

# Looking At Your Carbon Footprint

Source: *How Big Is Your Carbon Footprint* by Energy Star ([energystar.gov](http://energystar.gov))

During the Working Towards Sustainability – UN Sustainable Development Goals Speaker Series – SDG#13 Climate Action, speaker Christine Baes spoke about the research happening with dairy cattle and genomics. Farmers continuously seek ways to steward the land that they rely on to grow our food. In this activity, you will start looking at your/your family's carbon footprint.

## What is a carbon footprint?

When people talk about a carbon footprint, they are talking about the impact that you have on the environment. We will explore more about this below.

## Greenhouse Gases and Our Carbon Footprint

The light and heat from the sun support life on Earth and provide energy needed for plants to grow. Energy from the sun drives the Earth's weather and climate. The Earth absorbs some of the energy it receives from the sun and radiates (sends out) the rest back toward space. However, certain gases in the atmosphere, called greenhouse gases, absorb some of the energy radiated from the Earth and trap it in the atmosphere. These gases act as a blanket, making the Earth's surface warmer than it otherwise would be.

In the past 100 years or so, humankind has created machines, factories, and vehicles that have greatly increased the amount of greenhouse gases in our atmosphere. This increased level of greenhouse gases means more heat is held in the atmosphere and the Earth is getting warmer. These warmer temperatures are causing changes around the world on land, in the oceans, and in the air, known as Climate Change. This could upset the delicate balance that sustains life.

Whether we realize it or not, we all emit carbon dioxide, one of the greenhouse gases, through our day-to-day activities. The amount we emit is referred to as our "carbon footprint." The bigger the footprint, the more carbon dioxide that comes from each of us as a result of the choices we make.

## Climate change caused by excess greenhouse gases and a big carbon footprint can cause:

- Heat waves that damage crops, stress livestock, and make life difficult for people.
- More air pollution, which is linked to allergies, asthma, and other health problems.
- Severe storms and flooding due to higher sea levels.
- Loss of habitat as the climate changes, particularly in Arctic regions.



Families can help reduce their carbon footprint by focusing on four major areas that generate excess carbon dioxide: housing and household energy use, transportation, personal habits, and recycling. In this activity, you'll have the chance to estimate the relative size of your/your family's carbon footprint as well as learn ways you can help reduce it.

## Carbon Footprint Survey:

# How Big Is Your Family's Carbon Footprint?

Some of our lifestyle choices and day-to-day activities emit excess carbon dioxide and other greenhouse gases into the atmosphere. The amount of greenhouse gases we produce is referred to as our “carbon footprint.” Too much carbon dioxide and other greenhouse gases in our atmosphere can lead to unnatural climate change, which can have a harmful effect on our planet. Take this survey to get a sense of the size of your/your family's carbon footprint.

While we know that as a young person you may not have the direct responsibility for some of the items included in this survey, you can still impact change by having conversations with and encouraging the people who do make some of these decisions to modifications.

### House and Home Energy

- If you live in a single-family home, colour 4 rings **RED**; if you live in an apartment or other type of home, colour 2 rings **RED**.
- If you don't use energy-efficient light bulbs such as CFLs (compact fluorescent), colour 1 more ring **RED**.
- If your home doesn't have a programmable thermostat, colour 1 more ring **RED**.
- If you are not familiar with the Energy Star appliance rating

### Personal Habits

- If you turn off the lights when you leave the room, colour 1 ring **GREEN**; if you leave the lights on when you leave the room, colour 2 rings **GREEN**.
- If you take baths, colour 1 ring **GREEN**.
- If you run the faucet while brushing your teeth or washing dishes, colour 1 ring **GREEN**.
- If you water your lawn several times a week, colour 1 ring **GREEN**.

### Transportation

- For every small car in your family, colour 1 ring **BLUE**.
- For every medium or large car in your family, colour 2 rings **BLUE**.
- If you don't regularly change the air filter on your car and check the tire pressure, colour 1 more ring **BLUE**.
- If you get to school by carpool or school bus, colour 1 ring **BLUE**; if you get driven by a parent, colour 2 rings **BLUE**.

### Recycling and Waste

- If you usually recycle your household trash, colour 1 ring **BROWN**; if you never recycle, colour 2 rings **PURPLE**.
- If you never compost your yard and kitchen waste, colour 1 more ring **PURPLE**.
- If you eat all of the food you purchase, colour 1 ring **PURPLE**; if you tend to throw out some food you purchase, colour 2 rings **PURPLE**.

Now read on to learn what you can do to reduce the size of your carbon footprint!



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## My Carbon Footprint

### Materials:

- Carbon Footprint drawing and questions
- Crayons, markers, or coloured pencils in the suggested colours

Using the Carbon Footprint Survey, colour the lines around the footprint drawing. The more greenhouse gases you produce, based on your answers, the bigger the carbon footprint grows. Different coloured crayons will represent the four categories of behaviour surveyed:

