Annual Evaluation Report 2024-25

PROGRAM OUTCOMES FROM THE 2024-25 SCHOOL YEAR

Ocean Discovery Institute: YOUNG LIVES TRANSFORMED THROUGH SCIENCE

OCEAN DISCOVERY INSTITUTE
EVALUATION REPORT
September 2024 – August 2025

ABSTRACT AND KEY FINDINGS: 2024-25 EVALUATION REPORT

To inspire the next generation of science leaders, Ocean Discovery Institute creates learning experiences for young people traditionally excluded from science due to race, income status, and educational opportunity. Our students will join high-paying fields, break generational poverty, and change the future of science.

During the 2024–25 academic year, we achieved our long-term vision of providing continuous, tuition-free, hands-on science education to every K–12 student in the Hoover High Cluster—a milestone more than two decades in the making. Through our tiered educational model—In-School, Out-of-School, and Ocean Leader Programs—we engaged 6,399 unique students, representing 93% of all K–12 students in our community, in more than 107,000 hours of tuition-free science learning experiences.

Through rigorous data collection, we measured student outcomes across belief, achievement, and leadership. Students in our Out-of-School and Ocean Leader Programs consistently outperformed peers in science and math grades and standardized test scores. College-going rates among our Ocean Leader alumni far exceeded school averages, and our alumni are entering and excelling in science-related careers. Just as importantly, families, teachers, and students reported overwhelmingly positive experiences, reflecting the strength of our community partnerships and the trust we have built over time.

Key Results

Students Reached: We reached 6,399 unique students across all programs—the highest number in our history—and for the first time reached every grade from Kindergarten through 12th.

Student Achievement – Out-of-School: Students in our Out-of-School Programs (grades K–5) earned significantly higher grades in math, science, and English than their peers ($p<0.05$). Integrating math into the camp curriculum helped drive notable improvements in math achievement.

Student Achievement – Ocean Leaders: Ocean Leader high school students achieved a 3.04 average GPA, significantly higher than their non-participating peers (2.73, $p=0.003$). Over the past three years, Ocean Leaders' science GPA has increased nearly three times faster than that of other students.

Student Achievement – Entire School-Shed: Across the Hoover Cluster, students at schools we serve scored 38% higher on standardized math, science, and English tests than students at comparable schools ($p=0.02$).

Alumni Leadership – College Enrollment: 85% of our graduating Ocean Leaders enrolled in higher education, compared to 57% of their peers at Hoover High School. 55% of Ocean Leader alumni have graduated college, compared to 13% of their comparable peers nation-wide, and 74% of graduates majored in a science or science-related field.

Alumni Leadership - Careers: 61% of Ocean Leader alumni now work in science-related careers, compared to less than 1% of peers nationally from similar socioeconomic backgrounds. Nearly one in six alumni (15%) now give back as donors, continuing the cycle of leadership and community impact.

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About Ocean Discovery Institute

To inspire the next generation of science leaders, Ocean Discovery Institute creates learning experiences for young people traditionally excluded from science due to race, income status, and educational opportunity. Our students will join high-paying fields, break generational poverty, and change the future of science.

Our Evaluation Approach

Evaluation is a significant component of our educational model. Evaluation of our programs and our students provides critical data that guides us in determining progress towards our goals, informs subsequent enhancements to our programs, and keeps our efforts aligned with our mission.

Our Educational Programs and Goals

Our educational programs are structured with a "pyramid" approach (Fig. 1). Our pyramid design demonstrates the number of students reached by a program, with an inverse relationship between the number of students reached and the intensity and impacts generated through participation.

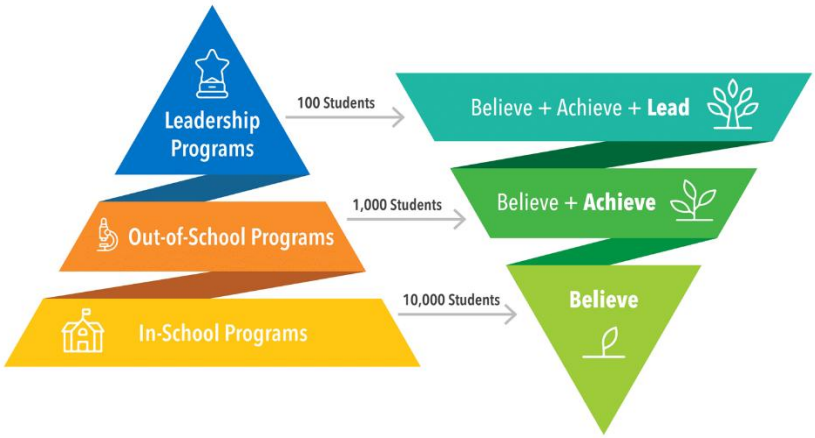


Figure 1. The pyramid approach to our educational programs, showing the number of students served by each program when our programs have reached full capacity, student goals by program, and the scale of impacts generated through participation.

We provide our programs through three distinct, and progressively rigorous, educational programs (Fig. 1):

- In-School Programs serve entire classes of K-12 students during the school day with hands-on science activities and field trips.
- Out-of-School Programs serve K-8 students who sign up to come to the Living Lab after school and in summer to participate in science and math camps.
- Ocean Leader Programs serve students beginning the summer before 9th grade through a rigorous pathway program to prepare students to go to college and become science leaders.

This educational model drives our evaluation goals, which are as follows for each program:

- Our In-School Programs will break down barriers of perception toward science, build community ownership of a place of science, and nurture our students to BELIEVE that science is something they can do and a scientist is someone they can be.
- Our Out-of-School Programs will build upon our In-School Programs by additionally supporting our students to ACHIEVE improved understanding of scientific and math concepts and the scientific process, as well as achievement of positive academic performance in school.
- Our Ocean Leader Programs will build upon the science belief and achievement fostered in our In- and Out-of-School Programs and empowers our students to LEAD by taking the necessary steps to pursue and obtain careers in science or science-related fields, by taking opportunities to use science to make a difference, and by participating as science leaders and mentors.

OUR EVALUATION METHODS

We combine both qualitative and quantitative evaluation methods for all programs:

- *Qualitative:*
  - Observations of program alignment with our Education Foundation (the guiding document of our educational philosophies and design principles)
  - Observations of instructor alignment with our Educator Principles (the guiding document for instructors' pedagogical approach across all programs)
  - Collection of stakeholder feedback (Teachers, Families, and Students)
- *Quantitative:*
  - We use a variety of assessment methods to assess student outcomes, including research-informed surveys, quantitative assessments, comparisons of academic data, and college matriculation and graduation data. We implement these methods during programs, then analyze the data and communicate outcomes via a variety of internal and external channels.

EVALUATION RESULTS: 2024-25 ACADEMIC YEAR (SEPTEMBER 2024 THROUGH AUGUST 2025)

Quantitative: Numbers Served

Introduction & Methods

- Our "pyramid" program model is described above and shown in Fig. 1.
- Student attendance is recorded at each program session and entered into our program database.

Results

In-School Programs

IS Grade	Actual Attendance	Cluster Enrollment	% of Grade Served
Kinder	601	529	114%
1st	609	532	114%
2nd	617	549	112%
3rd	684	615	111%
4th	623	563	111%
5th	634	550	115%
6th	416	432	96%
7th	444	472	94%
8th	444	465	95%
9th	382	615	62%
10th	349	460	76%
11th	212	440	48%
12th	177	462	38%
Total	**6192**	**6684**	**93%**

Table 1. Number of students served by In-School Programs, including the original projection of numbers served, the actual student attendance, the number of students enrolled in that grade level in our Cluster, and the percentage of that grade level served. The % of grade served exceeding 100% is explained below in the discussion section. Some classes served were "Combo Classes", where two grade levels (e.g., 2nd and 3rd) are combined into one class. For most combo classes, the teacher chose only one grade-level program to participate in. There were 4 combo classes (110 students) that participated in both grade-level programs (e.g., a 2nd and 3rd grade combo class participated in both our 2nd and 3rd grade programs in the same year.

Out-of-School Programs

Participation by Program	# Served
After-School Camp Only	417
Summer Camp Only	141
Participated in Both Programs	237

OS Program	# Served
After-School Camp	663
Summer Camp	380
Total – Includes Duplicates	**1043**
Total – No Duplicates	**795**

Table 2. Top: Number of students served in the two primary Out-of-School Programs (After-School Camp and Summer Camp). Bottom: Total number of students served.

Ocean Leader Programs

OL Program	# Served
Ocean Leader Wednesdays	68
9th Grade Summer Program	28
10th Grade Summer Program	23
11th Grade Summer Program	19
12th Grade Summer Program	10
Total High School Students	**96**
Total Alumni	**207**
Total High School + Alumni	**303**

Table 3. Number of students served in Ocean Leader Programs. *The total of high school Ocean Leader students is calculated as the number who participated in "Ocean Leader Wednesdays" (9-12th grade students) + the number who participated in the 9th Grade Summer Program (the incoming class of 9th grade students).*

All Programs Numbers Served

Program	# Served: 2022-23	# Served: 2023-24	# Served: 2024-25
In-School	5,622	6,035	6,192
Out-of-School	891	1,108	1,043
Ocean Leader	204	262	297
Total – Includes Duplicates	6,717	7,405	7,538
Total – No Duplicates	5,826	6,230	6,399
% of Hoover Cluster Served	77%	83%	93%

Table 4. Number of students served in all programs. The number including duplicates shows students who participated in both In-School and Out-of-School programs. The number not including duplicates shows the number of unique students served.

Hoover Cluster Enrollment By Year (Includes Transitional Kindergarten)

Year	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
Enrollment	8,287	7,863	7,737	7,610	7,495	7,260

Table 5. Hoover High Cluster enrollment by year, including students in Transitional Kindergarten, which is not served by Ocean Discovery (our model begins in Kindergarten).

