Sustainability Hero September 2024





Betsy Freeman

Readington Township Public Schools Green Committee and Readington Middle School Gift and Talent Development and Enrichment Teacher (Hunterdon County)

From the schools to the community, sustainability is deeply rooted in Readington Township. Betsy Freeman leads Gift and Talent Development and Enrichment at <u>Readington Middle School</u> in the <u>Readington Township Public Schools</u>. She is also founder and advisor for the school's student-led EcoAmbassadors, Viking Broadcast and Model United Nations (U.N.) clubs. Readington Middle School's enrichment program focuses on solutionary learning, empowering students to collaborate with experts to address and solve problems in their communities and leaning into the U.N. Global Goals for Sustainable Development to shape their own learning.

There are always students with actionable questions and ideas in Betsy's teaching environment, which results in sustainability projects including developing mobile air quality monitoring devices, building hydroponics systems, raising trout for local release and securing funding to develop an innovative eco-focused student-led video news program. Betsy said their collective aim is to make a difference in the world and to create their own futures.

For the better part of a decade, the Readington Township School District upheld a commitment to greening the schools and increasing energy efficiency. Betsy has been active in Readington Schools' Green Committee for all six years she has worked for

the district. She once served as the District's Coordinator of Green Initiatives and Sustainability, and led the charge for Readington Middle School's <u>Sustainable Jersey for Schools</u> silver-certification along with recognition as a <u>United States</u> <u>Department of Education Green Ribbon School</u> – honors that all schools in the district now share.

Betsy credits these achievements to the vision and leadership of Readington Schools Superintendent Dr. Jonathan Hart for "forging the foundation of what guides outstanding teaching and learning in the district – forward-thinking strategic goals that make sense for all – from Curriculum and Instruction to Business Office to Facilities, from Home School Association to the District's students, staff, administration and broader community." The District's stated mission is to empower members of the community to lead purposeful lives with integrity, to cultivate a spirit of discovery and to embrace connections in the diverse, global society. A mission that Betsy and her students work towards daily.

Uncomfortable in the spotlight, Betsy empowers her middle schoolers to be the stars. Her students have presented at international conferences, collaborated with Columbia University scholars, been celebrated as <u>National Geographic</u> <u>Storytellers of the Year finalists</u>, recognized for innovation by the Smithsonian Institute and more. Betsy works tirelessly to support her students in discovering and reaching their unique potential.

Betsy understands the importance of providing students with real-life experiences that go beyond the classroom. She actively seeks out dynamic guest speakers and field opportunities for her students. She encourages students to speak up and share what they have learned among themselves and others. Students partnered with <u>Readington Environmental Commissioner</u> Dr. Neil Henrickson to explore dendrochronology in order to understand what trees can tell people about climate change. In turn, Dr. Hart invited the students to lead a hands-on class for adults at Readington's Parent Academy night to further explain how trees can help people withstand climate change.

Students are also exploring the effects of climate change on pollen production in a developing partnership with Dr. Leonard Bielory, an immunologist, researcher and <u>New Jersey Clean Air Council</u> member. As systems thinkers, the students' focus will be data collection, visualization and change over time. This year, students will be building on global partnerships with Justin Harris, a senior advisor to the <u>National Wildlife Federation and the Climate Equity</u>



<u>Collaborative</u>, as well as Dr. Tim Hsu, an environmental advisor to <u>Taiwan's Ministry of Education</u>. The students joined Mr. Harris and Dr. Hsu this past summer at New Jersey Institute of Technology for sustainability discussions.

A former businessperson, Betsy is the ultimate collaborator and alliance builder on a mission to create, fund and implement stellar programs to promote sustainability. Because she accomplishes so much for her students, school and school district, she is recognized as a sustainability hero. She was also a Readington Township School District Governor's Teacher of the Year in 2022/2023.

Betsy said, "I don't view what I do as work. My reward

comes as students begin to see the importance of their effort. They develop purpose and agency as they set their own goals, manage their process and develop the kind of mindsets and skills necessary for collaboration and solving illstructured problems. There's a lot of creativity, critical analysis, pride and anticipation, too, in sharing and exploring their work with others in real-world contexts."

