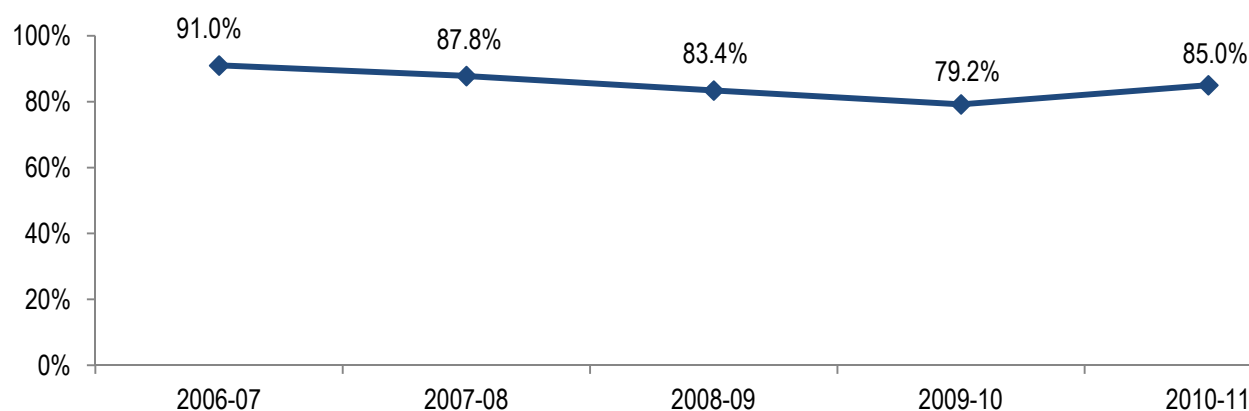
In their program material, OSO states that:

“...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.

In the Teacher/Group Leader Surveys, 85% of teachers/group leaders in 2010-11 reported that they had visited the Sea Odyssey website before their trip. Data from previous years' surveys showed that that website use has remained relatively stable with between 80% and 90% of teacher/group leaders using the site prior to their trip.

Figure 10: “Did You Visit the Sea Odyssey Website Before this Trip?” (Teachers/Group Leaders Who Answered “Yes”)



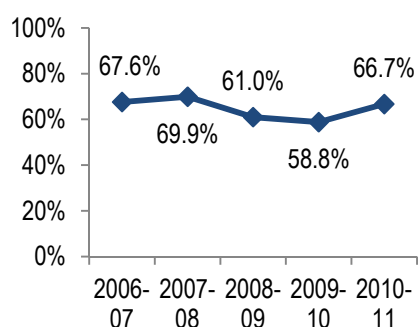
Source: 2006-11: Teacher/Group Leader Surveys (2004-05 N=101, 2005-06 N=108, 2006-07 N=144, 2007-08 N=156, 2008-09 N=163, 2009-10 N=178, 2010-2011 N= 160).

Teachers/group leaders were asked additional questions about the teaching materials available on the website.

- In 2010-11, 67% of all teachers/group leaders reported that they had used the online teaching materials provided on the website *before* their trip, which was a slight increase from the two years prior.
- Almost all teachers/group leaders (97%) felt that the teaching materials enhanced the students' learning of the topics, similar to the previous years.
- The vast majority (90%) reported that they intended to use the online teaching materials in the classroom *after* the trip. This result has stayed relatively level over the past five years.

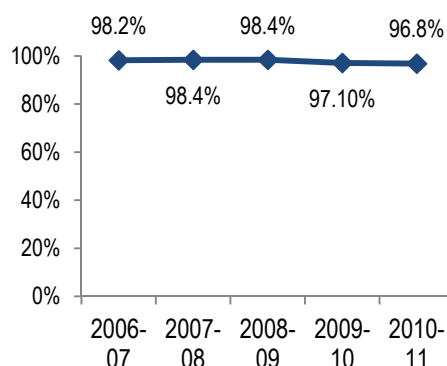
Figure 11: Use of Website Teaching Materials (Teachers/Group Leaders Who Answered “Yes”)

“Did You Use the Teaching Materials Provided On the Website Before the Trip?”



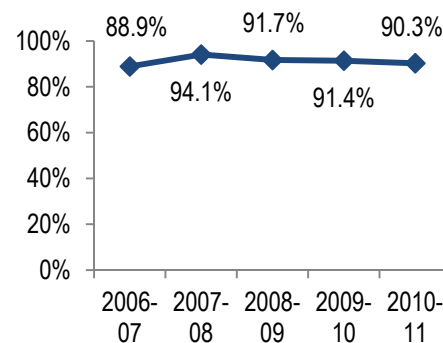
Source: Teacher/Group Leader Surveys (2006-07 N=142, 2007-08 N=153, 2008-09 N=159, 2009-10 N=177, 2010-2011 N= 159).

“Did the Teaching Materials Enhance the Children’s Learning of Topics?”



Source: Teacher/Group Leader Surveys (2006-07 N=111, 2007-08 N=127, 2008-09 N=122, 2009-10 N=140, 2010-2011 N= 1240).

“Do You Intend to Use the Online Learning Center or Teacher Packet Materials in the Classroom After the Trip?”



Source: Teacher/Group Leader Surveys (2006-07 N=135, 2007-08 N=153, 2008-09 N=157, 2009-10 N=162, 2010-2011 N= 145).

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?" and respondents could answer "learned a lot," "learned somewhat," or "did not learn at all."

