

The Stone Soup Leadership Institute's West Coast Program

# Final Report

Sustainable Education Toolkit with Redwood High School's Environmental Science Program

June 2022





Stone Soup Leadership Institute
<a href="https://sustainwdn.com/redwood-high-school-beta/">www.stonesoupleadership.org</a>
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West Coast Program 2022
with
Redwood High School's
Environmental Science Program

### Overview

The Redwood Environmental Academy of Leadership (REAL) Program is a small cohort of students within Redwood High School dedicated to inspiring and developing environmental leaders in an area that is consistently devoted to tech and innovation. REAL is a small learning community with an Environmental, Leadership and Culinary focus. REAL partners include Stanford University, Hidden Villa and other organizations. Students learn about garden entrepreneurship, farm-to-table practices, and other ecologically sustainable business models. Students are given hands-on practice in the ¾ acre outdoor learning space on campus and participate in many field trips with our community partners. Ms. Lisa Melendy taught the environmental science section of the program, and Mr. Chris Beetley-Hagar taught the other sections.

Last Winter, the Stone Soup Leadership Institute was invited to share its Curriculum with the 70 Environmental Solutions Fellow in San Mateo County. During this year-long fellowship, educators were tasked with creating a sustainable education curriculum for their students. Lisa Melendy accepted our invitation to serve as the Institute's West Coast BETA site. For the last six months, the Institute partnered with Lisa and Redwood High School to help enhance the curriculum in the REAL Program with our sustainability curriculum. The Institute designed a custom tailored 9-Week BETA Program to help students connect sustainable topics to real-life role models and pathways for pursuing sustainable opportunities.



Redwood High School Overview

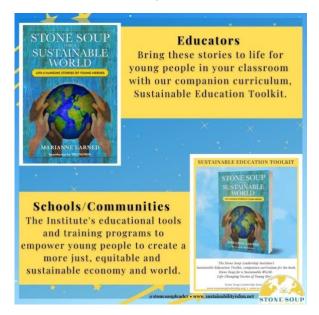
Redwood High School is a continuation high school in Redwood City, California. It serves students in the Sequoia Union High School District who are transferred there for reasons of low credit acquisition, behavioral issues and the need for a smaller, more hands-on environment. 92% of students come from families of low socio-economic status. 85% of students identify as Black, Indigenous or People of Color.

Redwood High School accepts students from four comprehensive high schools in the Sequoia Union High School District who have been identified as credit deficit and will not be able to graduate on time. Redwood has a quicker credit accumulation model, where students earn 2.5 credits for 6 weeks of classwork, instead of 5 credits for a 9 or 12-week class. This allows students to make up credits that they missed at their home school and graduate on time (or 6 weeks early, in many cases). Students become credit deficit for many reasons, including (but not limited to) a major family or personal event which prevents them from being fully successful in school; prolonged drug/alcohol use; gang affiliation; houselessness; family instability; immigration; illness; lack of motivation; lack of academic or intellectual challenge; lack of academic or personal support; bullying; mental illness; a learning disability (diagnosed or otherwise); or a lack of command of the English Language. Many students identify with more than one of these experiences. Students bring these experiences to the classroom, so the continuation teacher must plan each lesson with them in mind.

### **Program Overview**

The Northern Region of California is the hub of technology and has been an early leader in the transition to a sustainable economy. There is a strong need for an educated workforce to support the transition to a sustainable economy in California. The Institute's West Coast program at Redwood High

School serves as a bridge between the needs of local business, the programs at the local community college and the interests of students to find good-paying jobs upon graduation. The Institute expanded our original plans to incorporate our SustainWDN $^{\text{TM}}$  and Sustainable Career Pathways.



The Sustainable Education Toolkit Program is a 10-week education program designed to empower multicultural youth to explore sustainable education through the lens of Language Arts and STEM activities and Sustainable Career Pathways. Students are given the opportunity to explore sustainable career pathways and the post-high school educational options available to them.

