

President's Environmental Youth Awards Today's Youth Protecting Tomorrow's Environment

K-12th grade
students

The President's Environmental Youth Awards (PEYA) promote awareness of our nation's natural resources and encourage positive community involvement. Since 1971, the President of the United States has joined with the U.S. Environmental Protection Agency to recognize young Americans for protecting our nation's air, water, land, and ecology. Each year the PEYA program honors a wide variety of environmental projects developed by young individuals, school classes (kindergarten through high school), summer camps, public interest groups, and youth organizations to promote environmental awareness.

Your project – or one you are sponsoring – could be an award winner. Encourage one or more students you know to apply for a PEYA and see what a difference they can make for the environment with an award-winning project. Applicants from all 50 states and U.S. territories are eligible to compete for an award.

How the Program Works

The PEYA competition has two parts — a regional certificate and a regional award. The regional certificate program is conducted year-round. Therefore, applications for this program can be submitted at any time. All qualified applicants will receive a certificate honoring them for their efforts to protect human health and the environment.

The regional award program is conducted once a year. Following the December 31 deadline, the regional awards panel for each of EPA's 10 regional offices reviews applications to select the winner. The 10 regional award winners receive a presidential plaque.

How to Apply

A blank application is provided in this brochure. An electronic version of this document can be viewed or downloaded in portable document format (pdf) at EPA's PEYA Web site at www.epa.gov/peya. Past projects have included building nature trails, reversing the decline of endangered species, starting recycling programs, restoring native habitats, creating schoolyard habitats, and many other creative, sustainable efforts. To learn more about past award-winning projects, please visit the PEYA Web site.



At a PEYA awards ceremony, the EPA Administrator said that "These young people are leading the way in the protection of public health and the environment. Through these projects and their commitment, these students are setting an example for all of us in making our communities cleaner and healthier."

Youth who submit an application will receive a signed certificate. One outstanding project in each of the 10 EPA regions will be selected to receive a presidential plaque.

Complete instructions on how to apply for a PEYA are provided on page 2.



The Application

Step 1: Review the Eligibility Criteria

- Project is completed while the student(s) are in kindergarten through 12th grade.
- Student(s) are citizens of the United States or its territories or have been lawfully admitted for permanent residency.
- Project is sponsored by at least one adult.

Step 2: Complete an Application

- Sponsor must sign and date page A-1 of the application.
- Project must be summarized on the pages provided in the PEYA application form (no more than 300 words). A more detailed description of the project, addressing the evaluation criteria, should be included separately on 3 to 5 pages of 8½- by 11-inch paper.
- Typed, double-spaced applications are recommended. The applicant should type or write on only one side of each page.
- Project must be described based on the criteria (see column to the right). These criteria will be used by a regional awards panel to evaluate the application.

Applicants are encouraged to submit photographs, newspaper articles, and other supporting materials if they provide a more comprehensive view of the project.

Step 3: Mail the Application

- Each application must be mailed to the regional PEYA coordinator. Applications cannot be submitted electronically.
- A current mailing address for each regional PEYA coordinator is provided in the application (see page 3).

Application Deadline

For the regional certificate program, applications may be submitted at any time during the year. For the regional award program, the deadline for submitting applications is **December 31** of each year.

A note about sponsors. Each young person or group of young people applying for the PEYA program must be represented by a sponsor. The sponsor must be an adult and may be a parent, teacher, youth group adviser, summer camp counselor, community leader, or other interested individual. The adult sponsor plays an important role in helping a young person or group of young people carry out a project and apply for a PEYA. Typically, a sponsor offers suggestions and advice throughout the project to: develop a sound project approach; implement the project; work with other groups and individuals in the community; complete the application form(s); and prepare accompanying materials. The sponsor must also sign and date the application.

Questions about the role of a sponsor should be directed to your regional PEYA coordinator.

How PEYA Projects are Judged

Each application under consideration for a regional award is evaluated by a regional awards panel. The panel members are usually EPA staff who review and evaluate each application based on the criteria. A maximum of 100 points can be awarded to a given application.