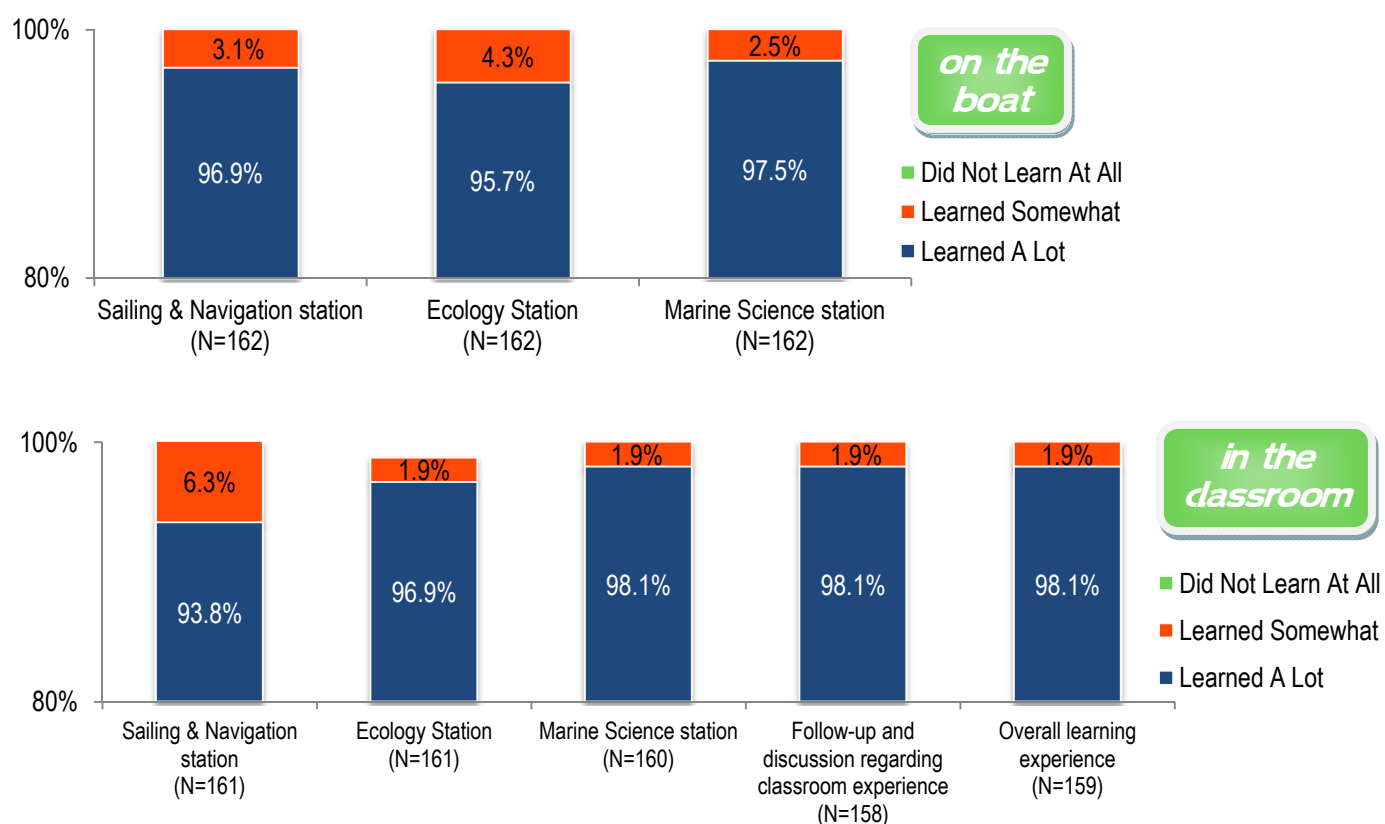
In every topic area, the vast majority of teachers/group leaders indicated that the students had "learned a lot." The percentage of teachers/group leaders who responded this way ranged from 94% to 99% across all topics.

- Of the three topics learned on the boat, teachers/group leaders thought students had "learned a lot" in the "Marine Science station" (98%), this was followed by the "Sailing & Navigation station" (97%), and "Ecology station" (96%).
- Of the four topics learned in the classroom, most teachers/group leaders again said that students had "learned a lot" in the "Marine Science station" and the "Follow-up and Discussion" (98%), followed by the "Ecology station" (97%) and the "Sailing and Navigation station" (94%).

Nearly all teachers/group leaders (98%) reported that their students had "learned a lot" from the "overall learning experience," and 99% agreed that the presentations were presented at an age-appropriate level.

During the past five years (2006-07 to 2010-11), the percentage of teachers/group leaders who reported that the students had "learned a lot" has been consistently high. The topic that showed the greatest increases were the "on the Marine Science station" (net increase of 4.6%). 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.

Figure 12: “How Much Do You Think The Children Learned From the Following [Topic Areas]?” (Percentage of Teachers/Group Leaders Who Gave These Responses), 2010-11



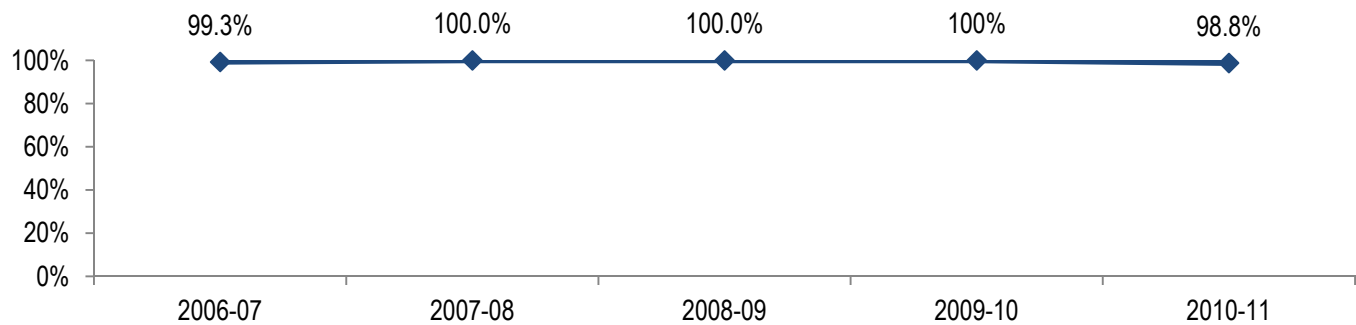
Source: Teacher/Group Leader Surveys, 2009-10.

Figure 13: Comparison of Topic Areas (Teachers/Group Leaders Who Said the Children “Learned A Lot”)

	2006-07	2007-08	2008-09	2009-10	2010-11
On the boat					
Sailing and Navigation station	97.2%	92.4%	93.4%	94.1%	96.9%
Ecology station	95.8%	97.5%	96.4%	96.8%	95.7%
Marine science station	92.9%	99.4%	97.0%	95.7%	97.5%
In the classroom					
Sailing and Navigation station	93.7%	91.8%	93.5%	94.6%	93.8%
Ecology station	98.6%	97.5%	97.6%	96.2%	96.9%
Marine science station	97.9%	95.6%	97.6%	99.5%	98.1%
Follow-up and discussion	97.8%	98.7%	95.7%	97.8%	98.1%
Overall					
Overall learning experience	98.6%	100%	99.4%	98.9%	98.1%

Source: Teacher/Group Leader Surveys, 2006-11.

**Figure 14: “Were the Presentations Presented at an Age-Appropriate Level?”
(Teachers/Group Leaders Who Answered “Yes”)**



