

Activity Data Sheet

School: _____

Step 1: Tally plastic use throughout one day.

If you need additional space, feel free to use another document or sheet of paper.

[illegible]

Audit Totals for One Day:				

Step 2: Extrapolate data over 2 years.

Now let's extrapolate! By extrapolating our observations, we can get an idea of the amount of plastics we would use over a longer time period. This isn't an exact number, but instead is an approximation based on our collected data. We are going to extrapolate to estimate the amount of plastic we would use over 2 years.

The following unit conversions may be used:

1 year = 52 weeks

1 year = 12 months

First let's look at the plastics that have the shortest use time, the "2 weeks or less" category. These are items that would be replaced roughly every two weeks, like a milk or juice container.

To extrapolate, enter your number of "2 weeks or less" plastics in the first box below. We will multiply the numbers on the top of each fraction and divide by the numbers on the bottom. We can do a unit conversion, using **1 year = 52 weeks**.

$$\frac{\text{___ plastics}}{2 \text{ weeks}} \times \frac{52 \text{ weeks}}{1 \text{ year}} \times 2 \text{ years} = \text{___ plastics}$$

Next, we'll calculate the "6 months or less" category. These are plastics that we would replace about every six months. For this, we'll use the unit conversion **1 year = 12 months**.

$$\frac{\text{___ plastics}}{6 \text{ months}} \times \frac{12 \text{ months}}{1 \text{ year}} \times 2 \text{ years} = \text{___ plastics}$$

Now, let's extrapolate the "1-2 years" category. For the purpose of simplification, we'll approximate that these items are replaced every one year.

$$\frac{\text{___ plastics}}{1 \text{ year}} \times 2 \text{ years} = \text{___ plastics}$$

For the final category, "2 years or more," we will again simplify and say that these items are replaced every two years. In reality, some of these items, may last much longer.

$$\frac{\text{___ plastics}}{2 \text{ years}} \times 2 \text{ years} = \text{___ plastics}$$

Plastics Used	2 weeks or less	6 months or less	1-2 years	2 years or more
Extrapolation Over 2 Years				

Step 3: Graph your extrapolated numbers.

Create a bar graph showing how much of each type of plastic you would theoretically use over two years. You can create your graph digitally (using Word or Excel) or draw it by hand. Don't forget to label your graph and the axis!

Step 4: Analyze your audit.

In 1-3 paragraphs, explain the findings of your audit along with any other information that you found interesting. Were you surprised by the results of your audit? What types of plastics did you use the most? How did you dispose of the plastics? Some plastics claim to be recyclable. Does your municipality's recycling program accept these? What happens to these plastics when they are sent away in recycling? You can write your explanation below or include it on a separate piece of paper.

Step 5: Create a mini action project!

Come up with your own mini action project idea or try one of the ideas below:

- A catchy 8 ½ * 11" poster (made digitally or by hand) sharing an impact that plastic waste can have on the environment.
- A letter or email to a government representative urging them to support legislature limiting single-use plastics. [Find your local legislator here.](#)
- A speech to your fellow classmates at a school assembly on plastic use.
- A collage or sculpture of plastic waste from your audit, demonstrating the amount of plastic we throw away. (For digital submissions, you are invited to send photographs of the project.) Check out some of these cool artists and projects for inspiration:
 - [Washed Ashore](#)
 - [Calder Kamin](#)
 - [Project Vortex](#)
- A series of photographs of plastic objects, showing the pervasiveness of plastics. Take a look at these [photographs of plastic bags by graphic designer Sho Shibuya.](#)

Step 6: Submit your project!

Submit your data sheet, graph, essay and mini action project. Your school's Fairchild Challenge coordinator can let you know if you should send your materials to the school or directly to Phipps. If you are submitting your project to Phipps you may do so via email at ejohns@phipps.conservatory.org or via mail at

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