Hours of Programming

Program	**# Served**	**Average Hours Per Student**	**Total Program Hours**	**Total Student Hours**
In-School	6,192	7	850	65,940
Out-of-School	1,043	36 (weighted)	725	26,368
Ocean Leader	297	152 (weighted)	558	15,518
Total	**7,532**	**16.3 (weighted average)**	**2,133**	**107,827**

Table 6. Number of hours of programming provided for students, including average hours per student, the number of total hours provided by each program, and the total student hours.

Ethnicity	**Percentage of Students Served**
Black / African American	9%
American Indian / Alaska Native	<0.1%
Asian	9%
Pacific Islander / Native Hawaiian	<0.1%
Caucasian	4%
Hispanic / Latino	72%
Multi-racial / Other	4%

Table 7. Ethnic breakdown of students served.

	% Non-POC Students			*% Free & Reduced Meals*					
	24-25	**23-24**	**22-23**	**24-25**	**23-24**	**22-23**	**21-22**	**20-21**	**19-20**
Adams	18%	18%	16%	76%	76%	70%	78%	77%	81%
Central	2%	1%	2%	96%	96%	94%	95%	97%	96%
Cherokee Pt.	3%	4%	4%	93%	93%	91%	95%	93%	91%
Clark	4%	4%	3%	92%	92%	92%	95%	95%	96%
Edison	3%	2%	2%	95%	95%	91%	92%	95%	95%
Euclid	1%	2%	2%	94%	94%	97%	93%	79%	83%
Franklin	33%	35%	28%	55%	55%	62%	55%	51%	65%
Hamilton	5%	4%	2%	93%	95%	95%	93%	95%	93%
Hoover	4%	4%	3%	89%	80%	81%	83%	73%	89%
Joyner	5%	2%	2%	91%	91%	88%	87%	82%	90%
Normal Heights	9%	7%	5%	80%	81%	84%	85%	79%	87%
Rosa Parks	4%	3%	1%	96%	96%	96%	94%	97%	96%
Rowan	16%	15%	10%	74%	75%	72%	77%	80%	80%
Wilson	5%	4%	5%	96%	95%	89%	86%	82%	96%

Table 8. Demographics of our school-shed, the Hoover High Cluster, including % of students who do not identify as a Person of Color and % of students who qualify for Free & Reduced Meals. We track this data annually to ensure our school-shed's metrics align with our educational model's criteria, as outlined in our Education Foundation.

Discussion

- **Highlights:**
  - **During the 2024-25 school year, 6,399 students from a low-income community of color participated in tuition-free science programming. This is the highest number of students ever served in a year in Ocean Discovery's 25-year history.**
  - **By providing In-School Programs for 12th grade classes at Hoover High for the first time, we reached our long-term vision of providing programs for every single K-12 student at all schools in the Hoover Cluster.**
  - **Every student in the Hoover Cluster now receives 13 consecutive years of hands-on science programming from Ocean Discovery, from Kindergarten through 12th grade.**
  - **93% of all K-12 students in the Hoover Cluster participated in Ocean Discovery programs in 2024-25.**
- The data point of the K-5 programs serving >100% of the enrolled students in those grade levels may seem like an error, but this is actually a result of enrollment timing. Enrollment fluctuates significantly throughout the school year. The enrollment data available, and reported here, are from the conclusion of the school year, when enrollment is at its lowest. Because our program reaches different grade levels throughout the school year, we can infer that students attended our K-5 programs who later unenrolled from the school.
- The following is a breakdown of high school classes reached by In-School Programs. For 9-11th grades, we provide our program to all science classes. 12th grade students are not required to take science, so

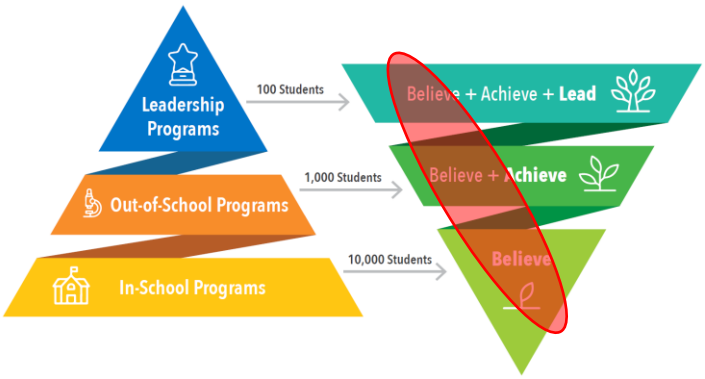
our program integrates with English classes, as all 12th graders take English in Fall or Spring. Hoover High is on a semester schedule, so different students take science in the Fall and Spring:

- 9th Grade: All classes were reached in Fall and Spring.
- 10th Grade: All classes were reached in Fall and Spring.
- 11th Grade: Piloted with three classes in Fall and provided to all classes in Spring.
- 12th Grade: All 12th grade English teachers were invited to participate, with 4 teachers electing into the program.

- In order to increase 12th grade teacher engagement, teacher communication will begin earlier in the school year.
- Another high school gap is that 9th grade students in the Health Academy (all students are grouped into a different academy) do not take 9th grade Biology, which is where our program reaches high school students. We are investigating alternatives to reach these students so that all 9th graders have the opportunity to participate.
- The percentage of middle school students (grades 6-8) participating (95%) was higher than in the previous school year (90%), continuing a 3-year trend. This increase is likely due to strategic communication and planning with middle school teachers to address low attendance in previous years and find solutions to attendance challenges.
- The Out-of-School Program continued to have strong participation. The 6% decrease from the previous year is explained by the After-School program being forced to end one month early due to the unexpected termination of Ocean Discovery's AmeriCorps partnership.
- Ocean Leader Program participation continued an upward trend, increasing by 12% from the previous year. Ocean Leaders also debuted its final summer intensive program for 12th grade students, who spent a week kicking off their college application process.

Quantitative: Student Belief

Introduction



For individuals in our community and beyond, substantial inequities exist along the pipeline from birth to science and science-related careers. Belief provides the motivation to persist in the face of these barriers. It manifests itself in positive academic behaviors and performance, and, in turn, fuels students' perseverance along their educational and career pathway. Our programs are designed to address the many opportunity gaps in the educational pathway experienced by our community and build in students, first, a belief that science is something they can do and scientist is someone they can become. Furthermore, we maintain an unshakeable belief in our students' potential, and in turn they believe in themselves.

Our program goal is to support student belief in the following areas, so students believe that:

- science is important;
- science has relevance for their lives;
- they can do science;
- challenges can be opportunities to learn and grow, rather than permanent obstacles;
- they are a math person;
- a career in science is a possibility for them; and
- they can make a difference.

Across all programs, the functional goal is that 70% of students demonstrate a positive sense of self-belief in science.

Methods

In-School Programs:

- Within our In-School Programs, the self-evaluation Believe Survey is implemented once per student per grade level starting in 3rd grade. Each student attending our In-School Program completes a Believe Survey once in each grade level, and specifically during the lesson that takes place at the Living Lab (typically the third and last day of a given curriculum).

Out-of-School Programs:

- Within our Out-of-School Programs, the self-evaluation Believe Survey is implemented once per student for students in 3rd grade and older. Each student attending our After-School Camp and/or Summer Camp completes a Believe Survey once per program, and specifically on the fifth and final day of camp.

Ocean Leader Programs:

- Within our Ocean Leader Programs, the self-evaluation Believe Survey is implemented twice per student, at the beginning of the school year and at the end of the school year.

All Programs:

- The survey is implemented by program staff according to the Believe Survey Administration Protocol.
- Each student's Likert-type responses to the twelve Believe statements are coded such that 5 represents the most positive response and 1 the least positive response for a given statement.

Results

In-School Programs

Grade	Total	I believe I can do science.		I believe science is important.		I believe science is relevant.		I believe I can use science to make a difference.		I believe I can have a career in science.		I believe I have a growth mindset.		I believe I am a math person.	
		Avg. Response (1–5)	% of Responses Positive (>3 of 5)	Avg. Response (1–5)	% of Responses Positive (>3 of 5)	Avg. Response (1–5)	% of Responses Positive (>3 of 5)	Avg. Response (1–5)	% of Responses Positive (>3 of 5)	Avg. Response (1–5)	% of Responses Positive (>3 of 5)	Avg. Response (1–5)	% of Responses Positive (>3 of 5)	Avg. Response (1–5)	% of Responses Positive (>3 of 5)
3	71%	3.9	67%	4.1	71%	4	72%	4.4	81%	3.7	58%	4.6	87%	4	71%
4	70%	3.9	68%	4.1	73%	3.9	66%	4.2	78%	3.7	60%	4.5	85%	3.9	68%
5	65%	3.7	61%	3.9	67%	3.7	60%	4.2	75%	3.4	50%	4.5	86%	3.7	65%
6	58%	3.3	46%	3.7	64%	3.6	54%	3.2	43%	3.1	39%	4.1	75%	4	69%
7	55%	3.4	50%	3.6	58%	3.4	52%	3.6	59%	3.2	43%	3.9	69%	3.6	60%
8	56%	3.4	51%	3.7	59%	3.5	55%	3.7	60%	3.2	42%	4.2	77%	3.4	49%
9	57%	3.5	56%	3.7	62%	3.7	58%	3.6	59%	3.4	46%	4	70%	3.5	52%
10	61%	3.5	54%	3.9	66%	3.7	62%	3.8	63%	3.5	50%	4.2	77%	3.5	56%
11	61%	3.6	53%	4	74%	3.8	67%	4	75%	3.3	36%	4.4	80%	3.5	54%
12	75%	3.6	61%	4.2	86%	4.2	81%	4.3	87%	3.9	64%	4.6	91%	3.7	67%
Avg. Grades 3–5	69%	3.9	65%	4.1	70%	3.9	66%	4.3	78%	3.6	56%	4.6	86%	3.9	68%
Avg. Grades 6–8	56%	3.4	49%	3.7	60%	3.5	54%	3.5	54%	3.2	41%	4.1	74%	3.7	59%
Avg. Grades 9–12	64%	3.6	56%	4	72%	3.9	67%	4	71%	3.6	49%	4.3	80%	3.6	57%
Avg. Grades 3–12	63%	3.6	57%	3.9	68%	3.8	63%	3.9	68%	3.5	49%	4.3	80%	3.7	61%

Table 9. Results of the Believe Survey for In-School Programs. For each grade level, the % of survey responses that were "positive" (a 4 or 5 on a scale of 1-5) is shown. The same % and average response for each Believe goal is also shown.