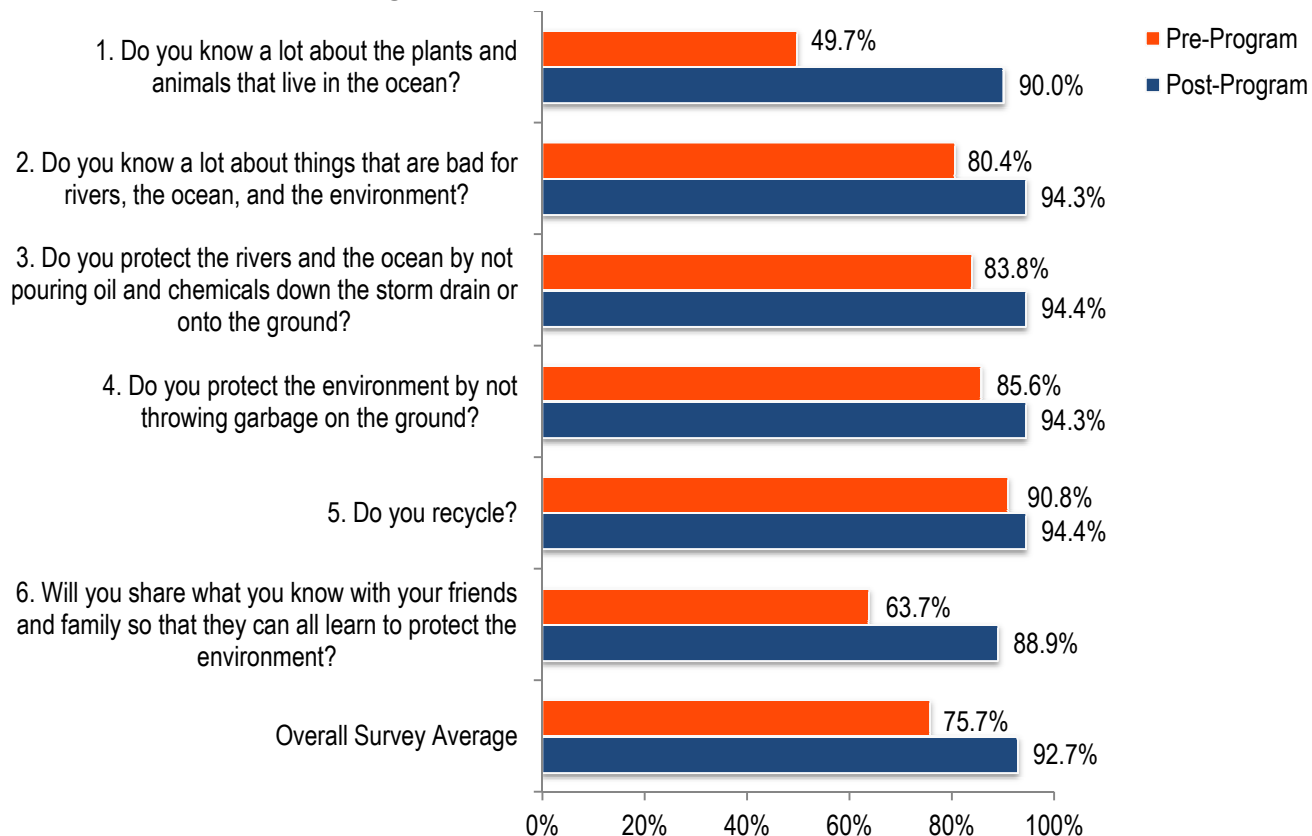
Source: Teacher/Group Leader Surveys (2005-06 N=108, 2006-07 N=144, 2007-08 N=156, 2008-09 N=163, 2009-10 N=160).

Student Environmental Awareness

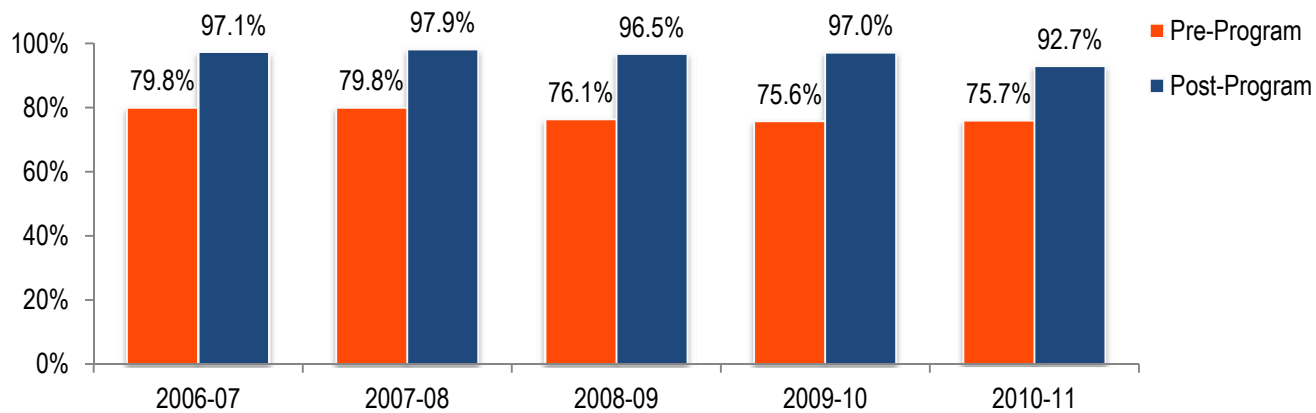
The Student Survey was read aloud to the students and was administered both before *and* after the program. The Student Survey included six “Yes/No” questions regarding their general knowledge about the ocean, and their future behavior regarding protection of the environment, recycling, and intention to share their knowledge about how to protect the environment with others. Students were asked to raise their hands 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 76% of students agreed with the survey questions overall. After attending the program, this percentage increased to 93%. Similar improvements have been demonstrated each of the five years that this Student Survey has been administered.

For each of the six individual survey questions, there were substantial increases in the percentage of students who agreed with them after participating in the program. The largest increases occurred with Question 1, “Do you know a lot about the plants and animals that live in the ocean?” (net increase of 40%), and Question 6, “Will you share what you know with your friends and family so that they can all learn to protect the environment?” (net increase of 25%). Again, these findings mirror the results from the previous three years.

Figure 15: Percentage of All Students Who Agreed with Survey Questions, Pre- and Post-Program, 2010-11

Source: Student Surveys, 2010-11 (N=4,727 students).

Figure 16: Students' Overall Survey Averages, Pre- and Post-Program

Source: Student Surveys (2006-07 N=3,851 students, 2007-08 N=4,435 students, 2008-09 N=4,756 students, 2009-10 N=5,001 students, 2010-11 N= 4727).

Effects of Economic Background

The Student Survey results were also analyzed to see 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," 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."

