Blue Planet Foundation: A Sustainable Legacy of Blue Innovation

Henk Rogers, Blue Planet Foundation
Hawaii

Call to Action

To get involved with the Blue Planet Foundation and its innovative projects, which are helping to shape Hawaii's blue future, please visit blueplanetfoundation.org.

Values

- **Innovation**
- **Creativity**
- **Community Service**
- **Environmentalism**

Lessons Learned

You can listen to the conventional wisdom – but it's ok to challenge it too.

Use your creativity, your resources, and your passion to achieve your goals.

Learn how to delegate, and ask for help from those older—and younger—than you. Everyone can contribute, and we need everyone working together to solve our problems.

When presented with a problem, look for solutions from different perspectives. Unconventional approaches are sometimes the key to solving a puzzle.

Your dreams can help shape the future. Make your dreams your goals!

One day Henk Rogers found himself in the back of an ambulance, with a 100 percent blockage of the largest artery to his heart.

Later, in the recovery room, as he was flipping through a newspaper, he saw a tiny snippet that alerted him that all of the coral in the world would be dead by the end of the century. "I realized that there are all of these things going on with climate change that people are just not aware of. And if we don't do something about them, they will happen. That was when I understood what my mission in life was." Henk founded the Blue Planet Foundation to drive change, empower youth, and inspire action that will help power the transition to 100 percent clean energy in Hawaii and beyond. And with his help, Hawaii became the first state to mandate this goal.

Language Arts

What would happen to the Earth if coral reefs disappeared? Write a research essay about coral reefs: what they are, their importance to the environment, to our food supply, and what the consequences of their disappearance would be.

Using the information from your research paper, create a series of TikTok videos in which you advocate for the preservation of marine ecosystems in general, and coral reefs in particular. Use the videos to educate people about the importance of coral reefs, and to appeal to your followers to take action to help restore them.

Choose one of the templates from the Discovery Education website[1], and create a puzzle to educate people on the importance of transitioning to clean energy. (You may use Hawaii as your case study, or you can use your own community). On a separate sheet of paper, explain why you chose to ask those

particular questions.

STEM Activities

Identify the various renewable energy sources in Hawaii, and compare them to renewable energy projects in your local community.

Download the carbon footprint and CO2 tracker app. Track your carbon footprint based on your vehicle, your home, and your daily lifestyle. Compare your emissions to the Island Pulse[2] clean energy tracker. Are you more or less eco-friendly than the tracker in Hawaii? How could you adjust your lifestyle to become more eco-friendly?

The Blue Planet Foundation hosts a student energy summit annually that motivates students to find clean energy solutions within their communities. Design a project that you would like to send to Henk along with your application to the student energy summit.

In this activity students will learn the role of carbon dioxide (CO2) in photosynthesis and cellular respiration; and learn about carbonic acid's impact on the calcification and dissolution of coral skeletons, and its ability to influence pH.

- Background information[3]
- Link to activity[4]

The fictitious town of Solutionville has decided to replace coal, their current source for electricity, with more sustainable energy sources. Students are tasked with designing Solutionville's sustainable energy future. (A basic understanding of fossil fuels and their impacts on the environment is recommended before doing this activity.)

- Fossil Fuels Video[5]
- Fossil Fuels Cause & Effect[6]
- Link to Solutionville activity[7]

Sustainability Innovations

In Hawaii's search to become more sustainable, the global coronavirus pandemic has brought about both questions and answers. Hawaii's economy is heavily reliant on the tourism industry, and has been decimated by the lack of tourism in 2020. However, its coral reefs have flourished due to the lack of human destruction during that year. The Kohala Center[8] is currently focused on growing Hawaii's coral reefs and using native plants to reduce the nitrogen that is affecting coral reefs.

Hawaii is the first state to establish a ban of sunscreen that omits toxins that are detrimental to marine life. This study[9] addresses the sunscreen ban, how these toxins affect marine ecology (in particular coral reefs), and how they can also contribute to skin cancer among humans.

The Blue Planet Foundation[10] uses Island Pulse to give real-time estimates of energy uses on the way to transitioning to 100% clean energy. This tool[11] displays energy watt usage, clean energy vs. fossil fuels, and the current energy mix of oil, wind, waste, coal, solar, and biofuel.

Henk began his involvement with technology by founding Tetris, and it has been at the center of his focus for a shift toward blue technology. Video games began as a means of entertainment for both children and adults, but they have recently undergone a shift. Virtual games are now being created to increase the knowledge and application of sustainability issues. Eco[12] is a

virtual game in which players must collaborate to build a society where all of their actions affect the environment.

EPA's Clean Energy Programs[13] are important to utilize as a point of collaboration with organizations like the Blue Planet Foundation to help us work our way toward being a carbon-neutral country.

Sustainability Career Pathways

Renewable Energy Engineer. Henk started as a video game designer, morphed into a philanthropist and renewable energy advocate, and now is working to improve battery storage systems. Improving the design of batteries, solar panels, and wind turbines will be essential in our Want to learn more? Start here[14].

Solar PV and Battery Installer. Not everyone wants to work in an office all day. Some people would rather help build the infrastructure with their own hands. Why not help cover the world's rooftops in solar panels and, like Blue Planet Energy, help take people off-grid? These jobs pay well and only require a high school diploma. Learn more here[15].

Renewable Energy Advocate. Renewable energy is a rapidly growing field that will make up an ever-larger percentage of the world's energy mix in the decades to come. Becoming part of a renewable energy company--as a manager, salesperson, or support staff--is a way you can help with this transition. Or, by joining one of the many nonprofit organizations promoting and/or lobbying for the transition to renewable energy, you can help draw attention and investments to renewable energy.

Renewable Energy Project Permitting. With most renewable energy projects, getting permission is key, as is convincing the community and state that the project is beneficial. There are many jobs connected to this process: from government jobs reviewing and approving permits, to consulting firms that design and apply for the permits, to lawyers who review the agreements. It may not be the most exciting aspect of the transition to renewable energy, but it is an essential one. Studying law and policy are good starting points for this career track, as is understanding the permitting process. Here is a list some of the many government agencies and organizations involved in renewable energy permitting.

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1 https://puzzlemaker.discoveryeducation.com/
2 https://www.islandpulse.org/
3 https://www.coral.noaa.gov/images/resources/cleo/Carbon_Dioxide_background.pdf
4 https://www.coral.noaa.gov/images/resources/cleo/CO2Activity.pdf
5 https://www.calacademy.org/educators/whats-the-deal-with-fossil-fuels
6 https://www.calacademy.org/educators/lesson-plans/the-heat-is-on-cause-and-effect-and-climate
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