Out-of-School Programs

Program	Total	I believe I can do science.		I believe science is important.		I believe science is relevant.		I believe I can use science to make a difference.		I believe I can have a career in science.		I believe I have a growth mindset.		I believe I am a math person.	
		Avg. Response (1–5)	% of Responses Positive (>3 of 5)	Avg. Response (1–5)	% of Responses Positive (>3 of 5)	Avg. Response (1–5)	% of Responses Positive (>3 of 5)	Avg. Response (1–5)	% of Responses Positive (>3 of 5)	Avg. Response (1–5)	% of Responses Positive (>3 of 5)	Avg. Response (1–5)	% of Responses Positive (>3 of 5)	Avg. Response (1–5)	% of Responses Positive (>3 of 5)
After-School Camp	63%	4.0	69%	3.7	59%	3.7	55%	3.9	68%	3.4	52%	4.3	79%	3.6	59%
Summer Camp	66%	4.1	69%	3.9	64%	4.0	62%	4.4	79%	3.4	55%	4.3	76%	3.6	57%
Total OS Programs	65%	4.0	69%	3.8	62%	3.8	58%	4.2	74%	3.4	54%	4.3	78%	3.6	58%

Table 10. Top: results of the Believe Survey for the Out-of-School Program "After-School Camp". Bottom: Results of the Believe Survey for the Out-of-School Program "Summer Camp". For each program, the % of survey responses that were "positive" (a 4 or 5 on a scale of 1-5) is shown. The same % and average response for each Believe goal is also shown.

Ocean Leader Programs

Semester	Total	I believe I can do science.		I believe science is important.		I believe science is relevant.		I believe I can use science to make a difference.		I believe I can have a career in science.		I believe I have a growth mindset.		I believe I am a math person.	
		Avg. Response (1–5)	% of Responses Positive (>3 of 5)	Avg. Response (1–5)	% of Responses Positive (>3 of 5)	Avg. Response (1–5)	% of Responses Positive (>3 of 5)	Avg. Response (1–5)	% of Responses Positive (>3 of 5)	Avg. Response (1–5)	% of Responses Positive (>3 of 5)	Avg. Response (1–5)	% of Responses Positive (>3 of 5)	Avg. Response (1–5)	% of Responses Positive (>3 of 5)
Fall	73%	4.2	71%	4.2	74%	4.1	69%	4.5	79%	4.1	69%	4.6	80%	4.3	75%
Spring	77%	4.2	71%	4.3	75%	4.1	69%	4.6	80%	4.2	70%	4.6	81%	4.6	81%
Total OL Programs	75%	4.2	71%	4.3	75%	4.1	69%	4.6	80%	4.2	70%	4.6	80%	4.5	79%

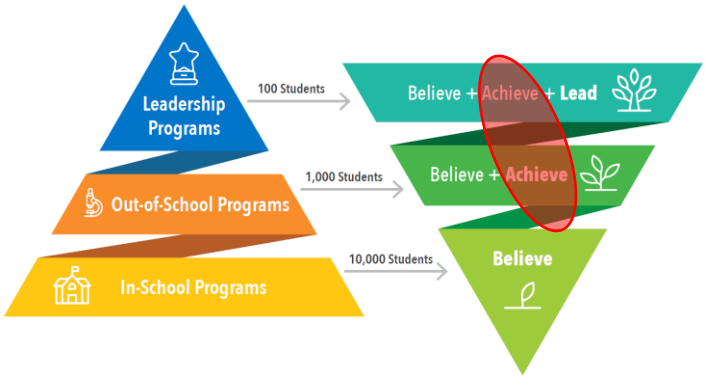
Table 11. Results of the Believe Survey for Ocean Leader Programs. For each program, the % of survey responses that were "positive" (a 4 or 5 on a scale of 1-5) is shown. The same % and average response for each Believe goal is also shown.

Discussion

- **Highlights:**
  - **Although less than 1% of their peers nationwide with similar socioeconomic demographics are working in science-related careers, 64% of students in the In-School Program showed "positive science belief" on the Believe Survey.**
- In-School and Out-of-School Programs both showed a 5% decrease in positive science believe compared to the previous year, though this difference is not statistically significant ($p>0.05$).
- Ocean Leader positive science belief increased by 4% from Fall to Spring semester, though this difference is not statistically significant ($p>0.05$).

Quantitative: Achievement

Introduction



Our goal in Out-of-School and Ocean Leader Programs is that students achieve in science and math through improved understanding of scientific concepts and the scientific process as well as positive academic performance in school.

Consistent academic achievement in grades K-12 is a key determinant in a young person's ability to attend college, receive a science or science-related degree, and obtain careers in science and related fields. However, science test scores of students of color and from low socio-economic status communities lag far behind those of Caucasian students and students from more affluent areas (Irwin et al., 2022). In 2018, 86% of the 11th graders at Hoover High School (the high school served by Ocean Discovery) did not meet state math test standards. Furthermore, learning loss related to the COVID-19 pandemic has been widely documented (NAEP 2023); for 4th graders, average reading and math scores in 2022 declined 5 points in reading and 7 points in mathematics compared to 2020. This is the largest average score decline in reading since 1990. Decreases were greatest amongst students historically furthest from opportunity. In mathematics, Black students' 13-point score decrease, along with White students' 5-point decrease, resulted in a widening of the score gap from 25 points in 2020 to 33 points in 2022. In 2022, Hispanic students in the 25th percentile (lower performance levels) experienced a 9-point reading decrease and a 12-point decrease in math.

Methods

Report Card Grades and GPA:

Through our data sharing agreement with San Diego Unified School District, we are provided with grade level-specific academic data on a semester basis for all students in Kindergarten through 12th grade in the school-shed. These data include the following:

- **Kindergarten through Grade 5**: Individual course grades
- **Grades 6 through 8**: Individual course grades, cumulative GPA
- **Grades 9 through 12**: Individual course grades, weighted cumulative GPA

Report card grades and GPA are analyzed twice per year: at the end of the first grading period for a particular grade level (note that middle schools are on a different grading schedule than elementary and high schools), and at the end of the academic year.

Analysis includes the following:

- Control Group: average report card grades and GPAs are calculated for all students in the school-shed who did not participate in Out-of-School or Ocean Leader Programs.

- Experimental Group: average report card grades and GPAs are calculated for students who participated in Out-of-School or Ocean Leader Programs.

Standardized Test Scores

SDUSD annually administers two grade-specific standardized tests. The California Science Test (CAST) is a standardized test based on Next Generation Science Standards (NGSS) and is administered in grades 5, 8, and once in high school in either grade 10 or 11. The California Assessment of Student Performance and Progress (CAASPP) includes a Smarter Balanced Summative Assessment (SBA) for Mathematics and is administered in Grades 3 through 8, and in Grade 11. Data for the school-shed are summarized in reports generated by SDUSD by achievement level ("Standard Not Met", "Standard Nearly Met", "Standard Met", "Standard Exceeded") and represent the number and percentage of students that were classified in each of these achievement levels based on the accuracy of their responses on each of the standards-based tests.

We track and summarize, as applicable, the annual results of the standardized test scores for the school-shed using the reports prepared by SDUSD. We also collect the same standardized test score data from a control group of schools within SDUSD that are not in our school-shed. This control group was determined using publicly-available data from the California Department of Education; we selected the group of non-school-shed schools within SDUSD that had the most similar socioeconomic (income and ethnicity) demographics to our school-shed.

We analyzed standardized test score data from 5th and 8th grade students during the 2024-25 school year.

Results

Out-of-School Programs

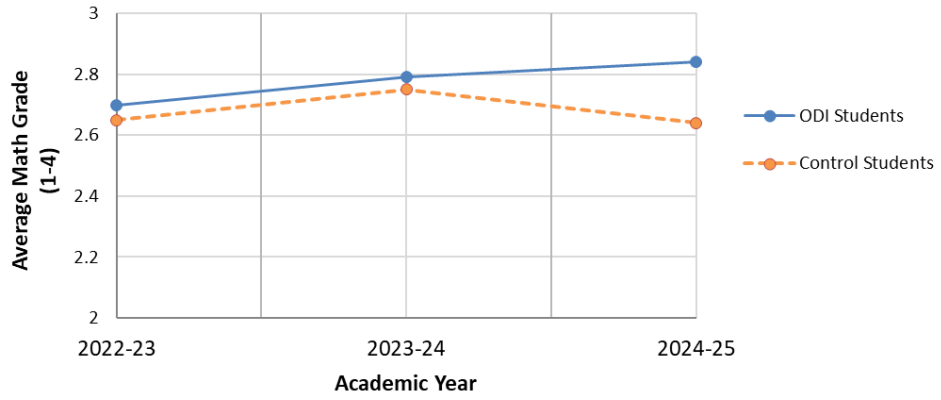
Report Card Grades: Grades K-5

Academic Year	Grading Period	OS Math Grade	Control Math Grade	OS Science Grade	Control Science Grade	OS English Grade	Control English Grade
2022-23	1	2.08	2.19	2.55	2.44	2.09	2.06
	4	2.48 (p>0.05)	2.42	2.70 (p>0.05)	2.65	2.40 (p>0.05)	2.31
2023-24	1	2.26	2.24	2.66	2.59	2.07	2.10
	4	2.53 (p>0.05)	2.47	2.79 (p>0.05)	2.75	2.43 (p>0.05)	2.33
2024-25	1	2.47	2.22	2.68	2.53	2.42	2.11
	4	2.73 (p<0.05)	2.40	2.84 (p<0.05)	2.64	2.70 (p<0.05)	2.30

Table 12. Average report card grades for the Out-of-School Program's participating elementary school students compared to the control group. Grades are calculated on 1-4 scale, with 1 representing "Beginning progress towards grade level expectations" and 4 representing "Exceeding grade level expectation". The p-value from a T-Test is included to show statistical significance.