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

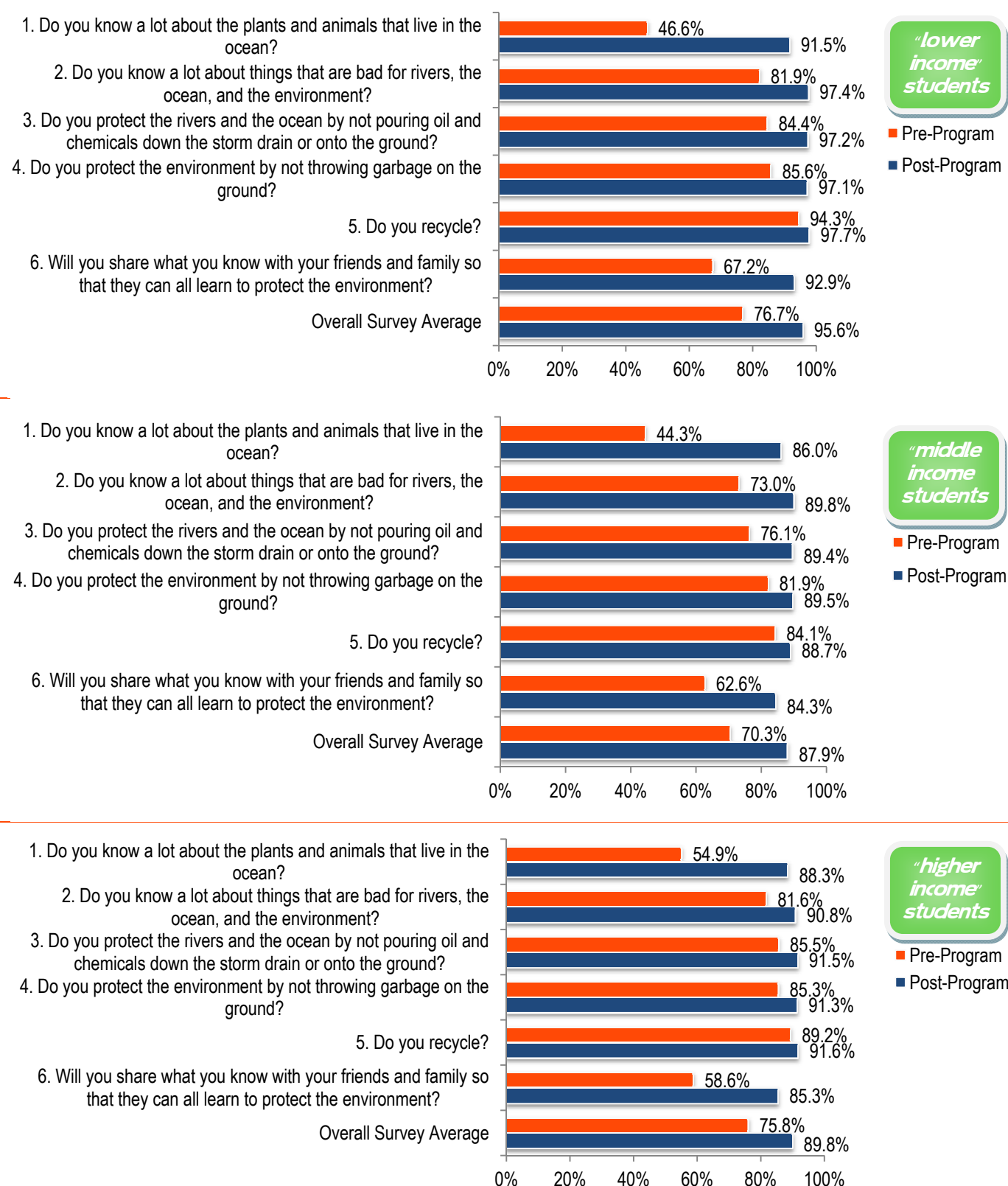
The most interesting findings were the *amount of change* and *effectiveness* of the OSO program in teaching and encouraging environmentally-conscious behavior, relative to the students' economic background. Before the program began, a lower percentage of "middle income" students agreed with the survey questions overall (70%), compared to "lower income students (77%) and "higher income" students (76%). After participating in the program, these "middle income" students agreement increased yet continued to be lower than rates among other income groups. After participating in the program, 96% of "lower income" students agreed with the survey questions, while 88% "middle income" students and 89% of "higher income" students agreed.

When specific survey questions were examined, the question that showed the largest difference related to economic background was Question 1, "Do you know a lot about the plants and animals that live in the ocean?" For this question, "lower income" students demonstrated a greater amount of change between Pre- and Post-Program surveys (net change of 45%) than "higher income" students (net change of 33%). However, Question 1 also had the lowest agreement rate prior to participating in the program regardless of students' economic background and therefore left the most territory to gain.

The overall results indicated that all groups of students increased their environmental knowledge after attending the program, with the "lower income" students' agreement starting higher than the other two income groups and still showing the greatest amount of change.

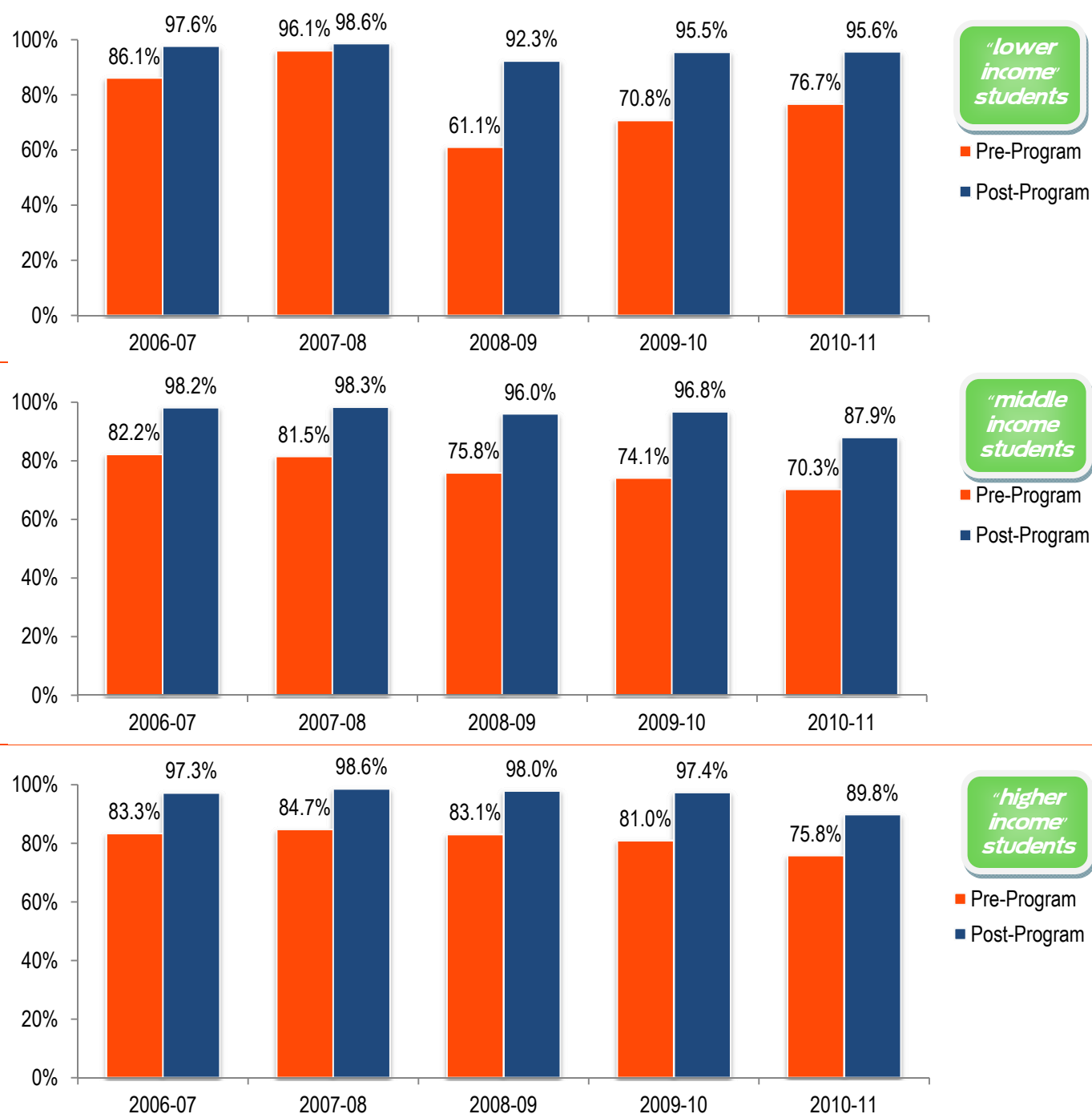
This year's results were similar to previous three years' findings, demonstrating that the OSO program is consistent in its ability to provide this environmental education in a manner that is accessible to all students. By the end of the program, virtually all of the students were more confident in their knowledge of the ocean environment, reported that they would behave in ways to protect the environment, and that they would share this knowledge with their friends and family members.