Betsy's sustainability hero origin story starts with her mother, who emigrated from Japan and imbued all her children with a love and respect for the natural world and all life therein. In addition to explorations in critical thinking, Betsy shares some of these concepts with her students, such as "mottainai," meaning regrettable waste, and "ikigai." Ikigai combines the terms iki, meaning "alive" or "life," and gai, meaning "benefit" or "worth." Ikigai's four primary elements are: what you love, what the world needs, what you are good at and where you may find reward. She introduces ikigai

as a way for students to explore and exercise their own interests, motivations, and developing skills.

Student-run EcoAction News: This fall, Betsy is leading a new initiative at Readington Middle School called EcoAction News with a goal of empowering students to become catalysts for change while building sustainable communities. With the support of a \$10,000 <u>Sustainable Jersey Grant</u> funded by the PSEG Foundation, the district will launch a student-led broadcast video program. Betsy managed the grant application process that was spearheaded by three of her students. Betsy said the students took it upon themselves to pursue the grant, and now the work they did will benefit many of their peers. She explained, "One could say, 'wow, what a homework assignment to

secure \$10,000,' except that it wasn't a homework assignment, it took a lot of hard work and initiative by the students. These children banked ten grand for their school so that other kids could follow a passion that they started two years ago and that we weren't necessarily fully equipped to do in our school."

The local community newspaper closed last year, so the team is hoping EcoAction News Network will fill a vital gap in hyperlocal news coverage by amplifying the voices of the youth while supporting school and township efforts to build community resilience to climate change. Student producers and district staff, with the training, guidance and support of WHYY-PBS producers, will produce broadcasts featuring collaborative EcoActions across schools, as well as sustainability initiatives underway in the schools and community. The program will feature a diverse array of voices, including experts, students, teachers and community leaders. WHYY Media Lab staff will provide students and staff with training in storytelling, reporting techniques, video production and distribution, as well as share content from the PBS Climate Desk, thus empowering students to connect local and global issues.

Students and staff plan to address topics that encompass crucial areas such as reducing waste; lowering carbon footprints; fostering innovation; promoting health and wellness; advocating for environmental stewardship and equity; and building community resilience in the face of challenges like climate change and natural disasters. In addition, EcoAction News will provide coverage of collaborative EcoActions between the schools and community. Recognizing the importance of inclusivity and accessibility, the broadcasts will provide practical tips and information in both Spanish and English. By bridging language barriers and ensuring everyone can participate, the school aims to create a more inclusive dialogue around sustainability for the whole community, especially areas that have been designated as "overburdened communities" through New Jersey's Environmental Justice Law. Betsy said, "By highlighting diverse





perspectives and initiatives, we hope to inspire collective action and raise awareness about the importance of building sustainable, equitable communities."

EcoAmbassadors Club: Betsy started the <u>EcoAmbassadors Club</u> at Readington Middle School with six kids. The club has grown to 45 members strong, making it one of the biggest clubs in the school. The EcoAmbassadors serve as the middle school green team. Betsy explained that the students align their action goals with the United Nations Sustainable Development Goals. The club currently focuses on making progress towards Goal 12.2 (Halve Global Per Capita Food Waste), Goal 13.3 (Build Knowledge and Capacity to Meet Climate Change) and Goal 4.7 (Education for Sustainable Development and Global Citizenship). The Club is an action-research based group rooted in peer-to-peer knowledge sharing and action. For example, the club has worked on gaining a better understanding of the waste the school produces in the school cafeteria, how that might contribute to climate change and what the school can collectively do about it. Two of the students published club's audit goals and efforts in an <u>ArcGIS StoryMap entitled</u> <u>True Cost of Cafeteria Waste</u>. In 2022, the EcoAmbassadors were recognized for Excellence in Watershed Science and Technological Innovation through their place-based storytelling and GIS work related to United Nations Sustainable Development Goal 14: Life Below Water. The students tracked and researched the impact of school cafeteria waste in

the waterways and oceans. The students then partnered with Trout Unlimited and the New Jersey Department of Environmental Protection's Fish and Wildlife Division to test and document the importance of healthy water for healthy life they raised trout from eggs in the fall and released the juvenile trout in the spring.

