

## Seaworthy Solutions: ANSWER KEY

	What is the solution? How does it work? Where does it take place?	What problem(s) does it address and not address?	What are the advantages of this solution?	What are the disadvantages of this solution?
<a href="#">Take 3 for the Sea</a>	<ul style="list-style-type: none"> <li>• People pick up three pieces of trash whenever they visit the beach.</li> <li>• People volunteer to participate, sign up for updates, attend film screenings, organize meetups, and share pictures.</li> <li>• This takes place wherever people want to volunteer.</li> </ul>	<ul style="list-style-type: none"> <li>• Addresses macroplastics on land</li> <li>• Does not address microplastics, which are too small to see or pick up; or pollution that is already in the ocean</li> <li>• Does not address how much plastic is being used or the amount that is recycled</li> </ul>	<ul style="list-style-type: none"> <li>• It can take place anywhere.</li> <li>• It's simple and free.</li> <li>• It can spread like a viral social media challenge, especially if participants organize large events and share pictures with hashtags.</li> <li>• People can feel empowered to take the solution into their own hands.</li> </ul>	<ul style="list-style-type: none"> <li>• Doesn't address microplastics</li> <li>• Doesn't capture plastic already in the ocean</li> <li>• Doesn't decrease the amount of plastic waste being generated</li> <li>• Depends on people having time and energy to volunteer</li> <li>• People may not want to participate because it doesn't give them any direct benefit.</li> </ul>
<a href="#">Compostable plastics</a>	<ul style="list-style-type: none"> <li>• Can be made from plants (bioplastics) or from fossil fuels</li> <li>• Designed to be biodegradable (unlike conventional plastics)</li> </ul>	<ul style="list-style-type: none"> <li>• Aims to address the problem of plastics persisting in the environment for hundreds of years</li> </ul>	<ul style="list-style-type: none"> <li>• Consumers make minimal changes to plastics consumption/disposal habits.</li> </ul>	<ul style="list-style-type: none"> <li>• Not all biodegradable plastics break down in the environment or in a backyard compost pile. Many require special facilities or conditions, such</li> </ul>

	<ul style="list-style-type: none"> <li>Found in many places that traditional plastics are used (cups, bottles, and bags)</li> </ul>	<ul style="list-style-type: none"> <li>Does not address the problem of single-use, disposable culture</li> <li>Does not address the problem of waste mismanagement</li> </ul>	<ul style="list-style-type: none"> <li>Plastic companies continue making and selling plastic products.</li> </ul>	<ul style="list-style-type: none"> <li>as high temperatures and certain bacteria.</li> <li>It may encourage consumers to litter and not to reduce their total plastic usage.</li> </ul>
<a href="#">Bye Bye Plastic Bags</a>	<ul style="list-style-type: none"> <li>Students create a social movement to ban plastic bags.</li> <li>They educate community members, distribute reusable bags, pick up litter, collect petition signatures, and meet with local businesses and government officials.</li> <li>This started in Bali, Indonesia, and has spread to over a dozen other countries.</li> </ul>	<ul style="list-style-type: none"> <li>Addresses single-use plastic bags</li> <li>Partners with Mountain Mamas, who recycle waste plastic into reusable bags</li> <li>Does not address other single-use plastics</li> </ul>	<ul style="list-style-type: none"> <li>This involves community members and students.</li> <li>Making and selling reusable bags from recycled materials can provide income and keep the environment clean at the same time.</li> </ul>	<ul style="list-style-type: none"> <li>Local government have promised to ban plastic bags, but they have not implemented the ban.</li> <li>While teenagers and students can be powerful advocates of social and environmental change, they also face unique challenges with their time, resources, skills, and experiences.</li> </ul>
<a href="#">Net-Works</a>	<ul style="list-style-type: none"> <li>People who live in coastal communities collect, clean, and</li> </ul>	<ul style="list-style-type: none"> <li>Addresses fishing nets, which are a major source of plastic pollution</li> </ul>	<ul style="list-style-type: none"> <li>Turns a waste product into a valuable resource</li> <li>Cleanup is economically sustainable because it</li> </ul>	<ul style="list-style-type: none"> <li>The nets must be transported from the Philippines to Europe for processing, which results in</li> </ul>

	<p>package “ghost” fishing nets.</p> <ul style="list-style-type: none"> <li>• These nets are then recycled into nylon fiber to make carpet.</li> </ul>	<ul style="list-style-type: none"> <li>• Addresses poverty because the funds from the sale of recycled nets are used to support a community lending program</li> </ul>	<p>provides direct benefits to the community</p> <ul style="list-style-type: none"> <li>• Community banks fund projects such as seaweed farms and education for children</li> </ul>	<p>pollution and carbon emissions.</p> <ul style="list-style-type: none"> <li>• No clear plan exists for how to deal with recycled carpet once it becomes waste.</li> </ul>
<p><a href="#">The Ocean Cleanup</a></p>	<ul style="list-style-type: none"> <li>• Self-propelled floating boats and barges are deployed in the ocean and near the mouths of rivers to collect plastic debris.</li> </ul>	<ul style="list-style-type: none"> <li>• Addresses macroplastics that are floating in rivers and the ocean</li> <li>• Aims to collect macroplastics before they degrade into microplastics</li> <li>• Does not directly collect microplastics</li> <li>• Does not decrease the total amount of plastic pollution entering the ocean</li> </ul>	<ul style="list-style-type: none"> <li>• Floating collectors do not require any energy usage other than wind energy and solar panels.</li> <li>• A project team of engineers is constantly testing, experimenting, and improving their design.</li> </ul>	<ul style="list-style-type: none"> <li>• The project has run into many obstacles, including not being strong enough to withstand ocean conditions.</li> <li>• The impact on marine life is uncertain.</li> <li>• Not all plastics can float.</li> </ul>