

## 🔆 Call to Action

Join with Lilly to Recycle, Renew, Reuse, Refuse, and Refill. Refuse to use plastic. Pick up trash. Follow Lilly : Instagram: @lillys\_plastic\_ pickup & Twitter: @lillyspickup

## 🔆 Values

- Enthusiastic
- Compassion
- Energy
- Confident
- Environmental Leader

## 🔆 Lessons Learned

Lilly turned her dismay at learning how damaging and harmful plastic waste is into action: what issue or issues do you care about? Can you think of some possible solutions to these problems?

When Lilly started out, she was working alone, but now people all over the world are following her and helping her to make a difference. There is strength in collective action!

**Lilly was only six when she decided to do something about plastic pollution:** no one is too young to make change.

**Children should have the courage to speak up** about the wrongs they see in our world: and adults should listen to them!

## **Caring For The Circle Of Life**

Lilly Platt, Lilly's Plastic Pick Up The Netherlands

#### When Lilly Platt was six years old, she took a walk with her grandfather one day and was horrified to count 91 pieces of trash in just a 20-minute walk.

She was even more upset when she learned that the plastic trash that ends up in the ocean not only pollutes the water but also kills marine animals. She set out on a mission to fight plastic pollution and protect the ocean that has led to her becoming one of the youngest, most wellknown environmentalists in the world.

"My hope is that people will finally realize that we should never take our planet for granted," Lilly says. "Our planet is one in a billion, billion trillion. That's a one followed by 33 zeros! People really need to know that our planet is sacred, and we need to take care of it. Who's with me?"

# 🔆 Language Arts

**In order to make Lilly's story accessible to young children, rewrite her story as a children's book.** Use pictures, rhymes, anything you think will make the story more appealing to a younger child, and will make them want to become conservationists.

**Write a short scene between Lilly and her grandfather.** Have Lilly ask her grandfather why people pollute; show how his explanation is so powerful that it inspires her to get involved in fighting pollution at only six years old.

How would you inspire someone younger than you to become involved in Lilly's cause? Write a one-page list of things you would say to this person, what examples you would use, etc.

## 🔆 STEM Activities

Lilly says that our planet is "one in a billion, billion, trillion." NASA's Jet Propulsion Laboratory actually puts the odds of an Earth-like planet in a given solar system similar to our sun at around 2 percent, but Lilly has the right idea. The problem isn't that our planet is so rare, it's that space is unimaginably vast. The nearest possible Earth-like exoplanet (Alpha Centauri) is 4.2 light years away, which means it would take about 4.2 years to get there if you were travelling at the speed of light. It's about 40,208,000,000,000 kilometers (km) away! The current speed record for a space-travelling vessel is 6,100 km/hour, set by the brave astronauts on the Apollo 10 mission. Assuming you had unlimited life support and fuel, how many years would it take to reach Alpha Centauri if you were going as fast as Apollo 10?

#### The Great Pacific Garbage Patch is a collection of plastic debris in the Pacific Ocean that's about twice the size of

**Texas.** Learn how plastics break down into smaller particles (microplastics and nanoplastics), and how they affect marine life, the food chain, and our own health. Explore an existing scientific or social solution that can help solve this problem (e.g. <u>plastic-eating enzymes<sup>1</sup></u>, <u>community based initiatives<sup>2</sup></u>, <u>biodegradable plastics<sup>3</sup></u>, recycling programs). Then create a visual presentation of your findings to share with your class.

Lilly's family takes broken electronics that they find on their cleanups to be repaired at "repair cafes." In the United States, the "Right to Repair" is a hot topic being debated at all levels of government. Profit-oriented technology companies don't want you to be able to fix your devices by yourself (or at a third-party company) because they don't make any additional money from the repair. Find an electronic device in your home or school that seems fragile, then do research online about how you could fix it yourself instead of replacing it in the event of accidental damage. Next, research what the effects of throwing that device into the trash would be. (In other words, find out what materials it is made of, and research how they break down). Present your research to the class, or prepare a science fair exhibit.

## 🔆 Sustainability Innovations

Lilly's focus on recycling, and her consistent effort to reduce the use of plastic is just one example of an individual taking on a larger issue for the health and safety of our planet. In addition to Lilly's efforts, the companies and organizations listed below are targeting similar issues:

- <u>Clear Blue Sea<sup>4</sup></u> focuses on reducing the use of plastic, and pollution of the world's oceans.
- <u>Algalita<sup>5</sup></u> is addressing the problem of plastic reduction by having conversations about the damaging effects of plastic for individuals, businesses, the community, and our environment.

After learning about some of these organizations, select a type of plastic product—for example, a water bottle or a **plastic bag.** Then find out what type of plastic it is made of (polyethylene, polypropylene, etc.), and the properties that make it useful (shelf life, reactivity, melting point, etc.). Find a non-plastic alternative that could serve as a replacement for that product, that would work for both producers and consumers.

## 🔆 Sustainability Career Pathways

We have spent the last 50 years creating a world that relies on plastic at every level of the economy. We will need to find alternatives—both in the form of behavior and cultural changes, as well as alternative kinds of packaging.

**Social Scientist (Psychologist, Sociologist, Anthropologist).** Understanding how people behave at the individual, societal, and cultural levels is essential in changing behaviors. Corporations often use the services of these experts to more effectively market their products to new demographics. This expertise can also be used to move us toward consuming less, and consuming differently as well. Explore these fields here<sup>6</sup>.

**Biochemist or Biotechnologist Designing.** Alternatives to plastic has already begun, especially by exploring the materials nature has evolved over millions of years (a new field called <u>biomimicry<sup>2</sup></u>). Would you like to design alternatives to plastic? If so, becoming a <u>biochemist<sup>8</sup></u> or a <u>biotechnologist<sup>9</sup></u> may be the right career choice for you.

**Industrial Designer.** In addition to designing and creating new materials, we need to find ways to turn them into effective and economical products. Would you like to help design products that use less plastic, or that are designed in such a way that the plastic can be reused or recycled? Explore industrial design here<sup>10</sup>.

**Eco-entrepreneur.** With billions of tons of plastic in circulation, in landfills, and in the ocean, we need to find ways to recycle that stock into new materials while also making communities healthier and more sustainable. Plastic can be made into a variety of different products. For example, <u>Bureo</u><sup>11</sup> is a US skateboard company that works with fishing communities in South America to collect ruined fishnets and melt them down into skateboards. What ways can you think of to profitably convert plastic waste into new products?



**Stone Soup Leadership Institute** stonesoupleadership.org | sustainabilityisfun.net

<sup>1</sup> https://www.theguardian.com/environment/2020/sep/28/new-super-enzyme-cats-plastic-bottles-six-times-faster

<sup>2</sup> https://www.afrik21.africa/en/ghana-an-initiative-for-community-plastic-waste-recovery/

<sup>3</sup> https://www.explainthatstuff.com/bioplastics.html

<sup>4</sup> https://www.clearbluesea.org/

<sup>5</sup> https://algalita.org/

<sup>6</sup> https://www.bestcolleges.com/careers/humanities-and-social-sciences/social-science/

<sup>7</sup> https://biomimicry.org/what-is-biomimicry/

<sup>8</sup> https://www.environmentalscience.org/career/biochemist

<sup>9</sup> https://www.prospects.ac.uk/job-profiles/biotechnologist

<sup>10</sup> https://www.thebalancecareers.com/engineering-job-titles-2061493

<sup>11</sup> https://www.goethe.de/ins/cz/prj/fup/en13860350.htm