This Program was designed to test the Institute's new book and companion curriculum, *Stone Soup for a Sustainable World - Life Changing Stories of Young Heroes.* In partnership with Lisa Melendy, we used the curriculum to supplement learning standards and lessons within her classroom.

Each week we featured a story and lesson plans from the companion curriculum for our new book, *Stone Soup for the Sustainable World: Life-Changing Stories of Young Everyday Heroes.* The Lesson Plans bring the stories to life with Language Arts and STEM Activities, Sustainability Innovations and Sustainable Career Pathways. To broaden students' awareness of real-jobs in their community, we researched sustainability-oriented certificates based in Northern California. Through this process, we discovered many opportunities in technology certificates and career paths, but very few sustainability-oriented certificates. As a result, we supplemented the Sustainable Career Pathway section with virtual/online certificate programs

connected with other community colleges nationally, including our East Coast program.

Throughout the program, students had the opportunity to listen to live (and virtual) speakers within different fields of sustainability and learn about the steps needed to pursue a sustainable career. The Institute's multicultural team of facilitators worked with Ms. Melendy to inspire her students to pursue these new career pathways in this emerging sustainable economy. Each week we debriefed with Ms. Melendy to evaluate student progress and explore ways to adapt the program to meet their unique needs.

# Sustainable Education Toolkit Lesson Plans

The Sustainable Education Toolkit highlights lesson plans based on stories featured in new book and companion curriculum, *Stone Soup for a Sustainable World - Life Changing Stories of Young Heroes.* The program provides dynamic virtual resources for educators to increase their students' appreciation for STEM, with a special focus on climate education and sustainability solutions. Each individualized lesson plan is designed to allow students to learn about the personal story, experience and career pathway from individuals working in diverse areas of the blue/green economy.

The lesson plans highlighted were Trevor Tanaka, Daniella Fernandez, Gary White and Matt Damon, Autumn Peltier, Anna Lappe, Illai Kenney, Vincent Kimura, Ana Sophia Misfud, and Francois van den Abeele. The students watched videos of the sustainable journey of each of the 10 stories from the book and in the Lesson Plans. As a guide for teachers, each lesson plan is structured with ELA and STEM learning standards to be implemented as a part of the curriculum. The goal is to allow teachers to use the curriculum individually and implement the lessons into their current classroom curriculum. Here are the stories with quotes from Lisa about her student's experience each week.

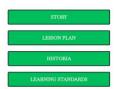
The Institute's Sustainable Education Toolkit is aligned with the Next Generation Science Standards, which are focused on helping students develop a coherent and scientifically based view of the world, convert their ideas into tangible, real-life projects. They have been adopted by 27 states.

"I am very excited to be a part of a professional community that is growing. It is important that we voice the need for more sustainable career options as young students try to find their path. We have been given the privilege to encourage and nurture students to do great things and make the world a better place. This program is a great step in making these opportunities a reality for more students."

# Lisa Melendy Environmental Science Teacher

agSee Eyewear: Sustainable Products with a Conscience =





"You don't just get out of bed one day and say 'I want to manufacture eyeglasses out of plastic waste," says François van den Abeele. His vision for cleaning up the plastic in the oceans was ambitious, but it was not unrealistic. Held worked with impact businesses before. And as a journalist and documentarian, he had covered social and environmental issues in roughly 130 countries - including in many of the world's most valuerable regions, in the Middle East and SukSaharan Africa. The crisis of plastic pollution in waterways was always at the top of the list.

### Francois van den Abeele

"There is so much plastic in the ocean, but it doesn't have to all be trash! Students were amazed to hear about the impacts that innovative people can have, such as creating eyeglasses (something that many, many people need) from ocean plastic, and hiring fisherman (people who are out there anyway!) to collect it."







### **Autumn Peltier**

"Autumn is the same age as my students and has made a huge impact politically and socially in her Canadian home. Students were impressed that she stood up to her Prime Minister at the age of 12 and has dedicated her life to a cause close to her heart. Her Instagram advocacy left students wondering what could happen if more people used social media for good."