Evaluation Criteria

Extent to which the project was designed, coordinated, and implemented due to the young person's or persons' initiative. Explain how the project was created and completed through the initiative of the student participant or participants. The impetus and driving force for the project must be the student or students, not the sponsor.
25 points

Environmental need for the project and appropriateness.
20 points

Positive environmental impact on the local community and society, and the long-term environmental benefits derived from the project. Describe how the project positively affected the community and any long-term environmental benefits or outcomes of the project.
15 points

Were the goals accomplished? List the goals of the project and how they were accomplished.
15 points

Positive ways in which other groups or individuals were involved to provide funds, resources, or publicity. Describe the positive ways that the project involved others in the community. Identify community resources, expertise, leadership, or publicity used.
10 points

Project innovation. Describe how the participant(s) used innovative approaches to achieve positive results.
10 points

Soundness of approach, rationale, and scientific design (if applicable).
5 points

EPA Regional PEYA Coordinators

Region 1

CT, MA, ME, NH, RI, VT

Kristen Conroy
U.S. EPA
5 Post Office Square
Mail Code ORA-01-1
Boston, MA 02109-3912
(617) 918-1069
E-mail: conroy.kristen@epa.gov

Region 2

NJ, NY, Puerto Rico, U.S. Virgin Islands

Cecilia Echols
U.S. EPA
290 Broadway, 26th Floor
New York, NY 10007-1866
(212) 637-3678
E-mail: echols.cecilia@epa.gov

Region 3

DE, MD, PA, VA, WV, DC

Ellen Lucchetti
U.S. EPA
1650 Arch (3PA00)
Philadelphia, PA 19103-2029
(215) 814-3287
E-mail: lucchetti.ellen@epa.gov

Region 4

AL, FL, GA, KY, MS, NC, SC, TN

Kathy Armstrong
U.S. EPA
Sam Nunn Atlanta Federal Center
61 Forsyth Street, S.W.
Atlanta, GA 30303-8960
(404) 562-8225
E-mail: armstrong.kathy@epa.gov

Region 5

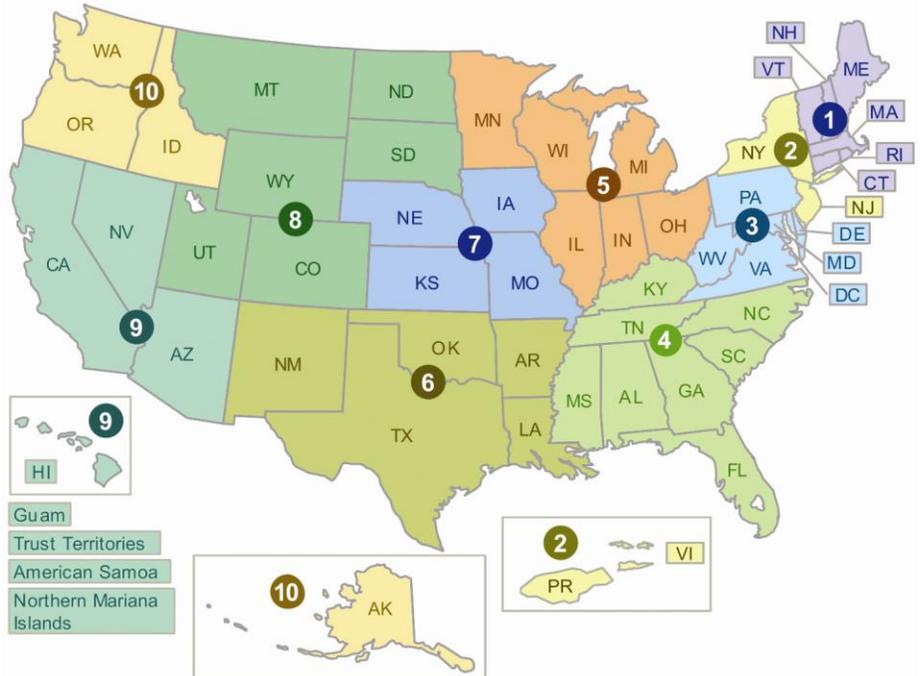
IL, IN, MI, MN, OH, WI

Megan Gavin
U.S. EPA
77 West Jackson Boulevard (AT-18J)
Chicago, IL 60604-3507
(312) 353-5282
E-mail: gavin.megan@epa.gov

Region 6

AK, LA, NM, OK, TX

Bonnie King
U.S. EPA
1445 Ross Avenue
Suite 1200 (6XA)
Dallas, Texas 75202-2733
(214) 665-2215
(800) 887-6063
E-mail: king.bonita@epa.gov