Figure 17: Percentage of Students Who Agreed with Survey Questions, Pre- and Post-Program, by Income Level, 2010-11



Source: Student Surveys, 2010-11. Lower income students: N=1,406 students. Middle income students: N= 1,589, Higher income students: N=1,732 students.

Note: Only groups that had data regarding the percentage of students receiving free or reduced price meals were included in this analysis. Middle income students are not displayed in order to focus the analysis on the two extremes of economic background.

Figure 18: Students' Overall Survey Averages, Pre- and Post-Program, by Income Level

Source: Student Surveys (2006-07 Lower income students: N=1,323 students. Middle income students N= 1,025 students, Higher income students: N=1,195 students. 2007-08 Lower income students: N=1,616 student, Middle income students N= 1,393 students, Higher income students: N=1,364 students. 2008-09 Lower income students: N=1,442 students. Middle income students N= 1,803 students, Higher income students: N=1,373 students, 2009-10 Lower income students: N=1,521 students. Middle income students N=1,947 students, Higher income students: N=1,533 students, 2010-11 Lower income students: N=1,406 students. Middle income students: N= 1,589, Higher income students: N=1,732 students).

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

Conclusions

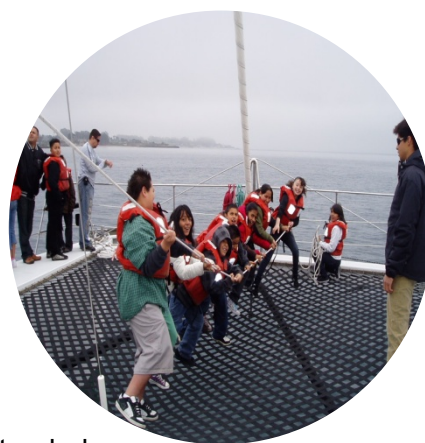
Student Participation and Demographics

During the 2010-2011 program cycle 182 groups participated in the O'Neill Sea Odyssey (OSO) program, representing 4,852 students. The average group size was 27.

The demographics of the groups and students who participated in the O'Neill Sea Odyssey program were similar to previous years. The majority of groups came from Santa Cruz, Santa Clara, and Monterey Counties (94%), and the vast majority of groups (97%) were comprised of students in the 4th through 6th grades. Some students were repeat visitors, with 10% of the students having been on the trip at least once before.

It was estimated that nearly half of the students were Hispanic or Latino (43%), 31% were White, and 26% were of other races/ethnicities. The percentage of English Learners (EL) was 36%, and 10% of students were Fluent-English-Proficient (FEP). When these two groups were combined, the results show that 46% of the participating students did not have English as their primary language.

Nearly half of the students (47%) 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 calculated that approximately 30% of participating groups came from "lower income" communities. Please refer to page 9 for more information.



Website and Teaching Materials Use

Most teachers and group leaders indicated that they used the website materials with their students before participating in the program, and intended to continue using them back in the classroom. Approximately 85% of teachers/group leaders had visited the Sea Odyssey website before the trip, and 67% of all teachers/group leaders reported that they had used the online teaching materials provided on the website *before* their trip. Virtually all of the teachers/group leaders (97%) felt that the teaching materials enhanced the students' learning of the topics, and the vast majority of teachers/group leaders (90%) reported that they intended to use the online teaching materials in the classroom *after* the trip.

Open-ended questions in the survey asked how teachers/group leaders used these online materials before the trip, which materials were most helpful in the classroom, if they had any suggestions for improving the teaching materials, and if they had any additional comments. The responses to these questions are available in Appendix I: Open-Ended Survey Responses.

Program Ratings

Based on the Teacher/Group Leader Survey results, the O'Neill Sea Odyssey program was evaluated extremely positively. In every topic area, the majority of teachers/group leaders (94% to 98%) indicated that the students had “learned a lot,” and nearly all teachers/group leaders (99%) felt the presentations were presented at an age-appropriate level. Almost all of teachers/group leaders (98%) 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 76% of students agreed with the survey questions (indicating that they knew a lot about ocean plants and animals and behaved in environmentally responsible ways), which increased to 93% after attending the program.



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

There was a considerable difference between these three income groups in the *amount* of change that occurred between Pre- and Post-Program surveys. Before the program began, a lower percentage of “middle income” students agreed with the survey questions overall (70%), compared to “higher income” students (76%) and “lower income” students (77%). However, after participating in the program, higher percentages of “middle income” students agreed with the survey questions, showing similar results to “higher income” students. In comparison to the other two groups, “lower income” students reported higher rates of agreement to the survey questions prior to the trip (77%) and as well as after (96%).

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

12. How did you use the web site Learning Center or teacher packet materials in the classroom before the trip?

- Create packet-discussed, connected with science standards learned throughout the year crosswords, kelp/seaweeds, pictures of the catamaran, information on debris in the sea and how we can help protect our oceans
- Crossword puzzles, vocabulary list
- Did as a group. We were not able to do as much as we would have liked.
- Did not
- Did not use it
- Discussed the vocabulary with the students
- Discussed what to expect and some of the things they'd be learning
- Discussion groups, website projects on big screen
- Discussion, project start.
- Discussions, viewed as a class
- Downloaded information to give overview of Marine sciences
- Each student had an activity packet and did activities
- Familiar with plankton and food chain
- Food Web Activity
- For front loading information
- For key vocabulary and concepts to prep for learning stations
- For our spelling words and a learning tool during class
- Front loading for the trip
- Front loading kids with water cycle, food chain information
- Front-loaded vocabulary, discussed plankton, food webs/chains
- Frontloaded information and overall experience to be expected- did not go in depth
- Gave the kids a brief talk about marine food chain.
- Groups of 3 working together
- Handouts, some discussion and reviews-especially on plankton
- Home school: some families did others did not- some researched O'Neill Sea Odyssey
- I actually used some of the materials that I had gotten last year! Watershed materials
- I did lessons using the packet and talked about key vocabulary
- I did not
- I did not get a chance to ask how exactly what she was going to do before the field trip.
- I did not. We are already learning the science conceptions in class c