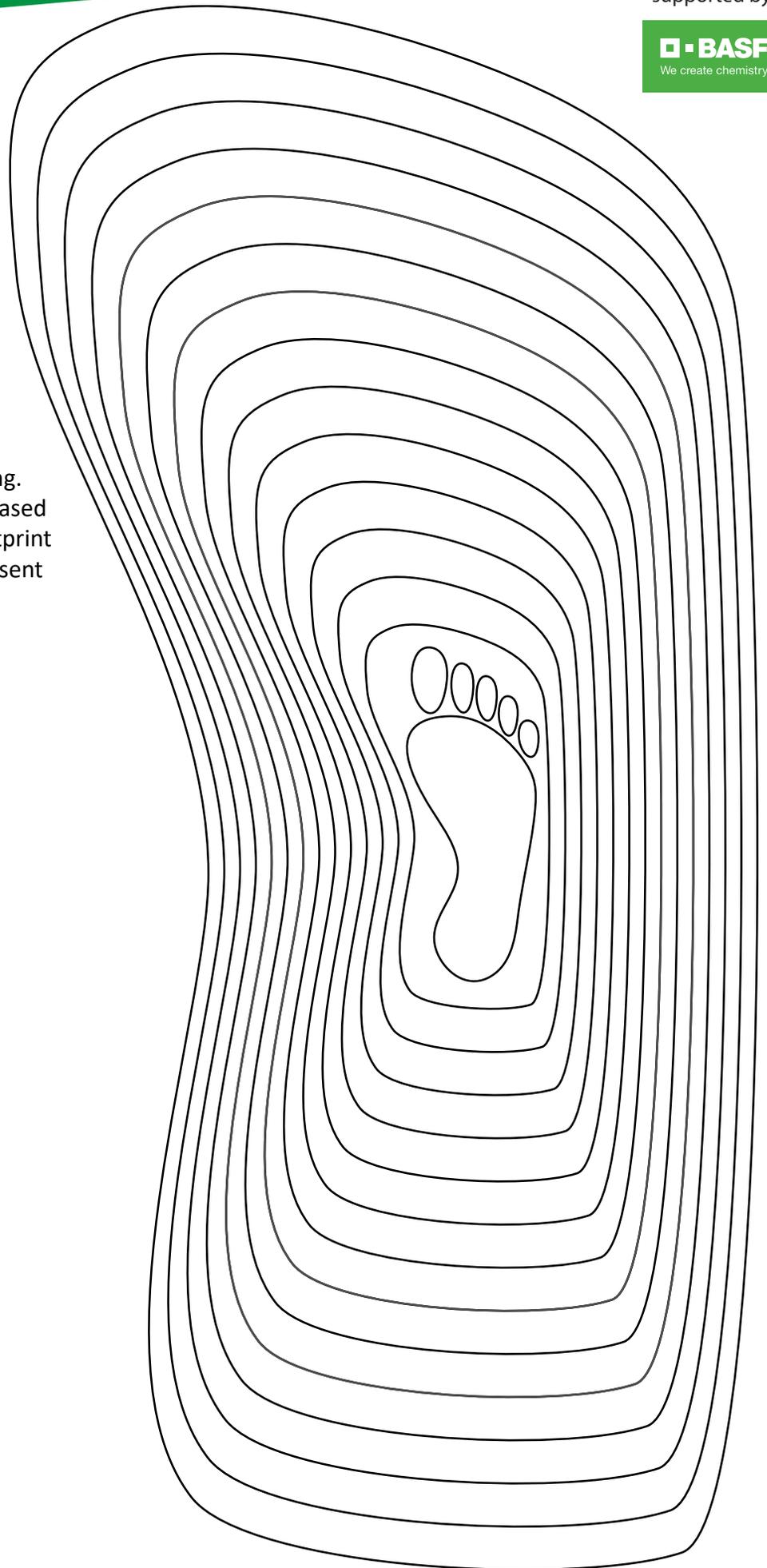
**Housing and Home Energy: RED**

**Transportation: BLUE**

**Personal Habits: GREEN**

**Recycling Habits: PURPLE**

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# What Can You Do To Reduce The Size Of Your Carbon Footprint

1. Single-family homes generally consume more energy per resident than multifamily housing such as apartment buildings. But no matter where you live, there are things you can do to reduce the amount of energy your home uses, thus reducing your carbon footprint.
2. Energy-efficient light bulbs such as compact fluorescent and LED light bulbs consume less electricity than conventional incandescent light bulbs. Change your household fixtures to CFLs and you'll save money on your household energy bills, too.
3. A programmable thermostat turns your home's heating or air-conditioning up and down automatically, depending on the time of day. When your home's energy system is working efficiently, it wastes less energy, thus reducing your carbon footprint.
4. Energy Star rated appliances use less energy. When purchasing new appliances such as a refrigerator, range stove, microwave, or air conditioner, look for the Energy Star label to save energy, save money, and reduce your carbon footprint.
5. Cars that are properly maintained are more energy efficient. Be sure to regularly change the air filter and make sure the tires are always properly inflated. All gasoline-powered automobiles emit carbon dioxide so the larger the car, the more carbon dioxide is emitted.
6. Virtually all modes of transportation consume energy, thus they impact your carbon footprint.
7. The growing, processing, packaging, delivery, and distribution of food requires energy from farms, factories, trucks, grocery stores, and more. Being mindful of eating local foods can help reduce your carbon footprint.
8. Water that goes down our drains and sewers must be processed through water treatment plants, even if the water is clean. Using only the amount of water you really need helps reduce your carbon footprint.
9. Recycling is good for the environment because it keeps excess waste out of landfills and trash incinerators. If you recycle on a regular basis, your carbon footprint is smaller.
10. Composting is good for the environment because it keeps kitchen and garden waste out of the trash, and it encourages natural gardening practices. If you compost at your house, your carbon footprint is smaller.
11. Reduce greenhouse gases by planting trees and new plants to help remove CO<sub>2</sub> from the air. Growing your own food helps to prevent CO<sub>2</sub> from entering the air by decreasing the need for fossil-fuel-burning trucks, planes and ships.
12. Continue to investigate small changes that you make as they will all add up!

