Youth Change Agents

Young people across the world are working to address the challenge of plastics and are creating a vision for the future where plastics are transformed. Below are some examples of youth change agents that you can explore with your students as well as suggested activities.

Real-World Examples:

Kids Make Slime for a Cause

Sara Mckee and Elise Lutchman transformed their perfect slime recipe into a money making business to support a worthy cause. After developing different types of slime, Sara and Elise sold containers to fellow students and donated 100% of their profits to Habitat For Humanity. To read more about their story, please visit: https://habitathm.ca/single-post-2017-07-10-getting-slime-y-for-a-good-cause/

Turning Plastic Trash to Art

Sean Connaughty has collected over 6,500 pounds of trash over 5 years from a Minneapolis lake. Not only does he create art from trash, (imagine McDonald's arches from straws), he shares the impact of this trash with the companies and consumers that produce the waste. Check out his story and ways you can make change happen at: http://www.startribune.com/lake-hiawatha-s-guardian-artist-uses-sculptures-to-call-attention-to-trash-problem/559597982/

Upcycling Plastics

Isatou Ceesay in Njau, Gambia transforms discarded plastic bags into colorful purses. By turning plastic waste into useful products, Isatou also transformed her community. Check out her story at http://oneplasticbag.com/ or read the book One Plastic Bag.

Liz Houck Kampa of St. Cloud, MN founded Weaving Love Inc., an organization that weaves plastic bags together to make rugs for the homeless. Check out her website at http://www.weavinglove.com/

Trash Free Lunch

Prisk Elementary students from the Long Beach Unified School District worked with Grades of Green, a local organization, to create a trash-free lunch campaign. They provided specific ways students could bring trash-free lunches and helped increase awareness around the school's waste sorting system at lunch. They even had a school

assembly to share their efforts. Check out their efforts at: https://www.gradesofgreen.org/prisk-elementary-green-team-students-lead-waste-reduction-efforts/

Scientist Superheroes

Junior high school student, Alex Weber saw a major problem as she was free diving off the coast of California; thousands of golf balls lined the ocean floor from a nearby golf course. Alex and her dad teamed up with a postdoctoral student at Stanford University to conduct a research project on the harmful effects of golf ball plastic pollution. As a result, the coastal golf course is working to keep harmful golf balls out of the ocean. To read more about Alex's effort, please visit https://www.theplasticpick-up.org/

Scientists Anne Schauer-Gimenez, Allison Pieja, and Molly Morse became inspired as young people to solve the plastic problem and are now working to create biopolymers that they hope one day will replace plastics. To learn more, visit: https://www.npr.org/2019/06/17/728599455/replacing-plastic-can-bacteria-help-us-break-the-habit

Project Ideas:

- **Slime Business** - Put your sublime slime engineering skills to work by making slime to sell to friends and family. With slime profits, consider sponsoring an animal at your local zoo or nature center. You can also donate to organizations that help rehabilitate animals impacted by plastics.

- **Make A Plan** - Keep a plastic diary and list every piece of plastic that you touch in a day. Sort the plastics into two categories: plastics that can be used over and over again and plastics that are thrown away after one use. Make a plan on how you can reduce plastic items that are thrown away after just one use. Ask others to join your efforts.

- **Informational Interview** - Interview a solid waste collector or school engineer and ask what are the most common plastics they see in the waste bin. Ask them for ideas to decrease the amount of plastics in the garbage. You can also conduct a waste audit - https://cleanriver.com/waste-audit-in-5-easy-steps/

- **Straw Reduction** - We all love straws, but what materials are they made of and how long is their lifecycle after we throw them away after just one use?

Explore reusable alternatives to plastic straws. Tell a friend or others about what you've learned.

- Read about the impact of plastic straws use here:
  - https://www.washingtonpost.com/lifestyle/kidspost/plastic-straws-are-little-but-they-are-part-of-a-huge-problem/2018/09/07/63bfe44e-ac9f-11e8-b1da-ff7faa680710_story.html?noredirect=on

- **Ditch Plastic Shopping Bags** - Plastic shopping bags can pile up after just one use. They are not easily recycled and often end up in the ocean or landfills where they can be deadly to animals. Just like Liz Houck Kampa of St. Cloud MN, you too can weave rugs from plastic bags. Here are some instructions: https://www.persil.com/uk/dirt-is-good/arts-crafts/plastic-bag-weaving.html

- **Know What To Recycle Campaign** - Knowing which plastics items can be recycled can sometimes be a daunting task. What might be recyclable in one community could be trash in another. Investigate what plastics are recyclable in your community by researching your county or local municipality's website then create a recycling campaign at your school or in your community. Use your knowledge of the Resin Identification Code as you investigate which plastics are recyclable. http://apps.npr.org/plastics-recycling/ and https://nepis.epa.gov/Exe/ZyPDF.cgi/600009UZ.PDF?Dockey=600009UZ.PDF

- **Establish a Recycling Program in Your School** - Form a team of fellow students who want to create a recycling plan for your school. First, determine the greatest area of need; do you need recycling bins at your school, do you need better awareness of what is put in recycling bins, or do students need to help sort recyclables during the lunch period. Then come up with a strategy to address the need. Create an awareness campaign and use student news, posters, presentations, and public announcements to get the word out to other students. Ask teachers for support.

- **Plastic Free Schools** - Join the Plastic Free Schools community and follow the steps outlined to reduce the amount of plastic waste created by your school. https://www.plasticpollutioncoalition.org/guides-schools

- **Upcycle Plastics into Art** - Combine your desire to make positive change with your artistic spirit by upcycling plastics into art! Check out Washed Ashore - https://washedashore.org/iamdc/ to learn how to organize a team to collect

plastic trash, design a piece of art, and then work together to create the art piece. When displaying the art, share how you transformed single-use plastic into something lasting and beautiful.

- **Share Groundbreaking Science -** Work with others to research innovative scientists that are working to solve the plastics problem. Create a slideshow to share with your class or school. Share ways you use the same science and engineering practices to learn about polymers. Check out the NSF Center for Sustainable Polymers at https://csp.umn.edu/eod/ for more information.

This activity is part of **Sustainable Polymers: Taking Action to Solve the Challenge of Plastics,** a 4-H STEM curriculum for grades 6-8. Please visit 4hpolymers.org to download the full curriculum.