- I didn't do this, but will next year!
- I didn't have an opportunity to since we came so early in the year.
- I didn't use it this time!
- I divided the children into groups told them a definition, they had to find the word
- I gave the class vocabulary practice pages. I made a pictorial input chart of the catamaran
- I had some students and parents who were apprehensive about the sailing-so I showed them the boat diagram. I also prepped some basic vocabulary.
- I had the students complete the fun pages(puzzles and word searches) and read a bit about each station
- I have not had a chance to get in depth, but I will. We just did an overview on the three areas you were going to cover today
- I showed the students the site and also made a packet of some of the informational material worksheets.
- I showed them the website and let them explore.
- I taught the materials to the whole class
- I used the map for parking, the phone number for calling and downloaded a form
- I used the word searches and puzzles extensively. I made an overhead of the boat for lost of nautical terms teaching
- I was giving an idea on how we will learn about science there on the boat
- I was not able to because of our CST prep. In addition, we use glad strategies which encourage the field trip before the unit of study so that kids can store the knowledge in their schema
- I will use after-later in the year
- In class and computer lab
- In class while group discussion and practice
- In the past we looked at live web cam and coloring pages
- Introduce some concepts they would hear during trip and vocabulary!
- Just a cursory examination. I couldn't access the teacher materials on the web there was an error screen
- Learned a bit about plankton-did plankton crossword using glossary and page of information
- Made three packets for each of the 3 stations and talked about each as a class
- Make copies of sections
- Not much, but will next year!
- On the afternoon before the trip we read some information and used it to do the fill in the blank sheets.
- Only used the intro video
- PDF file
- Plankton, kelp, navigation
- Pre-teaching plankton, seaweed, navigation and searching harbor facts

- Preview and we studied about animal life in the sea so the students would have some background
- Preview experience-frontload vocabulary; reviewed concepts from text book
- Printed packets for each student and reviewed as a class as well as googled pictures of plankton
- Printed/copied student packet
- Provided the link to parents-I previewed it.
- Referred site to parents and told class about generalities
- Review and overview
- Review for content
- Reviewed the glossary words and talked about ocean life.
- Reviewed vocabulary and concepts. Read science textbooks
- Saving for After the trip
- Science curriculum unit; literary workshop and homework
- Science Lessons
- Shared them with the kids to prepare.
- Shared your promotional video and went over the teacher packet with the students
- Showed the students pictures and we discussed what to expect
- Showing the boat, discussing safety, what to expect
- Sorry I did not use the materials before our trip this year.
- Students have a different teacher for science. She has been teaching students about ecosystems and geology- not too much marine sciences yet
- Studied vocabulary
- Taught kids the basics of the ocean
- The kids completed the water shed packet.
- They are solid! The lessons are somewhat simple buy lay a solid foundation!
- They read parts, answered questions in groups and drew diagrams
- To add to our curriculum
- To discuss food chains, webs and energy pyramids. Also to introduce latitude and longitude
- To explore what would be covered so we can review after the trip
- To prepare them for the trip with vocabulary and material.
- To study more of what the children would be doing and what was going to be explained to them.
- To teach expected behavior
- Used mainly to ease parents
- Used the graphics for math
- Used to explain the day of field trip and give students prior knowledge

- Vocabulary
- Vocabulary development packets
- Vocabulary in class and homework. We discuss topics and videos from library.
- Vocabulary puzzles and work searches
- We did 1-2 activities from the teachers' packet. I plan to do more in the next few weeks.
- We did food web pages. Vocabulary sheets and general discussion about Marine biology
- We did most of the terms and puzzles
- We didn't have much time and have only studied water ecology so far.
- We didn't use those this year...mostly likely use them before the end of the year.
- We do a month long unit incorporating the OSO materials
- We drew a boat with parts!
- We had classroom and homework activities (using vocabulary from a 2 section) and group discussions
- We had done our marine unit at the beginning of the year
- We learned about each category by using the packets in class. I showed the class the website to explore more on their own.
- We only had time to learn some- ecosystems, pollution, sanctuary visuals, activities and vocabulary
- We studied the marine biology and navigation handouts
- We studied the materials in conjunction with the science curriculum
- We studied the seaweed, marine ecology and plankton with the materials on the L.C.
- We studied them together and watched a plankton video available on-line
- We used a few activities from each category
- We used mostly the teacher packet-They loved it
- We used several parts-latitude and longitude, food webs, plankton, and parts of the boat
- We used some of the materials in my oceanography science class rotation.
- We viewed pages together as a class, looked at pictures, read about ecology, watched YouTube videos, we didn't use activities but checked out everything on the website
- We went over the vocabulary page and talked about plankton
- Whole class to give background knowledge
- Word Searches, Vocabulary sheets, food web, and navigation map
- Yes
- Yes, Navigation and about Webb Foundation

13. Please describe which materials were the most helpful in the classroom.

- Active worksheets
- Activities associated with the vocabulary
- All of it. The navigation station was great to put the use of compass for Navigation in real life.
- All of the hands on were very engaging(great compass work) collecting samples-microscopes-plastic talk-great garbage discussion and how trash gets into the ocean
- All of them
- All were great
- Any paperwork that built vocabulary background knowledge
- Background information, plankton, center cards
- Bill Nye "Ocean life"
- Boat labeled picture
- Children like the word search/crossword. I like the glossary. Boat Pictures and food chain activities.
- Compass, ecosystem, ecology
- Crossword puzzles
- Crosswords to vocabulary sheets
- Definitions and interactive worksheets
- Diagrams and vocabulary sheets
- Did not use before field trip
- Did not use it
- Different stations and background information
- Everything was helpful and engaging
- Excellent hands on
- Food web and ecosystem information is what we worked on in the 4th grade
- I didn't use it this time
- I used all of it equally
- I will be using the materials when we return
- In the past, the vocabulary sheets and word puzzles have helped
- Kelp and vocabulary
- Key Words
- Learning/teachers packet
- Loved seeing a preview on website to prepare for what we'll be doing.
- Microscopes
- Most effective were the "fun activities"(puzzles) to learn
- Most of the things I used were about producers, consumers, and food chains/webs because we studied them earlier. It was a good refresher.
- Mostly technology- website, planned on following up with teacher materials to review
- My nine years of experience
- Navigation, food chain and plankton materials
- Navigation, Puzzles, Food Pyramid
- online handouts-descriptions of plankton etc.
- Only used vocabulary
- Organism ID, ecology
- Picture of Boat, Word searches
- pictures of different plankton I used it in class
- pictures that help build/illustrate vocabulary
- Plankton materials, food chain, navigation
- Plankton pictures
- plankton samples and microscope
- Puzzle sheets
- seaweed/kelp types and plankton including marine biology terms
- seeing the plankton, triangulating boat locations, environmental awareness demonstration EVERYTHING!