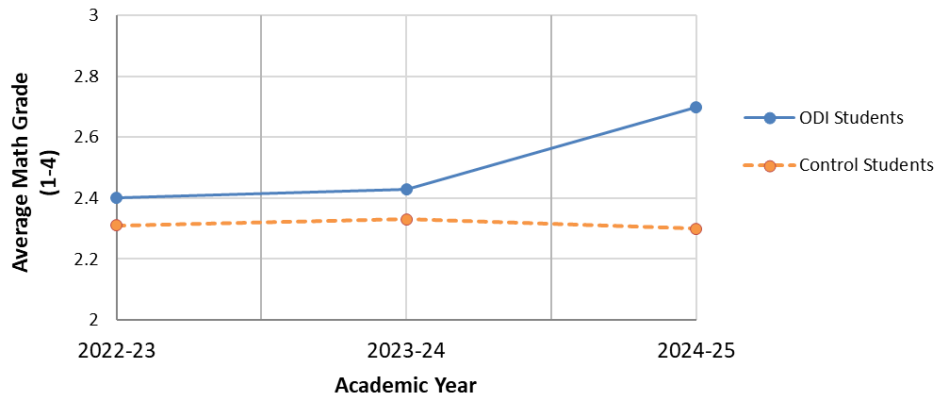
A

Out-of-School K-5 Science Achievement 2022–2025



B

Out-of-School K-5 English Achievement 2022–2025



C

Out-of-School K-5 Math Achievement 2022–2025

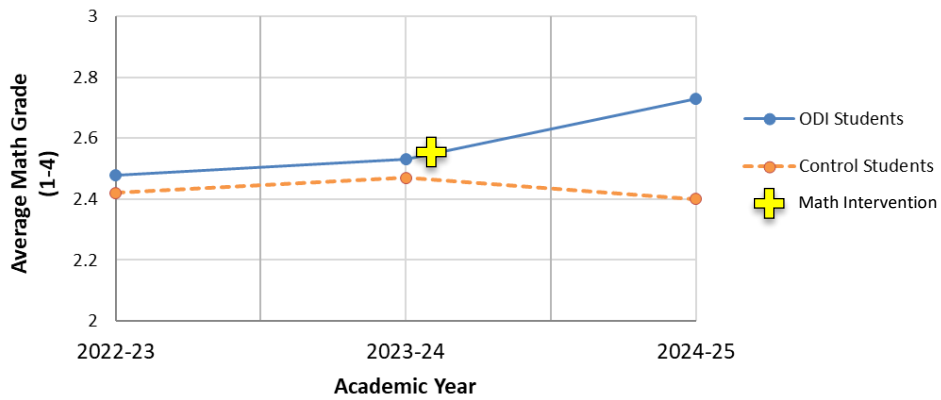


Figure 2. Science (A), English (B), and math (C) achievement of K-5th grade students participating in Ocean Discovery's Out-of-School Programs (n=724 students) compared to K-5th grade students at the same schools who did not participate (n=3,464 students). Ocean Discovery students achieved higher report card grades compared to the control students (p<0.001). Students are graded on a scale of 1-4, with 1 representing "Beginning progress towards grade level expectations", 2 representing "Approaching grade level expectations", 3 representing "Meeting grade level expectations", and 4 representing "Exceeding grade level expectation". In Figure 2A, the + symbol represents timing of Ocean Discovery's intervention to fully incorporate math into program curriculum in an effort to increase math achievement.

Report Card Grades: Grades 6-8

Academic Year	Grading Period	OS Math Grade	Control Math Grade	OS Science Grade	Control Science Grade	OS English Grade	Control English Grade
2022-23	2	2.58 / B-	2.30 / C+	2.58 / B-	2.43 / C+	2.44 / C+	2.10 / C
	4	2.26 / C	1.99 / C	2.58 / B-	2.32 / C+	2.24 / C	2.07 / C
2023-24	2	2.25 / C	2.07 / C	2.78 / B-	2.34 / C+	2.56 / B-	1.99 / C
	4	2.48 / C +	2.25 / C	2.69 / B-	2.28 / C +	2.47 / C+	2.05 / C
2024-25	2	2.68 / B-	2.26 / C +	2.76 / B-	2.47 / C+	2.48 / C+	2.12 / C
	4	2.75 / B-	2.25 / C	2.84 / B-	2.51 / B-	2.46 / C+	2.19 / C

Table 13. Average report card grades for the Out-of-School Program's participating middle school students compared to the control group. Grades are calculated on a traditional A-F level, and converted here where A=4, B=3, C=2, D=1, and F=0. An approximate letter grade is included next to each average grade. p>0.05 for each year.

Academic Year	Grading Period	OS GPA	Control GPA	p-value
2022-23	1	2.89	2.52	0.01 (significant)
	4	2.78	2.51	0.025 (significant)
2023-24	1	2.70	2.55	0.32 (not significant)
	4	2.72	2.50	0.07 (not significant)
2024-25	1	2.75	2.51	0.21 (not significant)
	4	2.70	2.51	0.06 (not significant)

Table 14. Average GPAs for the Out-of-School Program's participating middle school students compared to the control group. GPA is calculated on a 0-4 scale. The p-value from a T-Test is included to show statistical significance.

Ocean Leader Programs

Report Card Grades

Academic Year	Grading Period	OL Math Grade	Control Math Grade	OL Science Grade	Control Science Grade	OL English Grade	Control English Grade
2022-23	1	2.36 / C+	2.18 / C	2.60 / B-	2.49 / C+	3.16 / B	2.30 / C+
	4	2.52 / C+ p>0.05	2.02 / C	3.0 / B p>0.05	2.39 / C-	2.86 / B- p>0.05	2.27 / C+
2023-24	1	2.56 / B-	2.02 / C	3.13 / B	2.68 / B-	3.01 / B	2.53 / B-
	4	2.35 / C+ p>0.05	1.89 / C	2.93 / B p<0.05	2.48 / C+	2.81 / B p<0.05	2.32 / C+
2024-25	1	3.10 / B	2.72 / B-	3.13 / B	2.48 / C+	3.0 / B	2.66 / B-
	4	2.43 / C+ p<0.05	1.98 / C	3.0 / B p<0.05	2.57 / B-	2.81 / B- p<0.05	2.39 / C+

Table 15. Average report card grades for the Ocean Leader Program's participating high school students compared to the control group. Grades are calculated on a traditional A-F level, and converted here where A=4, B=3, C=2, D=1, and F=0. An approximate letter grade is included next to each average grade. The p-value from a T-Test is included to show statistical significance.

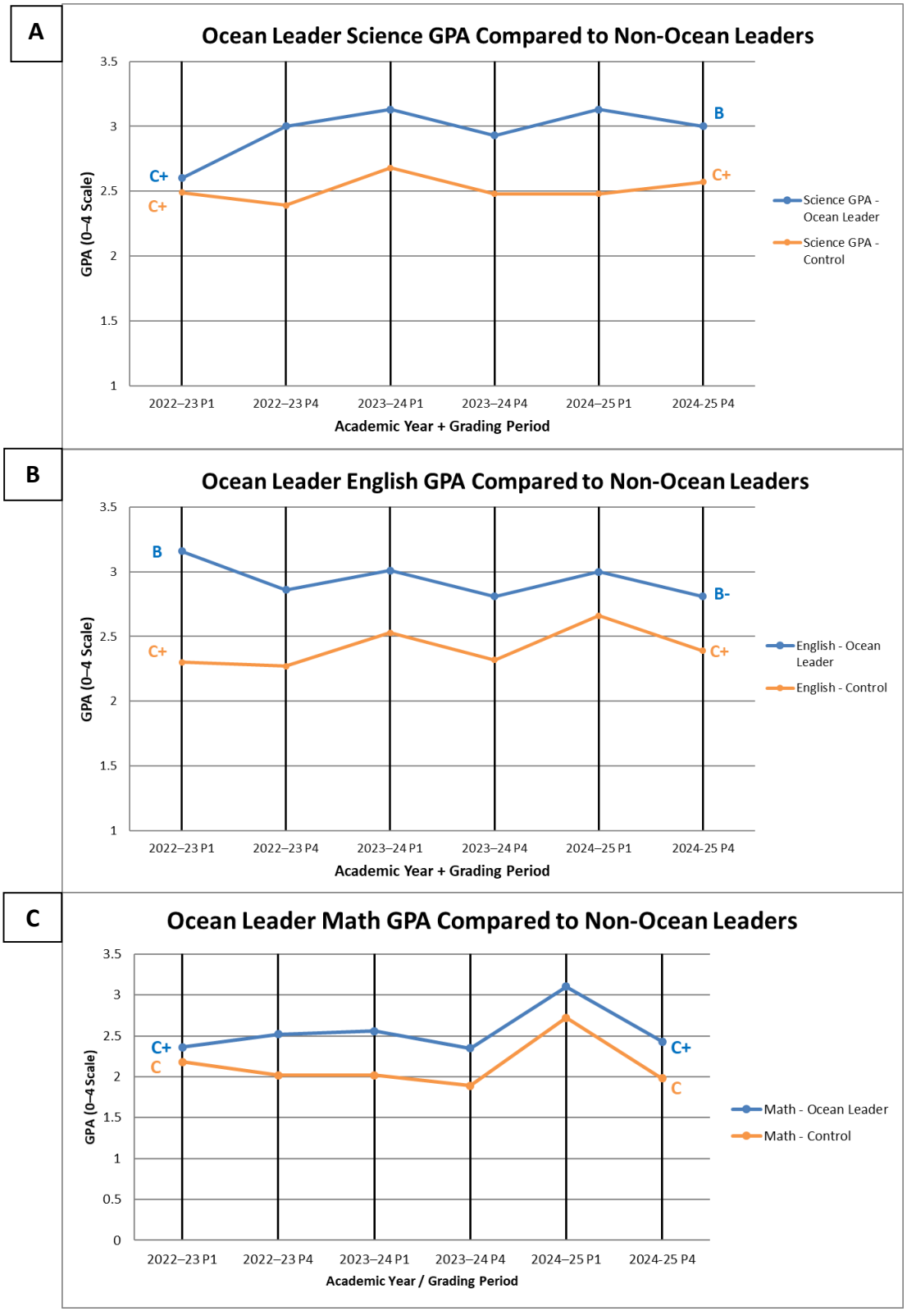


Figure 3. Science (A), English (B), and math (C) GPA of Ocean Leader students (n=68 students) compared to 9-12th grade students at Hoover High who did not participate (n=1,115) students).