Region 7

IA, KS, MO, NE

Denise Morrison
U.S. EPA
901 North 5th Street
Kansas City, KS 66101-2907
(913) 551-7402
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Region 8

CO, MT, ND, SD, UT, WY

Wendy Dew
U.S. EPA
1595 Wynkoop Street
Denver, CO 80202-2466
(303) 312-6605
E-mail: dew.wendy@epa.gov

Region 9

AZ, CA, HI, NV, American Samoa, Guam, Mariana Islands, Palau

Sharon Jang
U.S. EPA
75 Hawthorne Street (CED-4)
San Francisco, CA 94105
(415) 947-4252
E-mail: jang.sharon@epa.gov

Region 10

AK, ID, OR, WA

Sally Hanft
U.S. EPA
1200 Sixth Avenue (ETPA-086)
Suite 900
Seattle, WA 98101
(206) 553-1207
(800) 424-4372 (Region 10 only)
E-mail: hanft.sally@epa.gov

A note about the PEYA coordinators. EPA has 10 regional offices, each responsible for several states and some of which are responsible for U.S. territories. In each regional office there is a coordinator who manages the PEYA program for that region. The coordinator answers any questions about the program, oversees the review of submitted applications, and works with the sponsors on follow-up activities.

K-12



President's Environmental Youth Awards

Today's Youth Protecting Tomorrow's Environment

Young people from around the country are invited annually to participate in the awards program which encourages individuals, school classes, summer camps, public interest groups, and youth organizations to promote environmental awareness and positive community involvement.

Application

This is a voluntary program. Applications should be filled out only by those who wish to participate.



All eligible applicants will receive a certificate honoring them for their efforts in public health and environmental protection. To be considered for the regional award program, applications must be postmarked by the December 31 deadline and mailed to the appropriate Regional PEYA Coordinator.

Individual/Group/School Name Chris Loucif

Title of Project Making A Difference With Reefballs

Number of regional certificates requested 1

Eligibility Guidelines

- ✓ Project is completed while students are in kindergarten through 12th grade
- ✓ Participants are citizens of the United States, its territories, or lawfully admitted to the U.S. for permanent residency
- ✓ The project is sponsored by at least one adult.

Participants

List the names, addresses, and grade levels of the youth participants. Please continue on a separate sheet, if necessary.

Name Michael Guertin
 Address 13502 SW 21st Street

 City, State, Zip Miramar, FL 33027
 Age 15 Grade 10th

Name Charlie Metzger
 Address 10660 NW 42nd Drive

 City, State, Zip Coral Springs FL 33065
 Age 15 Grade 10th

Name Hector Perez
 Address 14025 SW 31st Street

 City, State, Zip Miramar FL 33027
 Age _____ Grade _____

Name Mari Silva
 Address PO Box 227143

 City, State, Zip Miami FL 33222
 Age 15 Grade 10th

Name Alyssa Martinez
 Address 701 North Hiatus Road

 City, State, Zip Pembroke Pines, FL 33026
 Age 16 Grade 10th

Name Justin Richard
 Address 1861 126th Ave

 City, State, Zip Pembroke Pines FL 33027
 Age 16 Grade 10th

Sponsors

List the name(s) of the adult sponsor(s). Application must be signed by the adult sponsor or sponsors.

Name Todd Barber
 Address 609 Portia N ST

 City, State, Zip Nokimis, FL34275
 Home Telephone _____
 Business Telephone _____
 E-mail reefball@reefball.com
 Signature _____

Name _____
 Address _____

 City, State, Zip _____
 Home Telephone _____
 Business Telephone _____
 E-mail _____
 Signature _____

* Some of the volunteers chose not to sign in. This list reflects volunteers who were interested in sharing their information