Gary White was raised for a life of service. "My parents, teachers, and faith really instilled in me a passion for it," he says. When he was in college he found his calling: to study civil and environmental engineering. That was when he discovered the intersection of his greatest passion and the world's greatest needs. "Engineering answers to the world's problems would be the path that I would take from there on," he says. In 5005, he met Mait Damon at the Clinton Global Initiative. At the time. Garw was running an organization called Waster Patraners, which

# STORY LESSON PLAN HISTORIA VIDEO LEARNING STANDARDS

# Matt Damon & Gary White

"Gary and Matt saw a need and applied basic principles of economics to it. Students learned how easy and elegant some solutions to big problems really can be."



#### Daniella Fernandez

"A college student can make a big difference for the ocean on her own, even when governmental structures work slower than she would like. Several students were amazed at the impact a small organization could have."



# Illai Kenney

"Illai cared about the working and living conditions in her college and took action to ensure that buildings supported the health of students. Certificates can be beneficial at all points in life!"



"Anna is from a nearby city and developed a method for food-insecure people to have regular access to food. Students learned the connection between ethics and food sustainability."



### Trevor Tanaka

"Trevor is a leader in the field of sustainability education that the students met virtually through the Stone Soup program. Students were interested to hear Trevor's origin story about growing up on a coffee farm in Hawaii."



# Ana Sophia Mifsud

**Lisa:** "Ana is a visionary just a bit older than the students in the program when she was inspired to take action to help her community in Puerto Rico."



### Vincent Kimura

"Sustainable and regenerative agriculture can be made more efficient with the introduction of tech innovations. Students learned how farmers can take their crops and their impact to the next level with."

# Redwood High School Students

Throughout the program, students were able to learn about multiple role models who were assisting in the positive transformation of a more sustainable community. Here are some quotes from the students about their experience:

Miguel, age 16: "I was happy to learn more about sustainability and how to take care of my community. Getting water and resources to everyone who needs it is extremely important.

**Jesus, age 18:** "I might not be prepared to pursue a career in sustainability myself, but I value the topic and think it is very important for others to do so."

Julian, age 19: "I was shocked to learn about all the environmental injustices in the world and that big corporations aren't helping the developing nations who are suffering. It was moving to learn about average people like me take their big idea and make it all happen."

**Shadi, age 16:** "I am interested to see what people my age can do to change the world and become part of the solution."

JT, age 18: "It is important for people from underserved communities to take action because they can speak for the problems they face and how solving them can be unique to that community."

**Jose, age 17:** "Daniela's story is inspiring because she wants to keep oceans healthy and fish are in important part of our food industry."

**Faijon, age 18:** "It is inspiring to see how much the people featured in the story could accomplish when they focus on their schoolwork and join a program they are passionate about."

**Juvenal, age 18:** "It is motivating to see how much you can accomplish at a young age with hard work and passion for the environment.

### Sustainability Survey Takeaways

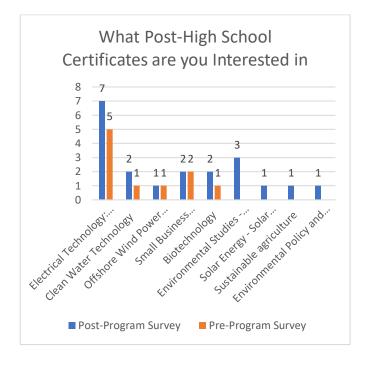
The Institute's Sustainability Survey is designed to

assess students' awareness and knowledge of sustainability as well as to introduce the possibility of pursuing sustainability-oriented careers. Students took a Sustainability Survey before and after completing the program. Throughout the program, students were introduced to inspiring ideas by reading stories featured in Stone Soup for a Sustainable World -Life-Changing Stories of Young Heroes. Students enjoyed watching short videos featuring the young heroes in the book -some with customized messages. The students were invited to envision their own futures with suggestions for ways to become involved in sustainable career pathways. This dynamic program gave the students opportunities to learn; to deepen their knowledge of and appreciation for sustainability; and to explore sustainable career pathways that they can pursue.