Academic Year	Grading Period	Ocean Leader GPA	Control GPA	p-value
2022-23	1	2.89	2.52	P<0.01 (significant)
	4	2.79	2.45	P<0.01 (significant)
2023-24	1	3.04	2.60	P<0.001 (significant)
	4	3.04	2.63	P<0.001 (significant)
2024-25	1	3.07	2.66	P=0.003 (significant)
	4	3.04	2.73	P=0.003 (significant)

Table 16. Average GPAs for Ocean Leader students compared to the control group. GPA is calculated on a 0-4 scale. The p-value from a T-Test is included to show statistical significance.

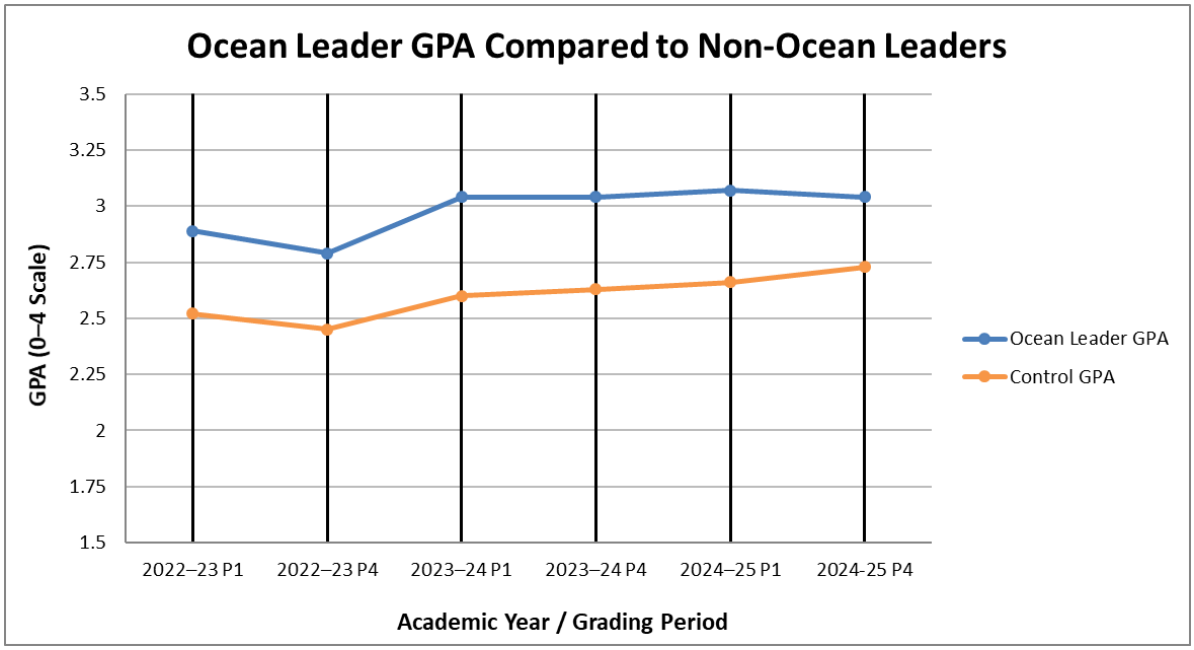


Figure 4. Overall GPA of Ocean Leader students (n=68 students) compared to 9-12th grade students at Hoover High who did not participate (n=1,115) students). Ocean Leaders achieved a higher overall GPA each year and across all years compared to the control students (p=0.003).

Standardized Test Scores

In the 2024-25 school year, more students at our participating elementary schools either met or exceeded all standards compared to students at the control schools (Fig. 2). Additionally, fewer students at our participating schools tested in the category of "Standard Not Met" compared to students at the control schools (Fig. 2). Lastly, students at our participating elementary schools achieved significantly higher mean English, math, and science test scores compared to control schools (Table 15).

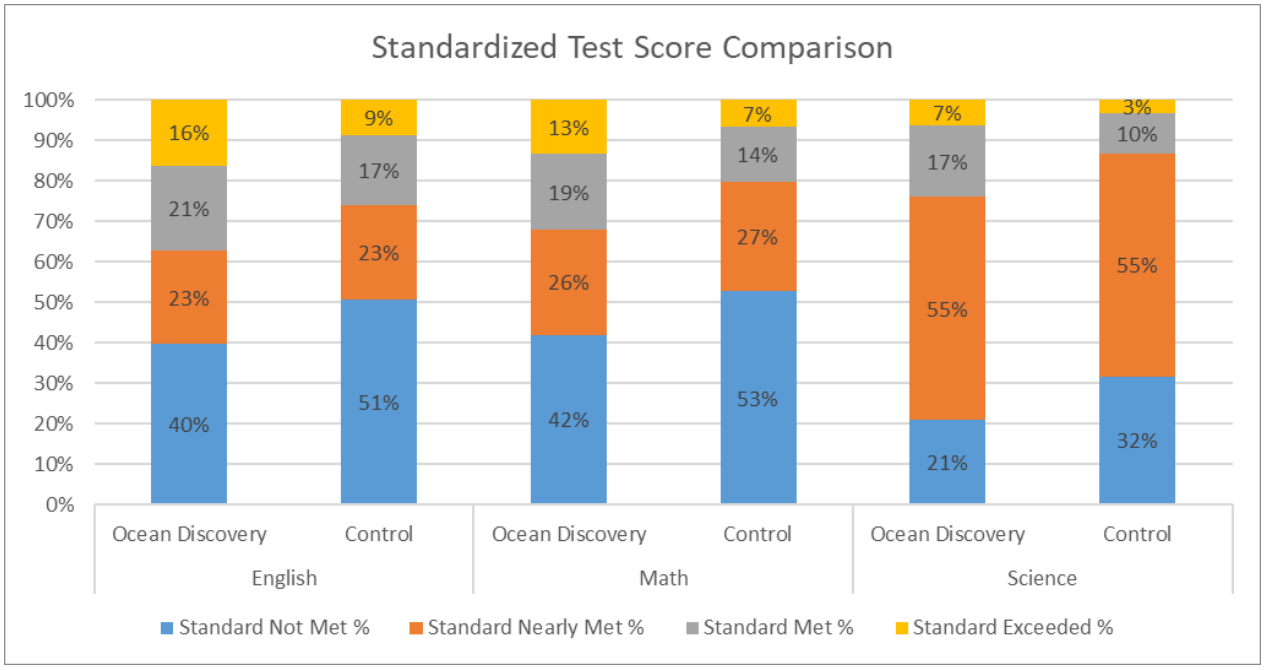


Figure 5. Mean standardized test scores, shown as a percentage of students who either did not meet, nearly met, met, or exceeded the subject standard, in English, math, and science for schools in the Ocean Discovery school-shed and a control group of schools within SDUSD.

	Ocean Discovery	Similar Schools	P-Value
Mean English Score	2471.45	2446.91	0.05
Mean Math Score	2468.03	2430.24	0.01
Mean Science Score	196.49	190.77	0.02

Table 17. Mean standardized test scores in English, math, and science for schools in the Ocean Discovery school-shed and a control group of schools within SDUSD.

In 2024-25, students at our participating schools scored 38% higher on math, science, and English standardized test scores (p=0.04) compared to their peers at non-participating schools with similar socioeconomic demographics (Figure 3), including 51% higher on math scores specifically.

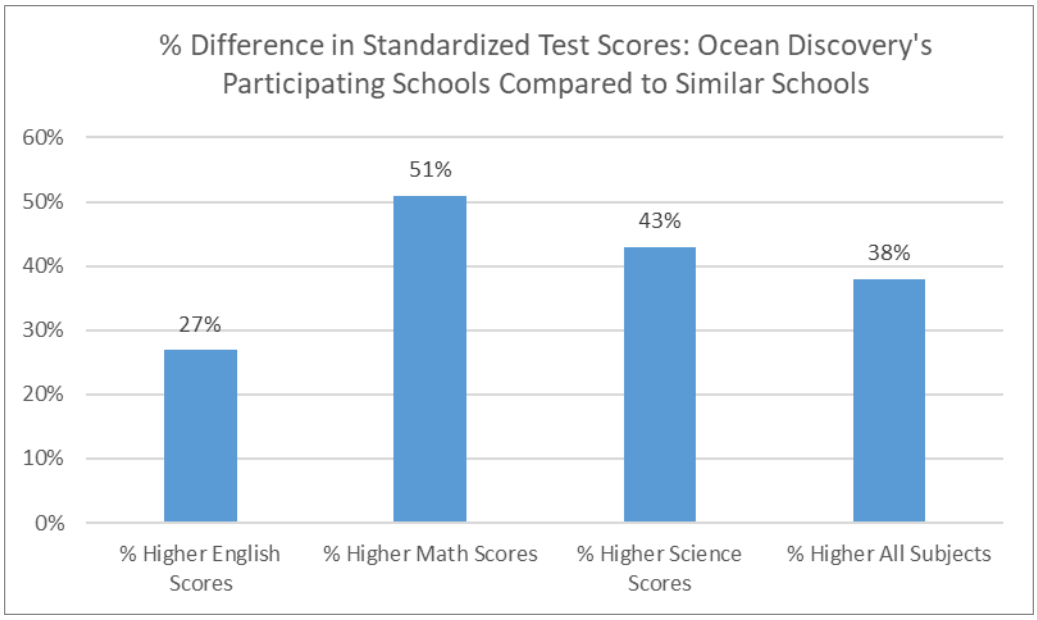


Figure 6. Difference in standardized test scores between students at schools in the Ocean Discovery school-shed compared to a control group within SDUSD. The Ocean Discovery schools scored higher for all subjects.