Name: Brandon Richard
Address: 6843 segovia blvd

pembroke pines FL 33027

Age: 16 Grade: 11th

Name: Justin Correa
Address: 1861 126th Ave

Miramar FL 33027

Age: 16 Grade: 10th

Name: Caitlin Reneau
Address: 7785 Grande Street

Sunrise FL 33351

Age: 16 Grade: 10th

Name: Trevor Dodson
Address: 36 Harlow Street

Worcester, MA 01605

Age: 9 Grade: 4th

Name: Devon Hayes
Address: 181 Miles Standish Dr

Marlborough, MA 01752

Age: 9 Grade: 5th

Name: Jasmine Sasser
Address: 36 Harlow Street

Worcester, MA 01605

Age: 11 Grade: _____

Name: David Beniot
Address: 26 Country Rd

Westford, MA 01886

Age: 16 Grade: 10th

Name: Andrew Rubio
Address: 4060 sw 152nd Ave

Miramar FL 33027

Age: 15 Grade: 10th

Name: George Correa
Address: 1861 126th Avenue

Miramar FL 33027

Age: 15 Grade: 10th

Name: Sam Dodson
Address: 36 Harlow Street

Worcester, MA 01605

Age: 11 Grade: 6th

Name: Morgan Hayes
Address: 181 Miles Standish Dr

Marlborough, MA 01752

Age: 11 Grade: 7th

Name: Ben Sencio
Address: 36 Harlow Street

Worcester, MA 01605

Age: 10 Grade: 6th

Name: Richie Guertin
Address: 13502 SW 21st Street

Miramar, FL 33027

Age: 11 Grade: 7th

Name: Ben Wesley
Address: 22 April Lane

Westford, MA 01886

Age: 16 Grade: 10th



Date project began January 2008

Date project ended June 2011

Did project receive press coverage? Yes No
If "yes", attach press clippings.

Please indicate what you applying for:

Regional Certificate Only

Regional Awards Program

Applicants for the regional awards program are advised to refer to the evaluation criteria when describing their project. EPA Regional Award Panels cannot make site visits, so applicants are encouraged to creatively present a comprehensive view of the project.

Description of the Project

Please provide a short summary or abstract (no more than 300 words) of the project and identify the results achieved. The purpose and goals of the project should be included in the summary. A more detailed description of the project, addressing the evaluation criteria, should be included separately on 3 to 5 pages of 8½- by 11-inch paper.

Chris Loucif, a homeschooling high schooler dedicated environmental protection, worked to improve our oceans by creating an artificial reef at Oleta River State Park. The reef has already shown signs of coral development and new tropical fish species (Chris continues to monitor the progress of the artificial reef with marine biologists). Chris has also organized beach clean ups, water testing programs, habitat restoration and worked with scouts to help them build artificial reefs. Chris continues to promote awareness and foster community involvement in saving our oceans through presentations to elementary/middle school students and neighborhood groups. Over the course of this project Chris has invested well over 865 hours and volunteers have generously contributed almost 2,000 hours. Chris' project includes five stages detailed below in the attached document:

Stage 1: Planning & Preparation

Stage 2: Building & Deploying Reefballs

Stage 3: Impacting The Entire Ecosystem

Stage 4: Community Outreach

Stage 5: Project Design & Innovation

Applicants for the Regional Awards Program

You may attach up to five additional pages to provide details about the project.

MAKING A DIFFERENCE WITH REEFBALLS

Building An Artificial Reef At Oleta River State Park



Chris Loucif

Sponsor: Todd Barber, Chairman Reefball Foundation

STAGE 1: DISCOVERY & PREPARATION



Presidential Classroom



Water Testing

I have spent much of my life in and around the ocean, splitting my time between Florida, Massachusetts and Rhode Island. I have also been a Sea Scout for 7 years and attended workshops by SEA PERCH on underwater ROV. During our vacations, I usually found myself on a boat, or snorkeling. In 2007, I had the opportunity to snorkel around the Great Barrier Reef and was stunned to see how much of the coral was bleached. Seeking a way to understand the problem, and to make a difference, I returned home and signed up for the year long New England Aquarium School. I also began speaking with Todd Barber (Chairman of Reefball Foundation), Larry Beggs (President of Reefball Innovations), as well as DERM (Department of Environmental Resource Management) for Miami Dade to learn more about reefball design. Concurrently, I began the process to become a certified diver.

In 2009, I was selected to be a Presidential Scholar and attended two Presidential Classroom courses focusing on Science and the Environment. I also had the opportunity to meet with Senator John Kerry's office to discuss my concern about our oceans and the role of reefballs.

During the summer of 2009 I was able to apply my reefball knowledge by acting as an advisor for another Eagle Scout Project placing reefballs in Delray Beach, Florida. I also ran a workshop for a Girl Scout camp teaching them how to build reefballs, and conduct water quality tests.

