François van den Abeele
Sea2See Eyewear
Barcelona, Spain

Stone Soup for a Sustainable World:
Life-Changing Stories of Young Heroes

Sea2See Eyewear: Sustainable Products with a Conscience
François van den Abeele
Sea2See
Barcelona, Spain

"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. He'd 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 vulnerable regions, in the Middle East and Sub-Saharan Africa. The crisis of plastic pollution in waterways was always at the top of the list.

François created Sea2See, an innovative sustainable business that is addressing the planet's most universal and most pressing environmental issue. Sea2See gathers plastic waste from the ocean and transforms it into affordable consumer goods - including eyeglasses and wristwatches. As of March 2021, Sea2See has collected 443 tons of plastic from oceans and waterways in Spain, France, and Africa.

Values: Innovation   Creativity   Enterpreneurism   Environmentalism

Lessons Learned

- What some consider waste is someone else's treasure. The ability to understand this is concept and make use of it marks the difference between a consumer and an innovator.
- As your needs change, so will your point of view. As you learn to see the world in new ways, look for opportunities to change what needs to be changed.
- Sometimes a "crazy idea" is just an unappreciated opportunity; so go ahead and explore your crazy ideas. You might end up leading the way toward positive change.

English Language Arts

- Sea2See uses a process called depolymerization with the trash they collect. Read this article and this article about depolymerization. Create a school-friendly graphic summary of both articles.
- Watch Javier Bardem's video about his experience with Sea2See. Then create a five-minute video (it can be a live video or an animated one) about what *your* venture would look like if you were to find a way to tackle plastic pollution in the ocean.

- Write a short (one-act) play, or a short story in which you tell the story of François and the African fishermen he works with; tell it from the point of view of one of the fishermen.
- What other uses can you come up with for plastic waste? Choose a business you are interested in (it can involve fashion, building materials, automotive parts, or something else). Imagine how you would use plastic waste as part of the manufacturing process. Then create a three-minute pitch to convince imaginary investors to invest in your idea.

STEM Activities

- Using page 42 of this Plastic Pollution Curriculum guide, explore the properties of different types of plastics. Then, examine some common plastics and perform tests to identify them.
- Select a product that contains plastic in its packaging, and develop a new or alternative type of packaging for the product.
- Think about how François found a way to reuse plastic waste to make eyeglasses; then think of another product that could be created from plastic waste. Next, gather some plastic waste from your home and build a prototype of your idea. Keep in mind which types of plastics could be used to make the product, and what their properties are.

Sustainability Innovations

- Sea2See is an example of a business that has addressed one of the world's largest issues and created a product that appeals to the younger generation from a fashion and social activist standpoint. Plastic for Change helps businesses address plastic neutrality and plastic offsets within their business model.
- Like Sea2See, there are many U.S.-based businesses that have identified the eyeglass industry as a focus for environmental and social improvements. Proof Eyewear, based in Boise, Idaho, creates glasses from repurposed skateboard and FSC-certified wood. (FSC-certified is the "gold standard" to describe wood that has been responsibly managed and that offers social, economic, and environmental benefits.) In addition to their products, Proof Eyewear plants five trees for every pair of glasses they sell, assists in health screening in underprivileged communities, and participates in many other positive initiatives.
- Visit the Sea2See website and learn about their WAVES approach to sustainability. What does each letter in the WAVES acronym stand for? Which is the most important to you?
- What are bioplastics? Review this article, which addresses the difference between bioplastics and plastics and explains how bioplastics can shift the future of the plastics industry.

Sustainable Career Pathways

- **Circular Economy Entrepreneur.** As we change the ways we consume and do business, there will many opportunities to help create a fully circular economy, one in which products are designed to last, and waste products become the material for future products. Do you want to be part of that revolution? Would you like to design fully circular sunglasses, phones, sneakers, furniture, and other products? Want to learn about more inspiring circular economy entrepreneur stories to get your creative juices percolating and help you discover your niche? Read here.
- **Sustainable Fashion Industry.** New clothes and apparel will continue to be made, of course, but they can be made sustainably. Materials like organic cotton or recycled plastics can be utilized, and designed in a way that the apparel at the end of its (ideally long) lifespans can be recycled or composted (by not mixing natural and synthetic fibers). Here is a great introduction to the field. And an article on the many ways sustainability is shaping the future of the fashion industry.
- **Environmental Journalist.** Many people who love to write make a career as a full-time journalist. Some dedicate their writing to chronicling the many environmental problems we face, as well as exploring the many innovative solutions to our sustainability challenges that are being developed. Some are freelancers, pitching stories to a variety of outlets. Others work full time for a news outlet, or with nonprofits, or even government offices. To learn more about this career, read here. And here's a valuable resource: the Society of

[Environmental Journalists](), which offers job boards, mentoring, annual conferences, and listservs for environmental journalists.

Call to Action: Learn how you can turn a problem into a new business: check out ~~the~~ Sea2See's sustainable products: [www.sea2see.org]().