Discussion

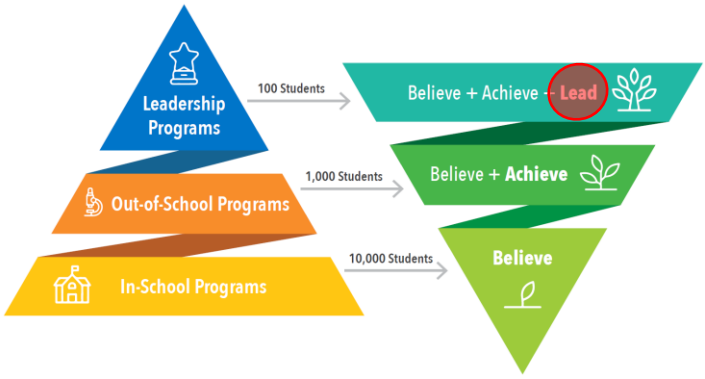
- **Highlights:**
  - **The average math, science, and English report card grades for elementary school students participating in our Out-of-School programs was significantly higher than their peers at school who did not participate in the program.**
  - **We know that students need to do well in math to pursue a career in science. For many of our students, poor math grades can often be a barrier to pursuing these goals. Recognizing this, last year we infused our After-School Camp curriculum with math in an effort to boost our student's math achievement. In their final report cards, students in our camp scored higher in their math grades compared to their peers at school who did not participate in our camp**
  - **The average math, science, and English report card grades for the high school Ocean Leaders participating in our Ocean Leader Programs was significantly higher than their peers at school who did not participate in the program.**
  - **The average GPA for high school Ocean Leaders (3.04) was higher than their peers at school who did not participate in the program (2.73), a statistically significant difference.**
  - **In 2022-23, Ocean Leader students had the same science GPA (C+) as their peers, but over three years have improved at nearly three times the rate — a 0.55-point increase in average GPA compared to 0.20 among non-participants (p=0.004).**
  - **In the Hoover Cluster schools served by our In-School Programs, students scored 38% higher on math, science, and English standardized test scores (p=0.02) compared to their peers at non-participating schools with similar socioeconomic demographics.**
- The average GPA for middle school students participating in our Out-of-School programs (2.70) was higher than their peers at school who did not participate in the program (2.51). Though not statistically

significant, a p-value of 0.06 indicates a strong trend. The small sample size of middle school students in Out-of-School programs (n=25) is likely the reason this difference is not statistically significant.

Quantitative: Leadership

Introduction

Our Ocean Leader Programs pair rigorous science programming and experiences with college and career support services in order to develop young people into science leaders who make a difference in their community and our world. This program builds upon the other program tiers and uniquely also provides the practice of soft skills and practical tools for college and career.



In order to main our country's position as world leaders in science and innovation, our science workforce needs increased representation from individuals from the socioeconomic backgrounds of our students. However, these students are less likely to pursue the higher education necessary for science- and technology-based careers (Pew Research Center, 2021). As a result, the United States' scientific workforce does not reflect the population of the nation as a whole; for example, Hispanic individuals represent 18.9% of the U.S. population, but only 8% of jobs in science, technology, engineering, and math fields (Pew Research Center, 2021).

Through our Ocean Leader Programs, we provide a foundation upon which our students are empowered to lead by taking the necessary steps to pursue and obtain a career in science or science-related fields, taking opportunities to use science to make a difference, and participating as science leaders and mentors.

Methods

The progress of our Ocean Leaders, from initial participation in our programming through college and career, is tracked so that we can provide targeted supports to our students as well as share their successes with the community, our partners, and beyond. Tracking data such as high school graduation date, college attendance and graduation data, major, and career progression are maintained in our program management database. Additionally, we alumni participation in all Ocean Discovery programs and volunteer activities. These data allow us to determine the extent of the impacts our programming is having on our students now and into the future.

Our post-high school tracking data are obtained through three primary sources: program and volunteer attendance data, annual Ocean Leader alumni surveys, and National Student Clearinghouse data. Alumni surveys are emailed to all alumni and request updates on their career progression with particular emphasis on science-related milestones. National Student Clearinghouse (NSC) data for Hoover High School graduates are obtained via subscription to the NSC service, and allow us to track all graduates' college entry and progression, including for our Ocean Leaders. The NSC data also allow us to calculate baseline metrics for college matriculation and graduation, and science/related major completion for Hoover High School graduates, providing data for a comparison group as well as for our Ocean Leaders.

Results

Ocean Leader Enrollment in Higher Education, Class of 2024

# of Graduates	% Enrolling in Higher Education	% Enrolling in a 2-Year Institution	% Enrolling in a 4-Year Institution	% Not Enrolling in Higher Education
13	85%	38%	46%	15%

Table 18. Enrollment in higher education by graduating 12th grade Ocean Leaders, including in 2-year and 4-year institutions.

Hoover High School Enrollment in Higher Education

Graduating Class	# of Graduates	% Enrolling in Higher Education	% Enrolling in a 2-Year Institution	% Enrolling in a 4-Year Institution	% Not Enrolling in Higher Education	% Currently Enrolled	% w/2-Year Degree	% w/4-Year Degree	% w/Advanced Degree
2022	440	64%	40%	24%	36%	40%	11%	0%	11%
2023	471	53%	42%	10%	47%	48%	6%	0%	6%
2024	464	47%	36%	11%	53%	54%	<1%	0%	<1%
2025	489	57%	44%	13%	43%	57%	NA	NA	NA

Table 19. Enrollment by graduating 12th grade students from Hoover High School, including in 2-year and 4-year institutions.

High School Cohort Year	Number of Alumni	Attended Higher Ed	Currently Enrolled in College	Currently Pursuing Science-Related Degree	Eligible to Graduate College*	Receieved Higher Ed Degree	Received Bachelors	Received Associates or Professional Certificate	Received Science-Related Degree	Received Masters	Received Doctorate	Career Field Known	In Science-Related Careers
2005	11	10	1	0	11	5	5	0	4	2	0	3	2
2006	12	9	1	0	12	7	7	0	6	1	1	5	5
2007	14	11	1	0	14	7	7	0	5	3	1	7	6
2008	11	11	1	0	11	10	8	2	6	3	0	9	6
2009	10	9	1	0	10	7	5	2	6	1	0	7	5
2010	13	12	0	0	13	7	7	0	5	1	0	12	6
2011	9	8	0	0	9	7	6	1	4	0	0	5	4
2012	9	8	0	0	9	6	3	3	4	0	0	2	1
2013	9	9	0	0	9	5	5	0	4	1	0	5	3
2014	6	5	0	0	6	3	2	1	2	0	0	3	1
2015	12	9	0	0	12	5	5	0	4	0	0	6	4
2016	5	4	0	0	5	1	1	0	1	0	0	4	1
2017	8	7	2	0	8	3	1	2	2	0	0	5	1
2018	10	10	2	2	10	3	3	0	3	0	0	4	3
2019	15	15	2	1	13	8	5	0	6	0	0	6	2
2020	12	12	5	2	6	1	1	0	1	0	0	1	1
2021	7	5	1	0	2	2	2	0	2	0	0	0	0
2022	6	6	4	2	2	2	0	2	1	0	0	0	0
2023	10	10	7	5	0	0	0	0	0	0	0	0	0
2024	5	5	4	1	0	0	0	0	0	0	0	0	0
2025	13	11	11	5	0	0	0	0	0	0	0	0	0
Totals	**207**	**186**	**43**	**18**	**162**	**89**	**73**	**13**	**66**	**12**	**2**	**84**	**51**
Percentages	-	**90%**	**21%**	**42%**	-	**55%**	**45%**	**8%**	**74%**	**7%**	**1%**	-	**61%**

*Table 20. College enrollment, college graduation, and career status information for Ocean Leader Alumni by high school cohort year. *Eligible to graduate college is defined as the following: students who either a) graduated high school 6 or more years ago; b) graduated high school between 4-6 years ago and are no longer enrolled in college; or c) graduated high school within the past 6 years and graduated college. The percentage of college graduates is calculated as (# of College Graduates / # Eligible to Graduate College). The percentage in science & related careers is calculated as (# in Science & Related Careers / # Career Field Known).*

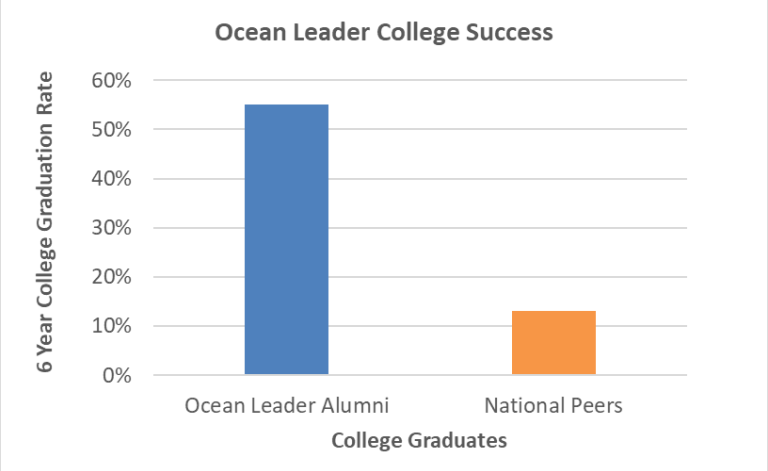


Figure 7. 6-year college graduation rates of Ocean Leader Alumni (55%0 compared to national peers (13%), which constitutes people of color from low-income communities.