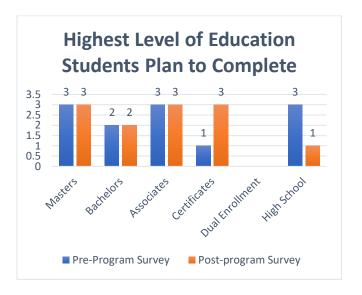
# Sustainability Survey Findings

# **Post-High School Certificates**

The most significant change occurred when we reviewed student's interest in Post-High School Certificates. Many students did not answer this question in the pre-program survey but cited a new interest in several certificates in both the post-program survey and their individual session evaluations. A main area of interest was sustainable agriculture as featured in the stories about Vincent Kimura, Trevor Tanaka and Anna Lappe. After reviewing Anna Lappe's story, JT recognized that "Sustainability is vital. For a food process to be truly sustainable, it must be both ethical and sustainable in its practices."



Sustainability-Oriented Certificates: One of the main takeaways from the Sustainability Survey is student's increased interest in exploring sustainability-oriented certificates. As local community colleges look for ways to increase their enrollments, it would be wise to expand their certificate programs beyond just tech certificates to include more sustainability-oriented certificates. As students prepare for their next steps in life, we hope that they have more information about the certificate options available to them and careers that they can pursue!



#### **Student Evaluation Worksheets**

At the completion of every session, students were invited to rate the various components on a scale of 1-10). They were also invited to write about their experience so we could learn from them. In reviewing the students' evaluations and Sustainable Survey results, the students have shown a budding interest in connecting sustainability to their community. Throughout the program, the students opened-up about their relationship with the stories and how the different components of sustainability are connected. The Lesson Plans in the curriculum allows information to be shifted from a lecture to a conversation the students can be a part of. It was impressive to see that students often acknowledged "we only have one earth and need to be the change."

#### Lessons Learned

# Teacher-Driven Stone Soup Model

Throughout this process, we learned how to adapt and modify the traditional Stone Soup model for the Redwood continuation school's needs. The short class periods and erratic attendance caused the teacher to decide to adopt a teacher-driven model, as she deeply understands the students' needs and how best to modify the curriculum in the moment. This was helpful during times of last-minute school requests and when a concept needed more discussion than anticipated. Several lessons went two days instead of the originally planned 1 day because of the background information needed and the discussion that was sparked.

## Student Awareness & Engagement

Many students were unfamiliar with many of the topics that were discussed, such as regenerative agriculture, and why it is important to pay attention not only to the levels of carbon in the atmosphere but also to the levels of methane. Students were also unclear as to why we needed to care about the amount of plastic in the ocean, or why it is important that people in other communities don't have regular access to clean water. These topics required much more in-depth and longer exploration outside of the Stone Soup time allotment. This may not need to be a consideration for schools with longer class periods and higher average academic levels.

# **Increased Post-High School Education**

Most significantly, many students had already decided not to pursue any post-high school education. They were already burnt out or barely feeling successful or not willing to find financial aid or simply not interested. However, this decision was mostly made with a 4-year degree in mind.

The Stone Soup Model highlights many 1- and 2-year certificates and degrees which students did not already know about. In order to keep students engaged and motivated, it was important to discuss and highlight not only the importance of these programs but also their feasibility. The class spent a long time discussing the benefits of the programs and how much more money they could make with even a certificate. This discussion will be essential for any other students who are not interested in pursuing any further education.

### **Teacher Planning Time**

It is important to consider the time that it takes students to accomplish certain tasks and the median academic levels in the classroom. Even though the REAL program is an elite program, many students read and write and do math at a 6th-grade level and suffer from mild to severe academic trauma (which is

how they came to attend a continuation school in the first place), which means that most assignments require more time and explanation.