Standards

California:
- **ELA**
- **RI.11-12.7:** Integrate and evaluate multiple sources of information presented in different media or formats (e.g., visually, quantitatively) as well as in words in order to address a question or solve a problem.
- **RST.11–12.7:** Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem.
- **SL.11-12.5:** Make strategic use of digital media (e.g., textual, graphical, audio, visual, and interactive elements) in presentations to enhance understanding of findings, reasoning, and evidence and to add interest.
- **W.11-12.3:** Write narratives to develop real or imagined experiences or events using effective technique, well-chosen details, and well-structured event sequences. a. Engage and orient the reader by setting out a problem, situation, or observation and its significance, establishing one or multiple point(s) of view, and introducing a narrator and/or characters; create a smooth progression of experiences or events. b. Use narrative techniques, such as dialogue, pacing, description, reflection, and multiple plot lines, to develop experiences, events, and/or characters. c. Use a variety of techniques to sequence events so that they build on one another to create a coherent whole and build toward a particular tone and outcome (e.g., a sense of mystery, suspense, growth, or resolution). d. Use precise words and phrases, telling details, and sensory language to convey a vivid picture of the experiences, events, setting, and/or characters. e. Provide a conclusion that follows from and reflects on what is experienced, observed, or resolved over the course of the narrative.
- **W.11-12.6:** Use technology, including the Internet, to produce, publish, and update individual or shared writing products in response to ongoing feedback, including new arguments or information.
- **W.11-12.7:** Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.
- **WHST.11–12.8:** Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.
- **WHST.11–12.9:** Draw evidence from informational texts to support analysis, reflection, and research.

- **STEM**
- **HS-ETS1-1:** Analyze a major global challenge to specify qualitative and quantitative criteria and constraints for solutions that account for societal needs and wants.
- **HS-ETS1-2:** Break a complex real-world problem into smaller, more manageable problems that each can be solved using scientific and engineering principles
- **HS-ETS1-3:** Evaluate a solution to a complex real-world problem based on prioritized criteria and trade-offs that account for a range of constraints, including cost, safety, reliability, aesthetics, and maintenance, as well as social, cultural, and environmental impacts.
- **HS-PS2-6:** Communicate scientific and technical information about why the molecular-level structure is important in the functioning of designed materials.

Massachusetts:
- **ELA**

- **RI.11-12.3:** Analyze a complex set of ideas or sequence of events and explain how specific individuals, ideas, or events interact and develop over the course of the text.
- **RI.11-12.7:** Integrate and evaluate multiple sources of information presented in different media or formats (e.g., in charts, graphs, photographs, videos, or maps) as well as in words in order to address a question or solve a problem.
- **SL.11-12.2:** Integrate multiple sources of information presented in diverse formats and media (e.g., visually, quantitatively, orally) in order to make informed decisions and solve problems, evaluating the credibility and accuracy of each source and noting any discrepancies among the data.
- **SL.11-12.4:** Present information, findings, and supporting evidence, conveying a clear and distinct perspective, such that listeners can follow the line of reasoning, alternative or opposing perspectives are addressed, and the organization, development, vocabulary, substance, and style are appropriate to purpose, audience and a range of formal and informal tasks. (See grades 11-12 Language Standards 4-6 for specific expectations regarding vocabulary.)
- **SL.11-12.5:** Make strategic use of digital media (e.g., audio, visual, and interactive elements) in presentations to enhance understanding of findings, reasoning, and evidence and to add interest.
- **SL.11-12.6:** Adapt speech to a variety of contexts and tasks, demonstrating a command of formal English when indicated or appropriate. (See grades 11-12 Language Standards 1 and 3 for specific expectations.)
- **W.11-12.3:** Write narratives to develop experiences or events using effective literary techniques, well-chosen details, and well-structured sequences.
- **W.11-12.3.a:** Engage and orient the reader by setting out a problem, situation, or observation and its significance, establishing one or multiple point(s) of view, and introducing a narrator and/or characters; create an appropriate progression of experiences or events.
- **W.11-12.3.b:** Use narrative techniques, such as dialogue, pacing, description, reflection, and multiple plot lines, to develop experiences, events, and/or characters.
- **W.11-12.3.c:** Use a variety of techniques to sequence events so that they build on one another to create a coherent whole and build toward a particular tone and outcome (e.g., a sense of mystery, suspense, growth, or resolution).
- **W.11-12.3.d:** Use precise words and phrases, telling details, and figurative and sensory language to convey a vivid picture of the experiences, events, setting, and/or characters.
- **W.11-12.4:** Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. (Grade-specific expectations for writing types are defined in Writing Standards 1-3.)
- **W.11-12.6:** Use technology, including current web-based communication platforms, to produce, publish, and update individual or shared writing products in response to ongoing feedback, including new arguments or information.
- **W.11-12.7:** Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.
- **W.11-12.8:** When conducting research, gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.

- **STEM**
- **HS.CHEM.2.6:** Communicate scientific and technical information about the molecular-level structures of polymers, ionic compounds, acids and bases, and metals to justify why these are useful in the functioning of designed materials.* Clarification Statement: Examples could include comparing molecules with simple molecular geometries; analyzing how pharmaceuticals are designed to interact with specific receptors; and considering why electrically conductive materials are often made of metal, household cleaning products often contain ionic compounds to make materials soluble in water, or materials that need to be flexible but durable are made up of polymers.

- **HS.LS.2.7**: Evaluate and refine a solution for reducing the impacts of human activities on biodiversity and ecosystem health. Clarification Statement: Examples of solutions can include captive breeding programs, habitat restoration, pollution mitigation, energy conservation, and ecotourism.
- **HS.ETS.1.1:** Analyze a major global challenge to specify a design problem that can be improved. Determine necessary qualitative and quantitative criteria and constraints for solutions, including any requirements set by society. Clarification Statement: Examples of societal requirements can include risk mitigation, aesthetics, ethical considerations, and long-term maintenance costs.
- **HS.ETS.1.2:** Break a complex real-world problem into smaller, more manageable problems that each can be solved using scientific and engineering principles.
- **HS.ETS.1.3:** Evaluate a solution to a complex real-world problem based on prioritized criteria and trade-offs that account for a range of constraints, including cost, safety, reliability, aesthetics, and maintenance, as well as social, cultural, and environmental impacts.

Stone Soup Leadership Institute
www.stonesoupleadership.org
www.sustainabilityisfun.net