- Since we are a long locked school I used most if not all your materials. Thank you
- Some Worksheets
- Teacher Background
- Teacher's packet was great resource-lots of choices!
- The ecology lab and the navigation chart
- The information was very helpful for a pre-teaching lesson
- The listed sheets previously stated
- The lists of specific and scientific vocabulary.
- The marine biology activities were helpful in that I didn't know a lot about that area
- The packets were most helpful
- The packets were most helpful
- The print outs with activities
- The run off activity/interactive
- The teacher materials
- The teacher packet!
- The teachers enthusiasm and knowledge
- The water shed packet
- The website
- The website in general, the pages mentioned earlier, I will use some to follow up-not sure what parts yet.
- The website was so valuable! The teacher's packet rocks!!
- the whole packet-plankton/seaweed
- They all give a good basis for getting more from our trip.
- Very detailed descriptions of all three stations-onshore and on the boat
- Video, write ups about stations
- Videos
- visual of watching rash go to ocean. Actually seeing the plankton.
- Vocabulary
- Vocabulary
- Vocabulary
- Vocabulary
- Vocabulary and explanations of the three stations
- Vocabulary and recycling information
- Vocabulary diagram of the catamaran, Question and Answer sheets
- vocabulary on plankton
- vocabulary sheets
- Vocabulary, cut and paste pyramid, reading passages
- Watershed model
- We also learned a lot about the North Pacific garbage patch before the trip to front load the information about ocean pollution
- We are under the CST time crunch, so I was unable to view the teaching materials from the site
- Weather information
- Weather station all the packets
- Website
- Worksheets that are self explanatory(some were a little confusing)
- Worksheets, puzzles, background information, we focus a lot on the food chain and conservations

16. Do you have any suggestions for improving the teaching materials?

- A pre-teaching video would be really cool.
- Add more pictures of students learning while on the boat. Slideshows with cool music. Make the getting into groups more clear on the instruction sheet so we can make sure to have them named and ready to go.
- All of the O'Neill crew are great with kids, firm but kind and interactive. These kids will take so much of the knowledge from this program into their lives and future learning. I hope to get them excited about doing more for our oceans and help get our school more green. We will keep talking about our day on the O'Neill trip as we learn more about life sciences. Thank You!
- Answer Key would make use of the materials easier
- Could include a small quiz or more puzzles
- Could the children have a snack time after the boat time?
- Drawing parallels to land ecosystems aid student recall
- Excellent tying together of on boat vs. in classroom
- Fabulous hands on trip. Thank you for this great experience! Can't wait to apply for next year!
- Find more for students to do on the boat section of marine biology and ecology
- Great Enthusiasm! Thank you so much!
- Great Field Trip
- Great Job lots to choose from.
- Great learning experiences for our 4th graders.
- Great Materials
- Great Program keep up the great work!!
- Its superb-do something about the weather?!!! Just kidding
- I appreciate the hands- on activities integrated throughout this experience. All three presenters spoke at a perfect pace; slowly enough for students to absorb all this new information. Great group management skills wonderful learning experience. We feel so lucky to be able to participate. Thank you
- I think it is an excellent program. Could the students make and take something home with them? Journal, write, picture of plankton etc. More time observing surrounding water for wildlife.(binoculars, id charts, field guides
- If a portion of the website were more kid friendly, they could explore the site independently at our school computer lab.
- It might be nice to include some "rules" for us to discuss before the trip. I do because I've been on the trip before but might be helpful for new groups and teachers.
- It was all perfect combined with the hands on
- It was great
- It was perfect and awesome
- It was wonderful
- Keep it going

- Keep up the good job. It was great thank you so much for your dedication
- Linking the stations/lessons to the CA state standards
- Lots of vocabulary-focus on what top 10 words are for each instead of full pages of vocabulary
- Maybe a few more crossword puzzles for vocabulary practice
- Maybe more YouTube videos since this is the YouTube generation.
- More online friendly.
- More online interactive learning activities
- More things for kids to touch.
- NO
- NO
- NO
- NO
- NO
- NO
- NO
- NO
- NO
- No, but I think more call and response should be done for managing the students-such as 1, 2, eyes on you. Or when I say, "phyto" you say, "plankton"
- No, they were great
- No! Tell students expectations about how to participate at each station- do they call out? Raise hands?
- Nope-love it!!
- Nope-will contact you in the future if something comes to mind
- not at this time
- Perhaps making it simpler, breaking it down a little more for second language learners
- Possibly a computer that has some of the video from MBARI or ETG M.B aquarium of creatures who live in the canyon.
- Posters
- Projects, more visuals, hands on activities
- Put less information on a page
- Some activities were a little juvenile for our age group (6th), so maybe a few more options for the older kids?
- Speak more slowly, use white board to demo important vocabulary/have students repeat words
- Splitting the material into different grade levels 1st,2nd,3rd,4th,5th and 6th
- Staff very helpful and attentive to kids! Thank You!

- Thank you for providing this educational experience for the kids
- Thank you for updating them!
- Thank you for updating them!
- Thank You so much. We know the children will now see the environment animal and people from a new perspective. Thank a lot?
- Thanks for the graphics and hands on demonstrations! Thank you so much SO VERY MUCH!
Betty
- Thanks great job and great program
- The more hands on the more there is student engagement!
- The whole thing was great
- They are very helpful
- This is an amazing field trip. High intent very educated. It was wonderful having the 60,000th student in your program, come from our class. Thanks!
- This program is beyond awesome; it is so important and creates a lifelong memory in a population that would not otherwise be exposed to. May it continue and expand forever!
- This was great! Bravo! Math was good and love all of the hands on! Wish you had a touch poll with sea animals
- This was my first time attending and it was amazing!
- Though I made my own, was there a beach cleanup tally sheet? Also, a chart graphic supporting what happens to the trash over time like your big chain!
- Video? DVD? We couldn't play videos on school computers
- Wonderful as always!
- Wonderful people and instructors very experienced
- You are fabulous!
- You guys rock and run it like a fine tuned clock Thank you!
- You have such a great program
- You're perfect
- Your program fir with what we have learned in the classroom across the curriculum

17. Do you have any additional comments?

- Adam, Laura and Collin are very knowledgeable and could answer the kid's questions. The very visual and experiential nature of the "classroom" was really great. Took sophisticated content and made it accessible "navigation". Also appreciated the clear instructions on the boat. Able to extend and make even more sense of the excursion they loved the ecology center!
- Always the best field trip of the year!
- Awesome trip as always
- Awesome job ladies! We had such fun! Loved every minute! Thank you!
- Awesome trip
- Best field trip possible
- Best field trip possible
- Even with weather difficulties the program was still fabulous
- Everyone was really great!
- Excellent engaging experience! Kids and adults loved it! Everyone learned something new!
- Excellent pacing/timing for this age group and great staff!
- Excellent Thank you!
- Fabulous experience
- Fabulous learning experiences
- Fabulous program-Past families have said the program changed their lives. They became more environmentally aware and began to recycle, beach clean ups etc.
- Fabulous trip and experiences students learned a great deal!
- Great adaptations and enthusiasm despite weather! Very detailed and clear information about pollution and visual aids were very helpful
- Great hands on experience for the students
- Great Job Laura. I really appreciate the passion and ability your staff has to teach, lead, coach and encourage students. You make each of you classes seem specials and unique. (Not an easy thing for teachers)
- Great Job!
- Great Labs, both on land and on board the catamaran. Thank you!
- Great presentation!!
- Great program with enthusiastic teachers!
- Great program. Keep it up. God bless you guys
- Great Trip!
- Great Trip!
- GREAT! AWSOME!
- I hope to see the program continue.
- I love this program! It is wonderful.