Stats At A Glance

My Total Hours	
Stage 2: Planning	184 Hours
Stage 2: Building& Deploying	241 Hours
Stage 3: Impact	65 Hours
Stage 4: Community Outreach	Over 100 Hours
Stage 5: Research & Development	260 Hours
Total Hours I Spent:	Over 865 hours
Volunteer Total Hours	
Stage 2: Volunteer Time	1560 Hours
Stage 3: Volunteer Time	300 Hours

**These Hours Exclude Time Spent By Miami-Dade DERM, Reefball Foundation, Reefball Innovations & The Oleta River State Park Team who generously contributed significant time and resources to make this project a success.*



Bleached Coral in Australia

STAGE 2: BUILDING & DEPLOYING REEFBALLS



Preparing Gear For Diving

"Nice job Chris...all of us at the Reefball Foundation are very proud of your work"
- Todd Barber
Chairman, Reefball Foundation



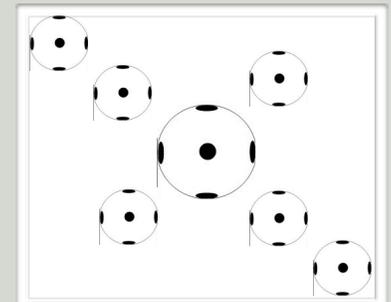
Building The Reefballs

Environmental Goals: As an advisor on various Eagle Scout projects, I frequently had the opportunity to discuss the environmental needs of the Oleta River State Park with the Park Supervisor. The Supervisor had previously agreed to two reefball projects for Oleta but the results had been disappointing and the reefs were languishing. Through multiple dives, I investigated the existing reef structures and found that the two existing reefball projects lacked enough surface area to encourage coral development. The critical environmental challenge was to integrate these reefs into one combined, more effective structure. Through discussions with the Oleta River Park team, Miami-Dade Derm and the Reefball Foundation, we identified the most impactful location and formation (based on research we have learned that the X formation is the most effective environmental design). The location of the new reef would result in expanding the surface area of the overall reef and would make the entire reef more hydrodynamic. The new reefball structure would improve the Oleta ecosystem, encourage a healthy environment for fish and wildlife, and hopefully jumpstart coral development. To make sure the new reef structure maintained a positive environmental impact, the reefball composition was carefully maintained to be as similar to coral as possible (including the use of sea water, and advaflow to maintain the appropriate PH). The reefballs also cured for 6 months before they were deployed in July 2010.

Planning the Project: Reefball projects are extremely complex and require extensive planning and coordination to ensure that all the resources are obtained and available at a the right time. In addition, permits / permissions must be obtained from multiple agencies. Finally, for the deployment, divers must be available to place the reefballs (along with supporting safety staff). Our projects could never have been successful without the support of Reefball Foundation, Reefball Innovations, DERM, the Oleta River State Park Team and local dive shops.



Types of Molds



Reefball Formation Diagram



Representative Image of Reefball Being Lowered Into Position (Visibility Too Poor At Oleta To Obtain Our Picture)

STAGE 3: IMPACTING THE ENTIRE ECOSYSTEM



New Fish Species At The Reef



Coral Development At The Reef

"Chris,
It was very nice working with you on this project. Attached are some of underwater pictures of the reefballs. They look great! And they should provide a nice home for juvenile fish and other invertebrates."

-Rebecca Ross, Biologist I
Miami Dade County, DERM

Monitoring the Reefball Results: In January 2011, I returned to Oleta River State Park with a Marine Biologist to identify the impact of the new reefball structure. We were thrilled to see that in 7 months the reef had begun to develop coral polyps and we were able to identify a tropical fish species that had not previously been seen in that area. We were ecstatic to see such early signs of success. Subsequent dives have found additional coral development in both the new reefball structure and for the first time, in the previous sites. The project results exceeded all our expectations.

The Entire Ecosystem: I looked around the Oleta River State Park and I realized that more could be done. As a senior member of my Florida Sea Scouts, I volunteered to play the role of liaison for our scouts and Oleta River State Park. In this role I was able to help Oleta complete critical projects by linking up their needs with Scouting resources. The goal was to improve the entire ecosystem at Oleta River State Park. The Scouts and other community volunteers completed beach clean-ups, habitat reconstruction, and tree plantings, more than achieving the goal. It was gratifying to see the transformation in Oleta and the interest and commitment from our Southeast region scouts.