Food for Thought: Investigating Sustainable Farming and Food Security in the Garden State: Betsy also worked with students on a grant for the Readington Middle School Food for Thought project. With the support of a \$2,000 Sustainable Jersey grant funded by the New Jersey Education Association, the Food for Thought grant empowered students to conduct hands-on investigations into sustainable farming to increase food security for all. Students analyzed and compared an aeroponic vertical growing system with traditional horizontal farming. Upon the close of the investigation, students across grade levels enjoyed the fruits of their

labor. They produced, prepared and consumed their own locally grown, richly nutritious food and shared the bounty with the regional food bank, too. Using what they learned, students engineered their own sensor-driven smart indoor vertical garden, which was displayed at the <u>Smithsonian's Lemelson Center for the Study of Invention and Innovation</u>. The students hope their work increases access to fresh healthy food year round to eliminate food insecurity in the Garden State– a charge that a new group of students have taken up while as they also tackle waste reduction. Students are currently upcycling plexiglass from the pandemic to create portable smart greenhouses, called Fairy Food

Greenhouse, to inspire all to grow food in ways that work best for them. The students are developing a series of educational storybooks to further enrich the user's learning experience.

District Sustainability Policy: The Readington Township Board of Education has a <u>District Sustainability Policy</u> and in 2021, the Readington Township School District enhanced the district strategic plan with three district goals (Inquisitive Learning, Partnerships and Social Awareness), all of which infused green initiatives. Adopting a policy on sustainability conveys a commitment on the part of the school district and the community

towards sustainability. Readington Middle School received 30 certification points as a result of the District completing the Sustainable Jersey for Schools actions: <u>District Sustainability Policy</u>; <u>Green Enhancement of District Strategic Plans</u> and <u>Strategic Plan Implementation of Green Initiatives</u>.

Local and Global Partnerships: Local and global community partnerships are a key component of the Readington School District mission and strategic plan. The aim is to prepare all learners to become engaged and productive citizens through service to others, real-world connections and collaboration in meaningful educational opportunities on local, regional and global scales. Readington School District staff members were invited to contribute to the directory of community partnerships and assets by using an online form. The Readington Township Board of Education approved funding for additional curriculum writing to integrate "Partnerships" and "Sustainability" across all K-8 curricula.





Readington Middle School received 10 certification points for completing the Sustainable Jersey for Schools action: <u>School Community Asset Mapping</u>.

Sustainable Jersey Silver Certified: All four of the schools in the Readington School District achieved silver-level certification with Sustainable Jersey for Schools. Betsy said, "Sustainability is a collective effort from our students, staff, faculty and families who are building the foundation of school success and sustainability in Readington. We collaborate with our partners that include the Readington Township Environmental Commission, Columbia University's Center for Sustainable Development, Rutgers Master Gardeners, the United States Green Building Council's Green Schools Program, Raritan Headwaters Association, the Hunterdon County Parks and Recreation, the Empowered Schools Program and many more." She added, "Sustainable Jersey for Schools is a conduit for teachers across the state to meet and compare notes. The program provides the connections we need to make progress and the knowledge base of sustainability actions that shows us what to do." To see the actions completed by Readington Middle School Certification Report.

More about Betsy: As an educator, Betsy is a connector, catalyst, consultant, coach and collaborator rolled into one. Betsy thanked Allison Mulch of New Jersey Audubon and Dr. Radhika Iyengar of the Columbia University Center for Sustainable Development for being the ultimate connectors for educators everywhere; Readington Middle School Principal Tim Charleston for his innovative spirit and drive, Dr. Stacey Brown for her research-driven approach to all things education and the exceptional leaders of the Readington Schools Green Committee: Dr. Jonathan Hart, Business Administrator Jason Bohm, STEM Supervisor Sarah Pauch, past and present Board of Education leads, Beth Fiore, Jodi Bettermann and Eric Zwerling; Dr. Neil Hendrickson, Readington Township Environmental Commissioner, for his dedication and service to the community; and the team at Sustainable Jersey for Schools, the ultimate sustainability heroes – bringing it all together for schools across the state!