- I think this is a great field trip and that it is very well done! Just to say thanks and I hope we can continue to be able to offer this for our students
- I think this is the best field trip the children go on. They learn more in one afternoon and retain the knowledge longer than anyway I could teach them this in a classroom.
- It was a wonderful experience
- It was great and very interactive on all that was being explained to the children.
- Laura your energy is out of this world!!
- Leaders have very good management and lots of patience
- Love it, keep it up!
- love this experience thank you
- Loved it!
- Loved it! Thank you!
- Maholo Nui
- My kids have enjoyed this every year! Thank you!
- No
- Once again we are so appreciative of this opportunity. I always can count on you professionalism and safety practices
- Please keep this program running!
- Smiley Face
- So Fun Thanks!
- Solo darn happy to have had this opportunity once again. Thank you thank you thank you!
- Students loved the trip
- Teachers are knowledgeable and engaged
- Thank you all so very much Bravo!!
- Thank you for a wonderful time.
- Thank You
- Thank You
- Thank You Again
- Thank you and the Foundation!
- Thank you for giving our children ways to protect our community
- Thank you for letting us come here! We always look forward to this trip. The kids learn a lot.
- Thank you for shaping our future stewards!!!
- Thank you for this wonderful adventure! It is just fantastic!
- thank you great intro and materials
- Thank You so much
- Thank you so much for the amazing learning experience, your wonderful staff and subsidizing

the bus cost. It will be the highlight of the year.

- Thank you so much!
- Thank you so much!
- Thank you so much! I don't know when or if they'll be able to have another opportunity to something like this.
- Thank you so much! It was awesome! Crissy Hansen
- Thank you so much! My kids had a blast! The instructors were really great at speaking in a motivating fun manner!
- Thank you so very much!
- Thank You So Very Much!
- Thank you very much. Engaged and motivating instruction!
- Thank you You 'all Rock!
- Thank you-the kids loved the experience. It was a lot of fun and covered a lot of content. I'm glad math was included!
- Thank you, Thank you Thank you
- Thank You!
- Thank you! Amazing opportunity for our students
- Thank you! Even though it was a condensed program, it is an invaluable experience for my students
- Thank You!!
- Thank-you for your continued enthusiasm, patience and quality program
- Thanks!
- Thanks again for another great trip!
- Thanks Awesome!
- Thanks for arranging a PERFECT Santa Cruz day. You guys are great with the students! Follows educational standards, Students 100% engaged, Parents loved it, too!
- Thanks for everything
- Thanks for many of our students this is a "once in a lifetime" experience that they will remember. Also, thank you for helping us fund our trip with Title 1 grants. We appreciate it!
- Thanks so much for a great day of learning and sailing.
- Thanks!
- Thanks. It was wonderful!
- The instructors and program are awesome! My students had a positive learning experience, and so much fun! Thank you Jennifer Johnston
- The presenters were wonderful!! So patient and knowledgeable
- This field trip and the people who direct it are GREAT.
- This is a fantastic experience for the students by using math and science concepts learned in the classroom to read life! Thank You!!

- This is a fantastic program
- This is a great trip. Thanks for providing opportunities for my kids. They'll remember this forever. Wish we could stay on the boat even longer!
- This is an absolutely amazing experience! Thank you so much!
- This is an amazing learning experience for my students! Thank you for everything. We are so lucky to have this opportunity!
- This is an exceptionally great field trip overall. Its information and well-paced. The kids learn so much!
- This is an outstanding opportunity. Thanks so much for including us!
- This is fantastical- No way can this experience be taught in a classroom. Thanks for the extraordinary experience.
- This is magnificent for Castroville kids!
- This is my favorite field trip to bring my class on. A wonderful once in a lifetime experience for my students. Your instructors are excellent teachers.
- This trip always a favorite. The students learn so much and it's very enjoyable!
- This trip is always amazing. I learn something new every time and my students love it.
- This trip is exceptional for making concepts real!! Thank you
- This was a wonderful experience for the students (and the teacher too!) Thank you so much for this opportunity!
- This was my first time and I thought it was a wonderful program. Thank You
- Though we did a lot back in the classroom and other activities, this trip and education center really brought everything together for us. Thank you for this opportunity. We all appreciate it so much and all the effort you do to find the funding to make this work for students. Great instructors and wonderful learning experiences. Thank You!
- We feel lucky to experience the field trip. We appreciate all your hard work. Thank You!!
- What a fantastic program
- Wonderful as always Thank you!
- Wonderful kid age appropriate friendly staff, beautiful day. I love this program!
- Wonderful program the students loved it and are learning a lot.
- Wonderful program! Thank you so much!
- Wonderful trip as always. The students have a better awareness of their relationship to the environment
- Wonderful, organized trip
- Wonderful!
- Wow! What a wonderful experience for my students. It will stay with them for a lifetime!
- You all do a wonderful job. I look forward to this trip every year. Thank you!
- You are so thorough-thank you so much!
- You guys are awesome. The content is important, the staff are perfect. What a gift you are giving our students and parents and ocean. Organized, age-appropriate. Woo-hoo!

- You run a smooth ship! Thank you so much for opening their eyes to the vitality of conserving our oceans
- You're presentation is improving each year! More detailed and challenging
- Your staff is exceptional. High expectations with lots of patience Thank you!

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. The current version has been used since the spring of 2006.

Teacher/Group Leader Survey

School _____ Date: _____

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 the children learned from the following?	Learned a lot	Learned somewhat	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. Follow-up and discussion regarding classroom experience.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Overall learning experience.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Please turn page over to complete the survey questions.

9. Were the presentations presented at an age-appropriate level?

☐ (1) Yes ☐ (2) No

10. Did you visit the Sea Odyssey website before this trip?

☐ (1) Yes ☐ (2) No

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

☐ (1) Yes ☐ (2) No

12. How did you use the web site Learning Center or teacher packet materials in the classroom **before** the trip? _____

13. Please describe which materials were the most helpful in the classroom: _____

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

☐ (1) Yes ☐ (2) No

15. Did the teaching materials enhance the children's learning of topics?

☐ (1) Yes ☐ (2) No

16. Do you have any suggestions for improving the teaching materials? _____

17. Do you have any additional comments? _____

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

Student Survey

The current version of the Student Survey was first used in the 2006-07 program cycle, and was modified only slightly so that most of the questions were in the present tense ("Do you..." vs. "Will you..."). 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 if they agreed with the questions (indicating a "yes" response), and the number of raised hands for each question were tallied.

O'NEILL SEA ODYSSEY Student Survey

Group Name _____ **Date** _____
Number of students _____

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

1. Do you know a lot about the plants and animals that live in the ocean?

Pre trip _____ Post Trip _____

2. Do you know a lot about things that are bad for rivers the ocean, and the environment?

Pre trip _____ Post Trip _____

3. Do you protect the rivers and the ocean by not pouring oil and chemicals down the storm drain or onto the ground?

Pre trip _____ Post Trip _____

4. Do you protect the environment by not throwing garbage on the ground?

Pre trip _____ Post Trip _____

5. Do you recycle?

Pre trip _____ Post Trip _____

6. Will you share what you know with your friends and family so that they can all learn to protect the environment?

Pre trip _____ Post Trip _____

About the Researcher



Applied Survey Research is a nonprofit social research firm dedicated to conducting and using community-based research to help people build better communities. Since 1980, ASR has employed best practices for survey research, assessment, and evaluation in order to better serve public and private agencies, health and human service organizations, cities and county offices, school districts, institutions of higher learning, and charitable foundations.

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