Leader's Guide

4ocean – Creativity and Wisdom in Action to Help Clean the World's Oceans

This lesson can be presented over 1-2 sessions. Instructors should feel free to use whichever discussion questions and activities you think best for your class or group. We advise giving students the sheet with the definitions of the virtues before each session.

Lesson Goals

Help students:

- appreciate the magnitude of the problem of plastics and other garbage entering the world's oceans, and how our actions can affect this problem – negatively and positively
- understand how plastic in our oceans affects the lives of people who live in these areas
- appreciate the value of being creative in thinking "outside of the box" and coming up with new ways to work toward goals and to solve problems
- realize the importance of living with wisdom in striving to be effective and good in how we work toward goals and solve problems
- appreciate our human nature in that by creating incentives we can motivate people toward shared goals
- realize that business has the potential to generate profit, serve customers and serve our common good

Primary Virtues / Character Traits

Creativity: to create new ideas; to come up with new approaches and methods for accomplishing a goal or solving a problem

Wisdom: ability to apply knowledge, experience and understanding in ways that are effective and good. The ability to discern or judge what is true, right, or lasting

Solidarity: unity from a shared common purpose and / or interest; active loyalty within a group; mutual support within a group; being present with others

Secondary Virtue

Caring: to help others; a caring person lives with empathy in trying to understand another person's situation, compassion in desiring to help others, and generosity in acting to help

Leader Introduction

For many of us, when we see a larger problem in our school, local community, nation or world as a whole we often think to ourselves "I can't do anything about this, it's too big of a problem." Today we are going to learn about two surfers who experienced a very large problem, one literally as large as our planet – the problem of plastics polluting the world's oceans. Yet, they didn't give up. As we watch their story, think about how these two young surfers used creativity and wisdom to help take on this global problem.

Film Clips for 4ocean (total time for all three clips is 7:45)

https://www.youtube.com/watch?v=GlQRPnlTruw

Start this from 2:11 for more background on 4ocean's strategy
https://www.youtube.com/watch?v=3WAWSaSKvjQ

This short 4ocean clip shows how plastics in the ocean circulate around the world
https://www.youtube.com/watch?v=3We8hSrR9Eg

Leader Summary

Andrew, Alex and their company 4ocean are an inspiring story of how we can make a difference in addressing larger problems. Although 4ocean won't rid the world's oceans entirely of plastic, their work is an important part of a solution and their work is sustainable and growing. Hopefully this story will inspire us to possibly help with the 4ocean project, and to think about problems in our own community that we can address through new and creative approaches.

Discussion Question Options *(discussion prompts / answers are in parentheses if needed)*

Before beginning our discussion, let's read over the virtues and their definitions - included within the online lesson as a separate document.

1. What motivated Alex and Andrew to want to clean up the beaches of Bali? Was it only so that they could surf in cleaner water, or were there are other reasons and people they wanted to help as well?
(Alex and Andrew want to help:
- the fishermen of Bali by providing them with a way to make more money in cleaning up the plastic from the ocean.
- improve the environment in Bali as a whole and provide other people living inland with a way to make money through working in the recycling centers.
- clean the ocean. Alex and Andrew have a deep love for the ocean, and the animals that live within it, and want to help preserve them.)

2. Do you think that if Alex and Andrew would have simply started cleaning up the beaches of Bali on their own, and asked other people to help, that would have worked for a short period of time? What about for a longer period of time?

3. What strategies did Andrew and Alex come up with that reflect their wisdom and creativity in creating a program of cleaning the oceans that has lasted for years and is still growing?
(They created incentives and opportunities for people to make money through their work in cleaning the oceans, and the program is sustainable because they are creating products from the recycled plastic that people want to buy.)

4. How are Andrew and Alex creating solidarity within our global community?
(By selling a relatively inexpensive product that people want they are enabling people from around the world to help fund and share in the common purpose of cleaning the world's oceans.)

5. What problem in our school, local, national or global community do you see where you think a new and creative approach can make a difference? (This is also a team activity below.)
(With each problem presented, encourage students to discuss whether the proposed solutions and new approaches would be effective and sustainable.)

6. The videos we saw don't show the work of 4ocean in capturing plastics within rivers before they enter the oceans. Do you have any ideas on how so much plastic enters rivers that then feed into the world's oceans?
(One major reason is that less developed nations https://www.youtube.com/watch?v=3We8hSrR9Eg often don't have organized garbage disposal systems so plastic garbage is simply thrown onto the streets. The rain then carries this garbage into the rivers and eventually into our oceans. Amazingly, on the Southeast corner of Florida we can often find plastic from the island nation of Haiti. This plastic flows into the Atlantic Ocean from Haiti's rivers, and then ocean currents bring that plastic to Florida. Most plastic waste that flows into the world's oceans comes from Southeast Asian nations that don't have good waste disposal systems; however, some also comes from developed countries such as the U.S. when we export recycled plastic waste that we don't use to less-developed countries (Please see additional resources below for more information on this.)