# The Institute's Curriculum Adaptability

The Institute's greatest strength is the ability to adapt our curriculum to the needs of a school and make the curriculum successful for all class periods, levels of students and teachers in the future.

## The Future with Community Colleges

As we explore future partnerships, we aspire to work with community colleges so we can expand the opportunities for students to find success in their pursuit of careers in the different sustainable fields. The Institute strives to be an integral part in the development and promotion of sustainability-oriented certificates that are available to all students. Together we can build the transition to sustainable regional economies aligned with state goals.

# Redwood High School Team



Lisa Melendy Environmental Science Teacher

Lisa led the Institute's teacher-driven program at Redwood High School in the 2021-2022 school year. In addition to her teaching at Redwood High School, Lisa served as a Bilingual Resource Teacher at the school, and previously as a Math and Sciences Teacher for the San Jose Conservation Corps and Charter School. She was a Solutionary Fellow: Land Based Ecosystems and Zero Waste with the San Mateo County Office of Education, which was how she discovered the Stone Soup Leadership Institute.

Lisa received her teaching credential for high school science from the University of California at Santa Cruz. She received her Bachelor's in Outdoor Science Education and Leadership at the California State University, Monterey Bay. A lifelong learner and educator, Lisa has facilitated outdoor recreation activities since the age of 16 - ranging from rock climbing for kids to open water kayak nature tours to outdoor high and low ropes courses for team building in the San Francisco Bay Area. During her time in the US Peace Corps from 2009-2011, Lisa led workshops for a local network of environmental schools, teaching about biodiversity and the importance of reforestation and managing the land. An unexpected but very impactful lesson learned from those experiences was about the deep connection between all parts of a community and its ability to survive major environmental changes.

### The Institute's Team



Trevor Tanaka Sustainability Coordinator

Trevor is the Sustainability Coordinator for the Institute and a lead facilitator for the Institute's Sustainable Education Toolkit program on the West Coast. For the last year, he worked with the Institute's development team to create the 100 lesson plans for

the Sustainable Toolkit Curriculum. His spearheaded the research and development of the Sustainable Career Pathways. Trevor's story is featured in the book *Stone Soup for a Sustainable World: Life-Changing Stories of Young Heroes.* 

Born and raised into a sustainable farming community on the Big Island of Hawaii, Trevor has a deep appreciation for the importance of caring for our land ('aina). In 2012, Trevor was nominated to serve as a youth delegate from Hawaii to the Institute's Sustainability Summit on Martha's Vineyard. Trevor received his bachelor's from Chapman University in 2017. As one of the Institute's Emerging Leaders, Trevor helps youth to realize their dreams and develop sustainability-in-action projects to help their communities.



Patricia Diaz STEM Activities Coordinator Sustainable Education Toolkit

For the last year, Patricia worked with the Institute's development team to create the 100 lesson plans for the Sustainable Toolkit Curriculum. She oversaw the development of the STEM activities that would increase student engagement in Science, Technology, Math & Engineering.

Patricia received her Master's in Computer Information Science at the University of Massachusetts, Dartmouth. Patricia served on the Institute's tech team with people of diverse backgrounds, to develop the SustainWDN TM BETA site for the Blue Economy in Southeastern Massachusetts from 2019-2020.

Patricia lives in New Bedford, Massachusetts, where she served as a facilitator for the Institute's Sustainability Summit in 2020. As a part of the team, Patricia assists in the development of our tools to combine her skills in tech and passion for sustainability. learning environment to train young people to build resilient communities for a sustainable economy in the 21st century. It leverages the *Stone Soup for the World* series and companion curriculum and is dedicated to the Institute's long-time chairperson, Walter Cronkite.



