Content for Website

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Carbon Footprint:

The carbon footprint has been talked about a lot in climate change and sustainability. Although, what is it? A carbon footprint is the number of greenhouse gases that are produced by our actions. Mainly carbon dioxide and methane.

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A carbon footprint is generated by our actions, both directly and indirectly. For example, a direct action could be driving a car to work, and an indirect action could be buying meat from a store. Driving a car is a direct action because cars produce emissions and the driver is the person who is responsible for those emissions. They are directly choosing to run a car that produces emissions, maybe even unknowingly. Buying meat from a store is an indirect action because the meat's carbon footprint is composed of all of the emissions that it took to produce and transport it to the store. So, when someone buys meat, the direct actions to produce and transport it to the store become one's indirect action, therefore becoming a part of their carbon footprint.

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The average American carbon footprint is 16 tons of C02e (Carbon dioxide equivalent). Which is one of the highest in the world because the global is 4 tons. The global average carbon footprint needs to be under 2 tons by 2050 to avoid a 35.6℉ rise in our climate. Learn how to reduce your carbon footprint on this part of my website.

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Reducing a Carbon Footprint (Reducing):

Reducing a carbon footprint seems like it may be complicated, but it is the simple things that we do everyday that have an impact. To start, there are five areas of a carbon footprint: Housing, Transportation, Food, Products, and Services. In each of these areas, several smaller variables make them up. For example, in housing, there is the variable of electricity use. Scroll down to see how to reduce a carbon footprint in each area.

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Housing:

When reducing a housing carbon footprint, there are several things to take into consideration. First, monitoring and reducing water is essential. Taking shorter showers and using High-Efficiency washers. Second, electricity is another important factor. Turning off lights when not in use, adding solar panels, using LEDs, and looking for "Energy Star" appliances are all ways to reduce a housing carbon footprint. Third, it's already known, but recycling instead of garbage is much better for the environment. Composting organic matter and collecting rainwater (if your government allows it) is another way to reduce a housing carbon footprint.

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Food:

Reducing a food carbon footprint is relatively simple. The first step that experts recommend is to eat less meat. Meat has a high carbon footprint because of the production and transportation it takes to get it to the store. In fact, 13% of greenhouse gases are produced from the production and transportation of food. So, eating less meat (red meat in particular) or choosing to go vegetarian or vegan is healthier and better for the environment. Another thing that someone can do is eating organic and locally made food. Organic foods are usually produced more sustainably. Lastly, make sure to compost food/organic waste so that it doesn't take up space in landfills.

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Transportation:
The second to last area to reduce a carbon footprint is travel. Many things can be done here. The first thing to do is to find alternatives to driving. Biking and walking are some of the least carbon-intensive modes of transportation. When those aren't possible, taking public transportation and carpooling is the way to go. Next, if most of the options aren't possible, buying an electric or low carbon emission car is also great. Although, make sure that the electricity source for the electric car is clean. Otherwise, the electric car doesn't have a zero carbon footprint. My last tip is to drive safely. For example, unnecessary acceleration can reduce gas mileage by 33%, and increases a carbon footprint.

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Goods and Services:
When it comes to goods and services, there aren't a whole lot of things that can be done. Just because there are some things that we can't avoid. The first thing to start doing is to dress more sustainably. This can be buying vintage clothes, donating clothes, staying away from synthetic fabrics, and looking for a fairtrade logo when buying clothes. The next step is to shop sustainably by using reusable bags, buying quality products, and avoiding packaging. If avoiding packaging isn't feasible, then make sure that it gets recycled.

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It has been found that these practices are good for the environment, and will help someone save money. See what projections there are for carbon emissions here.

Experiment on the Carbon Footprint (Experiment):

To gain a better understanding of the carbon footprint, I experimented. My experiment was to find my family's carbon footprint. I came to realize that calculating the entire carbon footprint would be very difficult. It can be

difficult because there are many different variables and different situations to take into consideration. For example, in the food sections there can be up to nine factors to calculate. Instead, I worked to find my family's housing and travel carbon footprint.

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In my experiment, I first gathered data that is needed to calculate a housing and travel carbon footprint. I collected data over different periods, and I had to consult different sources. Next, I took all of the data and inputted it into an algebraic function that I made for each data set. For example, the function of electricity use is T(m)=0.99m. I took the answer that I got and either multiplied it by 365 or 52 to get the emissions over 1 year.

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Throughout my experiment, I learned how difficult it is to calculate a carbon footprint. There are so many factors that need to be taken into consideration. My goal was to find if my family has a below-average housing and travel carbon footprint. I can say that I proved my hypothesis wrong, because the result was around 674.19 metric tons. Which could be wrong, but it was way off than what I thought it would be. Although, it did bring up some new questions. Below is my full write-up surrounding my experiment.

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Outlook on Carbon Emissions (Outlook):

It may seem like the United States is projected to be skyrocketing in carbon emissions for the future, but it's the opposite. The U.S. Energy Information Administration (EIA) projected that U.S. carbon emissions to be lower in 2050 by 4% lower than it was in 2019. Although, the world's carbon dioxide emissions are expected to increase by 0.6% every year (2018-2050). (https://images.pexels.com/photos/590020/pexels-photo-590020.jpeg?auto=compress&cs=tinysrgb&dpr=2&h=650&w=940)

Something to note is that the world's carbon emissions are not evenly spread across the whole world. Relatively developed countries are expected to have no growth in their emissions. Most of the countries that are projected to have higher emissions are not part of the Organization for Economic Cooperation and Development (OECD). The OECD is an organization that is working to promote policies for the social-well being of people and improve the economy.

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In conclusion, it seems as though most developed countries are going to have lower carbon emissions in the future. While countries that have fossil fuels as their industry is projected to increase. An example of this would be Russia. In Europe, coal production and consumption have been steadily declining. Which is a good sign for the global carbon footprint. As people, we can help speed up the decline by reducing our own carbon footprint.

(https://images.pexels.com/photos/159397/solar-panel-array-power-sun-electricity-159397.jpeg?auto=compress&cs=tinysrgb&dpr=2&h=650&w=940)

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