Please consider leading a class discussion as outlined in the first Extended Activity and with the information below in Additional Resources that can educate students and their families on how our actions affect the problem of plastics in the world's oceans, and how we can help.

Journal Writing Option

Write about an experience where you, or someone else you know, experienced a problem and by approaching the problem in a new and creative way, the problem was lessened or solved.

Extended Activities:

1. Educate your students and lead a discussion on what happens to plastic that is thrown away in your community and within your school. You can find out by contacting your local garbage disposal company, and then present a summary to your students. Excellent additional information to present to students is below in Additional Resources - Background Information from 5 Gyres Science to Solutions. Lead students in a specific discussion on how our actions affect the problem of plastics in the world's oceans and how we can help.

   Evaluate with your students how your school is doing in separating out recyclable material and what is happening to that material. If your students aren't satisfied with the present program, encourage them to host a meeting with the school administration to evaluate how it could be improved and how students can help.

2. If there is a value for recyclable materials in your community ask students to brainstorm how they could incentive fellow students and the community as a whole to collect more of these materials. What could the money that comes from selling this material be used for that would encourage people to participate?

3. Students can support 4ocean's work in cleaning the oceans by purchasing bracelets through the web site below. Students can do this individually or through a school campaign that they design and manage.

4. Organize your group into teams and ask team to choose a problem in our school, local, national or global community where through a new and creative approach we can make a difference. Ask each team to then make a presentation to the group as a whole on the problem, the causes of the problem, the team's proposed new approaches to addressing the problem and expected outcomes. Each team member should speak.

   Following all of the team presentations, ask the class to vote on the team that has the best proposed solution. Voters should consider the effectiveness of the proposed solutions and whether it is sustainable.

Additional Resources

4oceans web site
https://4ocean.com/?gclid=EAIaIQobChMI3u_IhN7Z3wIVDy5pCh3Zvgk5EAAYASAAEgITZ_D_BwE

Background information on plastics in our oceans from 5 Gyres Science to Solutions
https://www.5gyres.org/faq/

Why should I care about plastic? In 2015, a study published in Science determined that 8 million metric tons entered our oceans in 2010—enough to cover every foot of coastline in the world. Most of the plastic came from heavily populated countries with poor waste management systems, such as China, Vietnam, The Philippines, and Indonesia.

However, the report failed to acknowledge that many developed countries such as the United States export plastic waste. In 2011, China imported nearly half of America's plastic waste; when that country began restricting these imports in 2014, plastic exports from the U.S. to Indonesia increased by 219%. (China suspended imports of American plastic in 2016.) In many of these countries, people—including children—become "waste pickers," sorting through rivers of plastic trash to find pieces to sell while polluted waterways transport the remainder straight out to sea. Plastic pollution *is* a social justice issue.

What can I do today? Through our action campaigns, 5 Gyres inspires individuals and communities to pledge to go #plasticfree for a day, week, year—or forever. You can go #plasticfree today by refusing the top five sources of single use plastic: plastic bags, plastic bottles, plastic to-go containers, plastic takeaway cups, and plastic straws. Follow us @5Gyres to get tips on living #plasticfree, like these:

Bring your own shopping bag. On average, a plastic bag is used for 12 minutes, yet they persist in our environment for decades. Plastic bags are difficult to recycle and clog up machines, light weight so they're easily transported by the wind and water, and they look like jelly fish in the ocean so they're mistaken for food by turtles.

Buy in bulk. Packaging now accounts for 25% of all plastic manufacturing. Buying bigger helps reduce the amount of plastic you consume.

Wear natural fabrics. All materials shed fibers, which escape filtration through wastewater and can end up in the ocean. Unlike wool and cotton, plastic microfibers from synthetic materials like nylon and spandex don't biodegrade. In cases where synthetics fabrics are unavoidable—think bathing suits—try to wash less frequently and by hand.

Carry a reusable water bottle. Seven out of every ten plastic bottles are trashed. Not only does a refillable bottle make good environmental sense, it's good for your bank balance. Bottled water costs 2,000 times more than (filtered) tap water.

Refuse disposable straws. Americans use 500 million straws every day, which aren't recyclable, end up in oceans, and kill marine animals. Plus they cause wrinkles. Who needs those?

Refuse lids. Americans use more than 25 billion expanded polystyrene foam—better known as "Styrofoam"—cups each year, and many lids are made from the same plastic. If you forget your reusable cup, order your coffee without a lid.

If you must use a single-use item, choose a material other than plastic. For example, aluminum is accepted at all curbside recycling in the United States; the material is currently 70% post consumer recycled content and holds its value at $2,100 per ton because there is such a strong market for it; although it is not typically marketed as reusable, it is safe to reuse. In contrast, only 60% of cartons are accepted through curbside recycling and those products are, on average, 30% post consumer recycled, with a market value of $55 per ton. Sadly, today only 19% of plastics are accepted at curbside, plastic products average only 3% average post consumer recycled material, and a ton is valued at just $6—while plastic takes up 18% of U.S. landfill space.

Together, we can make a difference—one piece at a time!