Ocean Leader Alumni Volunteering

# of Eligible Alumni*	# of Alumni Volunteering	% of Alumni Volunteering
154	10	6%

*Table 21. Number and percentage of eligible alumni who volunteered with the organization. *Eligible alumni = graduated high school 6 or more years ago.*

Ocean Leader Alumni Donating

# of Eligible Alumni*	# of Alumni Donating	% of Alumni Donating
139	21	15%

*Table 22. Number and percentage of eligible alumni who donated financially to the organization. *Eligible alumni = graduated high school 6 or more years ago.*

Discussion

- **Communication Points:**
  - **85% of graduating 12th grade Ocean Leader students enrolled in higher education, compared to 57% of their peers in their high school graduating class.**
  - **55% of Ocean Leader alumni have earned a college degree, compared to 13% of their peers nation-wide from similar socioeconomic backgrounds.**
  - **74% of Ocean Leader alumni graduates majored in a science or science-related field. In comparison, in 2021, only 15% of all STEM degrees received nationwide were awarded to people of color.**
  - **61% of Ocean Leader alumni currently have jobs in science or science-related fields, compared to 1% of their peers nation-wide from similar socioeconomic backgrounds.**
  - **15% of Ocean Leader alumni give back to the organization as donors.**

  - **12 Ocean Leader alumni have received Master's degrees and 2 have received Doctorate degrees.**
- The percentage of all Hoover High students enrolling in higher education increased by 10% after declining in each of the previous two years.
- College and career data are fluid, and percentages can increase and decrease annually. Some students who are not currently enrolled in college will re-enroll and eventually graduate.

Qualitative: Stakeholder Feedback

Introduction

Feedback from program stakeholders is a valuable data source that informs the effectiveness of our programming. Currently, we define three types of stakeholders:

1) Teachers: partner K-12th grade teachers within our school-shed who opt-in to participate in In-School Programs.
2) Families: parents or other family members of students who participate in Out-of-School Programs.
3) Students: Ocean Leader high school students.

Methods

- Teachers:
    - Teacher surveys were offered to every teacher participating in the In-School Program. Typically, surveys were offered when classes visited the Living Lab.
    - Surveys were administered via a Google Form accessed on a tablet.
    - Survey questions included:
        1. Our primary goal for this program is that your students will BELIEVE that science is something they can do and a scientist is someone they can be. In your opinion, did this program increase this sense of "Belief" in your students?
        2. Please describe one or more aspects of this year's program that you believe were positive for your students' experience.
        3. Please describe one or more aspects of this year's program that you think could be improved and how this would help us meet our goals.
        4. Please rate your experience with the following components of the program (1 = negative, 5 = positive):
            - Communication with Ocean Discovery staff
            - Scheduling
            - Timing of activities
            - Quality of instruction
        5. Please rate your overall experience in the program this year (1 = negative, 5 = positive)
        6. Do you have any additional comments or feedback you would like to share?
- Families:
    - Family surveys were offered on the 5th and final day of After-School and Summer Camp.
    - Surveys were administered via paper copies.
    - Survey questions included:
        1. How happy are you with your child's experience in the ODI program? (1-5)
        2. Does your child feel better about science after completing this program? (1-5)
        3. Can you share one example of how this program has helped your child?
        4. Do you have any suggestions to improve the program?
        5. What is one thing ODI could do to help your child do better in school?
        6. Please describe your students' experience with mathematics at school. How do they feel about doing math?
        7. Are you interested in becoming a parent volunteer?
- Students:
    - Students were surveyed mid-way through the academic year.

- Survey questions included:
    1. What is your overall satisfaction of Ocean Leader Wednesdays?
    2. What is your current career interest?
    3. What are your interests and hobbies now?
    4. What subject do you need the most help with / tutoring now?
    5. Do you want to go to college? Why or why not?
    6. Field trips fall under the following categories: Ocean, College Visits & Career Exploration. What ideas for a field trip would you recommend that are related to these?
    7. At a STEM company, which of the following careers do you consider as science leaders? Select all that apply.
        - Accountant
        - Anthropologist
        - Biologist
        - Communications/Marketing Director
        - Data Analyst
        - Graphic Designer
        - Outreach Specialist
        - Project Manager
    8. What has been your favorite moment or experience with Ocean Discovery yet? Tell us about your spark moments!
    9. Do you have suggestions for improvements for OL Wednesdays or anything else you would like to add or share regarding your experience?

Results

Teachers

- 94 teachers completed a survey.
- Survey responses were read and trends were pulled out and grouped for each question, both within and across grade levels.
- Detailed responses by grade level were provided to the In-School Program Manager. A summary of trends by question is as follows:

1. Our primary goal for this program is that your students will BELIEVE that science is something they can do and a scientist is someone they can be. In your opinion, what percentage of your students do you think hold this "Belief"?

Response Option	**Percentage of Teachers**
The majority of my students increased this belief.	54.3%
Almost all of my students increased this belief.	31.9%
I'm not sure.	8.5%
Almost none of my students increased this belief.	3.2%

The majority of my students did not increase this belief.	2.1%

2. Please describe one or more aspects of this year's program that you believe were positive for your students' experience.
    - The feedback from teachers about this year's program was overwhelmingly positive, highlighting several key aspects that enhanced students' experiences:
        1. Hands-On Learning: Teachers praised the engaging, project-based activities (e.g., building models, planting native plants) that connected students directly to real-world science.
        2. Student Engagement: Educators reported that all students — including those less confident in science — were highly involved and excited.
        3. Inspiring Confidence: The program helped students believe they can be scientists and see the relevance of science in their lives.
        4. Instructor Excellence: Teachers described instructors as stellar, organized, patient, and enthusiastic.
        5. Program Impact: The overall sentiment reflected deep appreciation and recognition of the program's role in fostering environmental awareness and curiosity.
        6. Overall, teachers felt that these elements collectively contributed to an enriching educational experience, helping students build knowledge, curiosity, and a sense of responsibility toward their environment.

3. Please describe one or more aspects of this year's program that you think could be improved.
    - Here's a summary of teachers' suggestions for improving the program:
        1. Extend the number of lessons to reinforce learning and deepen scientific understanding.
        2. Improve logistics and communication around outdoor activities (e.g., sound issues, composting instructions).
        3. Consider smaller group sizes or additional indoor options for large classes.
        4. Overall, teachers appreciate the program but feel these adjustments could enhance student learning and engagement.

4. Please rate your experience with the following components of the program (1 = negative, 5 = positive):

Category	**Average Rating (1-5)**
Communication with Ocean Discovery staff	4.83
Scheduling	4.74
Timing of activities	4.60
Quality of instruction	4.65

5. Please rate your overall experience in the program this year (1 = negative, 5 = positive)
    - The average teacher rating was 4.64 out of 5.

- 89% of teachers had a favorable experience (rating of 4 or 5 out of 5).
- 8.5% of teachers had a neutral experience (rating of 3 out of 5).
- 0% of teachers had a negative experience (rating of less than 3 out of 5).

Families

- 118 parents completed a survey.
- Survey responses were read and trends were pulled out and grouped for each question.
- Detailed responses were provided to the Out-of-School Program Manager.
- A summary of results and trends by question is as follows:

1. How happy are you with your child's experience in the ODI program? (1-5)
    - Average response: 5 out of 5
2. Does your child feel better about science after completing this program? (1-5)
    - Average response: 4.84 out of 5
3. Can you share one example of how this program has helped your child?
    - Families shared that the program has significantly benefited their children in various ways:
    - Learning enthusiasm: Many families described their children as excited to learn and eager to share what they did at Ocean Discovery.
    - Science growth: Parents mentioned growth in knowledge about animals, plants, and space.
    - Confidence and curiosity: Several noted their children have become more curious and confident learners.
    - Engagement: Children were more motivated to attend and talk about science at home.
4. Do you have any suggestions to improve the program?
    - The feedback from families about the program for their child is overwhelmingly positive. Most parents had no suggestions for improvements, expressing that they were happy with the program as it is. However, a few suggestions included:
        1. More program time (longer sessions or more weeks).
        2. Additional hands-on activities or field trips.
        3. Small logistical improvements (e.g., schedule adjustments).
        4. Overall, feedback was overwhelmingly positive and improvement suggestions were minor.
5. What is one thing ODI could do to help your child do better in school?
    - Homework support: Some families suggested offering time or help with homework.
    - More academic reinforcement: Requests for more reading, writing, or math integration.
    - Continued exposure: Many simply said the current structure already helps by keeping students interested, focused, and learning.
6. Please describe your students' experience with mathematics at school. How do they feel about doing math?
    - Positive feelings: Most students reportedly enjoy math or are doing well.
    - Confidence differences: A smaller number found math difficult, particularly due to language barriers or comprehension.
    - Motivation: Several parents noted that their children are happy when doing math and proud of their progress.
7. Are you interested in becoming a parent volunteer?

- Yes: 18%
- Maybe: 10%
- No or not right now: 25%
- I already volunteer: 4%
- No response: 33%

Students

- 31 students completed a survey.
- Survey responses were read and trends were pulled out and grouped for each question.
- A summary of results and trends by question is as follows:

1. Satisfaction

Overall Satisfaction Breakdown

Highly Satisfied: 9
Satisfied: 11
Neutral: 9
Dislike: 2

Trends by Satisfaction Level

1. Career Interests

- **Highly Satisfied** students showed a strong interest in STEM-related careers (marine biology, environmental science, engineering, biomedical fields).
- **Satisfied** students leaned toward a mix of STEM and service-based careers, with some expressing interest in car detailing, SWAT, and healthcare.
- **Neutral** students were often undecided or non-STEM-focused (e.g., law, military, sports).
- **Dislike** respondents were unsure or chose careers not strongly tied to science.

Insight: Students more satisfied with OL Wednesdays tend to have clearer and stronger STEM-aligned goals.

2. Tutoring Needs

Across all satisfaction levels, Math was the most common subject for tutoring.

- **Highly Satisfied / Satisfied** students often said they needed little or no help, while others asked for support in advanced subjects like Chemistry and AP courses.
- **Neutral/Dislike** students were more likely to report needing general help or were unsure.

Insight: Students who feel academically confident—especially in math—report higher satisfaction.

3. College Motivation

- **Highly Satisfied and Satisfied** students often connected college to career advancement, personal growth, and family pride.
- **Neutral** students were mixed—some cited uncertainty or financial motivation; others expressed ambivalence about college.

- **Dislike** students still expressed a desire to go to college but gave shorter, less detailed responses.

Insight: A clear vision of why college matters correlates with higher satisfaction and motivation.