DERM Played Significant Role in All Stages of The Project



Monitoring Reefball Results



Habitat Restoration

STAGE 4: COMMUNITY OUTREACH & INVOLVEMENT



**"This was a fun class! I loved making a mini reefball, I'm putting it in my fish tank at home."
- Morgan, Age 12**



**"I loved learning about the ocean. I want to grow up and build reefballs."
- Devon, Age 9**



Thank You Letter From Director of Educational Resource Center

Volunteers in Building and Deploying the Reefballs: One of the challenges of reefball projects is that volunteers are needed multiple times: for the training sessions before the build, to build the reefballs and then to place the reefball at the reef. In total, over 60 volunteers generously donated their time to build and deploy reefballs at Oleta River State Park.

During our deployment at Oleta, after all of the volunteers had arrived and been prepped, the resources (including boats) had been set up, the cement was mixed and reefballs were waiting in the shallow end of the ocean, we received word that a sewage spill in Miami prevented water access. It speaks to our volunteers commitment level that 80% of the volunteers returned days later when we received the "all clear."

Website: After the success of the Oleta reefball project, I began speaking at scout meetings to encourage other Scouts in creating reefball projects. I created a website called Reefball Projects to share my knowledge about what I had learned and provide easy access to reefball project information with others.

Community Outreach: The goal of the community outreach was to energize people to advocate for their communities, to become more ecofriendly in their daily living and to help the oceans ecosystems. I frequently spoke with elementary and middle school students about the changes that are affecting the ocean and how they can play a role in making a difference. The students were able to build mini reefballs that they could bring home to their aquariums thanks to the generous donations from Larry Beggs of Reefball Innovations.

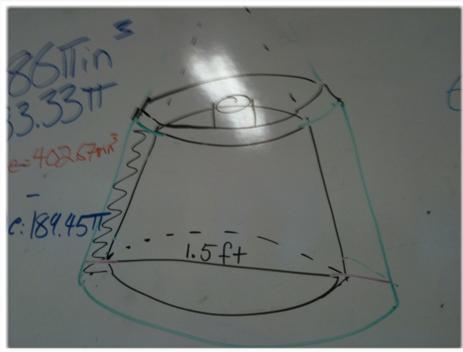


Instructional Session on How To Build Reefballs

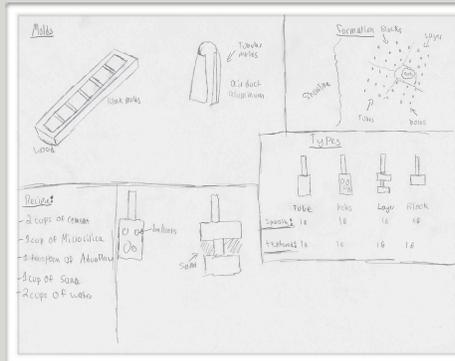


Middle School Class Presentation

STAGE 5: PROJECT DESIGN & INNOVATION



Prototype Reefball



Plans To Develop Reefball Prototypes



Building Prototypes

Project Innovation: During the building and deployment of the reefballs

multiple steps were taken to innovate the reefballs to enhance the project's success. First, the reefball molds were coated in sugar water to provide the reefballs with a rough surface texture. This was implemented to allow coral polyps to latch on to the reefballs with ease. We also created a concrete mixture that would be used to cement the reefballs on a concrete plot underwater. This was used to prevent the reefball site from sinking into the sand around the reefball site. Volunteers were trained to clean the algae off the reefballs and then apply concrete under water to secure the reefballs.

Design Innovation: From October 2010 to June

2011 I worked with a Marine Biologist, Carly Ryan focusing on testing the effectiveness of different designs of reefballs and evaluating the various textures for reefballs. The research began by reviewing key principles of experimental design, seminal research studies on reefball design, and the biology of artificial reef communities. The experiment involved measuring the species attracted to specific reefball shape and texture.

"Under my supervision as a Marine Biologist, Chris designed a project to test the role that the physical properties of artificial reef units (known as "reefballs") plays in attracting and facilitating the settlement of marine organisms. In completing this project, Chris will have learned how marine biological research is conducted in the field, as well as how to plan and execute a high quality research project that leads to publishable results. He has had to use elements of engineering, geometry and biology as well as understanding the scientific process to complete this project.

Chris has shown an ability to organize and coordinate all of the resources necessary to complete this complex project. He has also demonstrated a high degree of motivation and willingness to work hard to achieve this goal. His attitude and drive to succeed make him an excellent mentee."

Carly Ryan

Marine Biologist