Marianne Larned Author/Founding Director

Marianne Larned is the author of the *Stone Soup for the World* series and the companion curriculums. A progressive educator, thought leader, and spokesperson, she uses the Stone Soup folk tale to encourage everyone to share their time, talents, and resources to build a more just, equitable, and sustainable world. As the Founding Director of the Stone Soup Leadership Institute, she uses the true stories of "everyday heroes" told in the Stone Soup books to develop multicultural digital educational tools, trainings, and Sustainability Summits that empower young people to become today's—and tomorrow's—leaders.

Marianne is recognized as a public-private partnership consultant, a Design Thinking pragmatist, and a sustainable workforce development strategist. As a pioneer in Corporate Social Responsibility (CSR), she has assisted Fortune 500 companies, Chambers of Commerce, and education, government, civic, and community leaders to develop triple bottom-line solutions for improving education, health care, and economic development. She directs the Institute's multicultural global team to develop the Institute's Sustainable Education Platform is a video-enhanced, content-driven, values-based, blended experiential

# About The Stone Soup Leadership Institute

The Stone Soup Leadership Institute is a 501c3 nonprofit organization whose mission is to develop multicultural digital educational tools, youth leadership initiatives, and technical assistance for sustainable workforce development. Founded in 1997 on Martha's Vineyard, we've synthesized the lessons we've learned along the way, and developed a grassroots model to train local leaders, exchange innovative solutions, and build resilient communities that can, by working together, build a better world. For the last 25 years, the Institute has been working alongside ocean communities—from Puerto Rico to Martha's Vineyard, from Hawaii to Rhode Island from the British Virgin Islands to the Philippines. Youth leaders from these communities created a 2020 Report for Sustainable Development challenging their leaders to develop policies that balance protecting their communities' fragile ecosystems, providing for their families, creating opportunities for their children, and building a just, equitable, and sustainable future. Through this work we've inspired hundreds of underserved multicultural youth around the world to become effective leaders.

# The Stone Soup Model for Building a Sustainable Regional Economy

The transition to a just and sustainable economy is the most challenging issues of the 21st century. It's estimated that the transition to a sustainable economy will generate over 10 million new jobs over the next several years. Creating a workforce development pipeline and a regional ecosystem for building that economy depends on strong partnerships between high schools, community colleges, and sustainability-oriented companies.

- ➤ The Stone Soup Model integrates the principals of **Design Thinking**, **Systems Change**, and **Healthy Communities** to build bridges and maximize public-private partnerships among business, government, and educational institutions to train the next generation of multicultural youth to build a sustainable economy.
- For over 25 years, The Institute has developed innovative inclusive workforce development initiatives for multicultural youth in underserved communities, with a focus on the environmental and sustainability spheres. We have customized our Stone Soup model for Sustainable Workforce Development, which is aimed at filling these structural gaps in eight sites (including one in California) and has created partnerships to fill these needs. The goal is to build a pipeline for a sustainable workforce development ecosystem that connects high schools to community colleges to local jobs. Creating both a pipeline, and an ecosystem that raises awareness about these issues are equally important.
- **Professional Development:** The Institute is committed to scaling its train-the-trainer program for teachers to offer the educational tools they need to prepare their students for the transition to the green/blue economy. The Institute's Professional Development trains them and serves as a network that is building bridges between employers, educational institutions, community organizations, and young people who are seeking ways to rebuild their communities and the planet.
- Scaling Up: The Institute has BETA-tested our educational platform in eight unique communities in the U.S. and around the world. With the increase of ed-tech tools that allow for reach and access to the most vulnerable among us around the globe, we have shifted our resources to help get our bilingual educational tools, books, and other multimedia works digitized and available for licensure in a digital portal at schools around the country and around the world. With these tools and trainings, we want to be able to provide jobs training and a pipeline to employment for people in those vulnerable groups who are most in need.

We are eager to scale this platform to reach more schools and businesses nationwide and are partnering with forward-thinking allies across industries to help aid our youth and their communities who are eager for the transition to the sustainable economy and help create a more equitable and sustainable future.

Stone Soup Leadership Institute