4. Favorite Experiences (Spark Moments)

- **Highly Satisfied** students highlighted multi-day trips (Bahía, La Jolla, summer camps) and hands-on activities.
- **Satisfied** students mentioned field trips and bonding with peers and mentors.
- **Neutral** students also enjoyed field trips but wished for more freedom or variety.
- **Dislike** responses were minimal but included summer camp and camping with friends.

Insight: Immersive, social, and adventurous learning experiences contribute strongly to positive program engagement.

5. Suggestions & Improvements

- **Highly Satisfied:** Suggested adding more “fun with learning” activities, free time, and homework help.
- **Satisfied:** Mostly said "No suggestions," but a few wanted more critical thinking activities like last year’s projects.
- **Neutral:** Wanted more tutoring, shorter sessions, and more study hall.
- **Dislike:** One suggested hands-on projects like using microscopes.

Insight: Even satisfied students want balance between structure and fun, and a chance to go deeper in critical thinking and project-based learning.

2. Growth Mindset

Growth Mindset Awareness
Most students define growth mindset as:

- Being open to new ideas
- Learning through mistakes
- Not putting limits on yourself
- Self-belief and persistence
- Continual improvement

However, many also asked:

- “Why is it important?”
- “How do I apply it daily?”
- “How do I measure growth without overthinking?”

Trend: Students understand the what but are asking for the why and how — there's a need for relatable, action-based examples of growth mindset in daily life.

3. Student Mental Health Experience and Openness

Available Resources
Most students said mental health resources are visible and accessible at Ocean Discovery. Several noted they're "around if needed" but not often used unless there's a major issue.

GRADE-LEVEL INSIGHTS
9th Grade

- View mental health services positively but casually.
- Growth mindset is equated with positive thinking and controlling emotions.
- Less interest in 1:1 therapy unless necessary.

10th Grade

- Deeper engagement with mental health content.
- More variation in openness to therapy—some past experiences were negative.
- Want to understand why growth mindset matters and how to make it relevant to them.

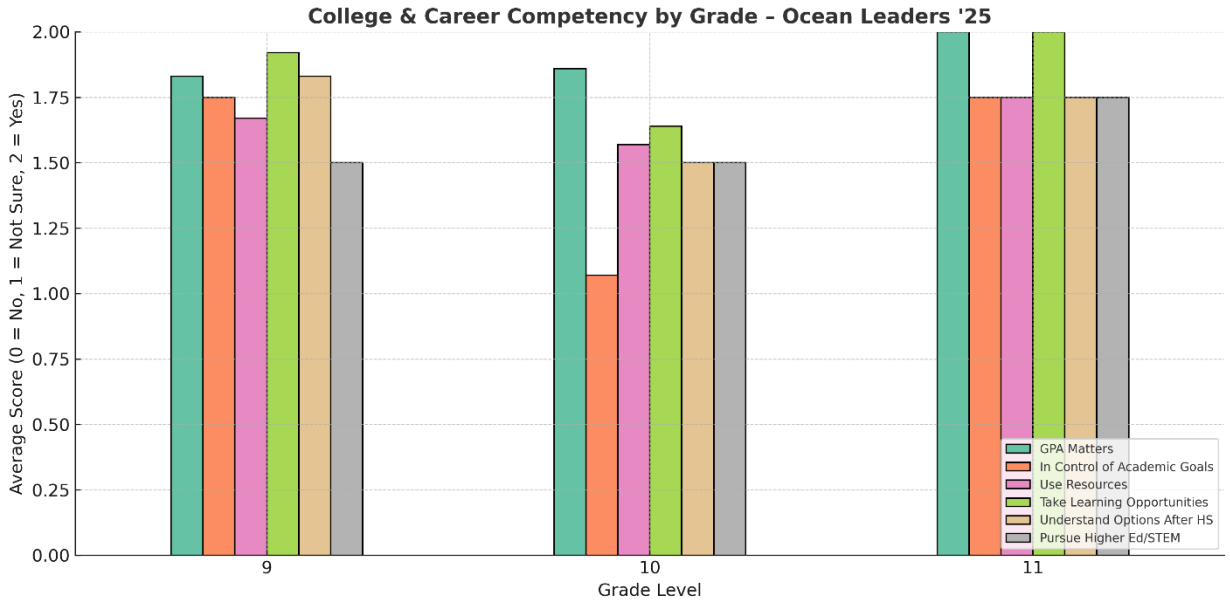
11th Grade

- Reflective and seeking deeper meaning.
- Comfortable with therapy but want choice and space.
- Want to understand growth mindset's practical impact—how to apply it without it becoming overthinking.

Trend: Openness increases with grade level, but students still want agency—like being able to opt out, choose when, and build trust with their mental health support.

TAKEAWAYS
Clarity & relevance matter: Students want growth mindset and mental health tied to their real life, not abstract ideas.
Curiosity can close the gap: Frame reflection and self-inquiry as strengths, not just soft skills.
Voice and choice: Give students control over when/how they access mental health resources or engage with deeper topics.

4. College and Career



How to Read This Chart:
Each bar represents the *average response* from students in 9th, 10th, and 11th grade to key college and career readiness questions. Responses were scored as follows:

- 2 = Yes
- 1 = Not Sure
- 0 = No

A higher number means students feel more confident or informed in that area. For example, if the "GPA Matters" score is 1.9, most students strongly agree that GPA is important. Lower scores show areas where students may need more guidance, support, or clarity.

THEME SYNTHESIS: College & Career Competency (CCC)
Key Takeaways Across All Grades:

- **GPA Awareness:** Students across all grades recognize the importance of GPA in unlocking academic opportunities (avg. score: 1.9/2).
- **Learning Engagement:** Most students are open to taking learning opportunities and pursuing STEM/higher ed.
- **Growth Areas:** Students in 10th grade show the most uncertainty around **control over academic goals** and **understanding post-high school options**.

GRADE-LEVEL INSIGHTS:
9th Grade

- **Strengths:** Highly engaged in taking learning opportunities (1.92) and aware of GPA importance (1.83).
- **Growth Areas:** Need more clarity on academic control (1.75) and pathways after high school (1.83).
- **Interpretation:** Strong start, these students are optimistic but need structured goal-setting tools.

10th Grade

- **Strengths:** Good grasp of GPA relevance (1.86) and strong resource usage (1.57).

- **Growth Areas:** Low confidence in managing academic goals (1.07) and lower clarity on post-high school plans (1.50).
- **Interpretation:** This is a pivotal grade—students need targeted coaching in goal-setting and pathway planning.

11th Grade

- **Strengths:** Strongest across almost all metrics—GPA matters (2.0), learning engagement (2.0), post-HS awareness (1.75), and academic control (1.75).
- **Growth Areas:** Minor uncertainty still presents in college/STEM commitment.
- **Interpretation:** These students are nearly ready to launch—support with final college decisions and leadership skills would be ideal.

Discussion

- **Highlights:**
  - **Teachers expressed overwhelmingly high satisfaction with the program in 2024-25.**
  - **Positive feedback from teachers mentioned hands-on activities, opportunities for kids to learn outside in nature, and meeting science role models who are representative of student backgrounds.**
  - **Families expressed unanimously high satisfaction with the program in 2024-25.**
  - **Positive feedback from families mentioned how much their kids have learned about science and marine life, and how excited they are to attend the program. Families feel the program is helping their kids in school as well as to help make new friendships.**
  - **Highlighted teacher quotes include:**
    - ***"The engineering design and building of FRED was super positive because they can make the connection between environmental needs and them being able to do something about it… Otherwise, this was awesome! Thank you!"***
    - ***"The hands-on activities were great as were the drawing and design exercises… Today's instructors were stellar. Thank you very much Think-Pair-Share addition super helpful!"***
    - ***"The students always love planting at the marsh… Everyone was into it and participating… The instruction was great! The strategies to support students have really improved over the years."***
    - ***"My students were so excited to build and test their models. It really made them think like scientists and engineers — they were proud of what they created."***
    - ***"The instructors were so patient and engaging. Every student felt included and valued, even those who are usually shy in science."***
    - ***"This program continues to be one of the highlights of our school year. The combination of real-world science and hands-on learning is powerful."***
    - ***"I love how much Ocean Discovery has grown over the years — the organization, communication, and materials just keep getting better. Thank you for all you do!"***
  - **Highlighted parent quotes include:**
    - ***"I had never enrolled my children in any program before, and they really liked it. They came home very happy and excited to share what they learned."***
    - ***"She comes home excited and explains to me everything they did during the day."***

- ***"This program has helped my child socialize with other students and become more confident about learning new things."***
- ***"My daughters have been so excited telling me about the activities they learned and played. They love being part of this program."***
- ***"The program motivated both of my kids to want to learn more about the ocean and space."***
- ***"She feels very happy in this program, and it has helped her a lot to grow and feel confident."***
- ***"Mateo has been very excited about Ocean Discovery. He loves talking about the Mars rover and what he learned there."***
- ***"He comes home eager to tell us everything he learned that day — he's so proud of himself."***

- Ocean Leader student survey takeaways include:
  - STEM Engagement Drives Satisfaction: Students most satisfied with Ocean Leaders Wednesdays tend to have clear, STEM-aligned career goals, stronger academic confidence (especially in math), and greater clarity about how college supports their future.
  - Experiential Learning Matters: Hands-on, immersive experiences (e.g., field trips, summer camps, and Bahia excursions) were consistently cited as highlights—reinforcing that adventure, teamwork, and real-world exploration deepen engagement.
  - Growth Mindset Understanding Is Emerging: Students grasp what a growth mindset means but want more relatable, real-life examples of why it matters and how to apply it. Relevance and daily connection are key next steps.
  - Mental Health Openness Grows with Age: Older students show increasing comfort discussing and accessing mental health resources but want autonomy and choice in when/how to engage with support.

DISSEMINATION

We incorporate data and key takeaways into a variety of other dissemination materials. Our organizational Annual Report discusses our achievements and is distributed broadly through our networks. We also share outcomes on our website, to funders, and to all partners who provide support for our programs and students.