**Making Calculations- A Guide to Starting Your Calculations**

Below are a few ways to begin the analysis in your Impact Project. This is ONLY a starting off point. Advanced projects will move beyond these basic calculations to consider energy savings, carbon dioxide emissions, or other secondary effects of changing the behavior.

1. Eating Locally
   1. Calculate the distance your food traveled to be at your home and determine how many gallons of gas were used to bring that food to your home.
      1. For example: If food is brought in semi-truck trailers that have a fuel efficiency of about 5.1 miles per gallon, how much gasoline is used? What would be the amount of fuel used if everyone in Redwood City adopted your behavior?
   2. Extension Suggestion: Could consider changes in CO2 emissions
2. Conserving Gas and Fossil Fuels
   1. Calculate how many miles you walked/took public transportation in the week you changed your behavior. Then, calculate how much gasoline was saved.
      1. For example: If you normally drive a car with a fuel efficiency of about 30 miles per gallon, how much gasoline was saved? What would be the savings in Redwood City if everyone adopted your behavior?
   2. Extension Suggestion: Could consider changes in CO2 emissions
3. Becoming a Vegetarian or Vegan
   1. Determine the approximate weight of meat (or meat products) you were eating in a day? In a week? Extend your calculations out to determine how much meat would be saved in a year? Thinking about energy, how much land would it take to support the amount of meat you eat in a year? How much land would it take to support your lifestyle if you were a vegetarian?
   2. Extension Suggestion: Could consider amount of water needed to support livestock vs. crops
4. Packaging and the Environment
   1. What was the total mass of your waste in a day? In a week? In a year? How many landfills would it take to support the waste you accumulate in a year? How many landfills would it take to support the waste Redwood City creates in a year? What are the savings when you modify your behavior?
   2. Extension Suggestion: Could consider how habitats are affected to create the paper or plastic packaging
5. Reusable Bags
   1. Determine how many bags were saved by your behavior in one week? In one year? If everyone in Redwood City changed their behavior for one year?
   2. Determine the number of bags you saved? How much does one paper bag weigh? How much does a year’s supply of paper bags weigh?
   3. How many trees does it take to create a paper bag? How many trees were saved by your change in behavior?
   4. Extension Suggestion: Could consider how habitats are affected to create the paper or plastic bags
6. Reusable Cups/Bottles
   1. Determine how many cups were saved by your behavior in one week? In one year? If everyone in Redwood City changed their behavior for one year?
   2. Determine the number of cups you saved. How much does one paper cup weigh? How much does a year’s supply of paper cups weigh?
   3. How many trees does it take to create a paper cup? How many trees were saved by your change in behavior?
   4. Extension Suggestion: Could consider how habitats are affected to create the paper or plastic bags
7. Water Conservation
   1. How many gallons of water does a shower release every minute? How many gallons of water do you normally use in your shower every day? How many gallons of water did you save each day by shortening your shower? What would the savings be over the course of a year? What would the savings be if this was extended so everyone in Redwood City adopted your behavior?
   2. Extension Suggestion: Consider where the water is coming from? At the current rate, how long will it take to drain the current source of water?