



CARBON FOOTPRINT QUIZ



A carbon footprint is the total greenhouse gas (GHG) emissions caused directly and indirectly by an individual, organization, event or product. Different GHGs (such as methane and nitrous oxide) have a greater or lesser ability to trap heat in the atmosphere. These differences are calculated as the global warming potential (GWP) of each gas in units of carbon dioxide equivalents (CO₂e).

Answer the following true/false or multiple choice questions about the carbon footprint of GHG sources in the United States and climate change mitigation. Correct answers and more information on ways to reduce your personal carbon footprint are on the other side of the page.

1. **T/F** The transportation of food has a much bigger carbon footprint than the agricultural practices involved in its production.
2. Meat products have larger carbon footprints than grain or vegetable products. Which meat has the smallest carbon footprint?
A. Chicken B. Beef C. Pork
3. **T/F** Refrigerators are one of the largest users of household appliance energy.
4. How much can you improve the fuel efficiency of your personal vehicle by observing the speed limit?
A. 5% B. 7-14% C. 20-30%
5. **T/F** Energy consumed by devices in standby mode accounts for 5-10% of residential energy use.
6. **T/F** There isn't much difference between brands of toilet paper, besides the thickness of sheets and the size of the rolls.
7. **T/F** It doesn't matter how many paper coffee cups I use because they can be recycled or composted.
8. Most climate change experts agree that avoiding catastrophe will require more than just reducing our CO₂ emissions. We'll need to actively remove CO₂ from the atmosphere as well. **Carbon sequestration** or carbon dioxide removal (CDR) is the long-term removal, capture or sequestration of carbon dioxide from the atmosphere to slow or reverse atmospheric CO₂ pollution and to mitigate or reverse global warming (Wikipedia). Which of the following are methods of CDR?
A. Afforestation B. Biochar C. Carbon farming D. Ocean sequestration E. A—D

RESOURCES:

Carbon Footprint Factsheet:

<http://css.umich.edu/factsheets/carbon-footprint-factsheet>

Carbon Footprint Calculator:

<https://www.nature.org/en-us/get-involved/how-to-help/carbon-footprint-calculator/>

Carbon Offset Provider:

<https://www.terrapass.com/climate-change/climate-change>

Carbon Solutions—Renewable Energy Credits:

<https://www.snopud.com/?p=3472>

CLIMATE EMERGENCY!

The Oxford Dictionary chose *climate emergency* as the word of the year in 2019 and defines the term as “a situation in which urgent action is required to reduce or halt climate change and avoid potentially irreversible environmental damage resulting from it.” A **climate emergency declaration** is an action taken by governments and scientists to acknowledge humanity is in a climate emergency. Hundreds of local governments in dozens of countries (including the cities of New York, San Francisco, and Oakland) have made such declarations already. Some countries, including the United Kingdom and Canada have declared climate emergencies. In November, 2019 the European Parliament (representing the 27 member states of the European Union) made its declaration.

ANSWERS TO QUIZ AND MORE INFORMATION

1. **False** The production of food accounts for 68% of emissions, while its transportation accounts for 5%. Eliminating the transport of food for one year could save the equivalent of driving 1,000 miles, while shifting to a vegetarian meal one day a week could save the equivalent of driving 1,160 miles¹.
2. **A. Chicken** It's not necessary to eat a completely vegetarian diet to reduce your carbon footprint, but replacing beef with chicken in your diet can be a significant reduction. Ruminants, such as cattle, sheep and goats have a bigger carbon footprint due to the methane released from their digestive processes¹.
3. **True** According to the US Dept. of Energy, refrigerators typically are one of the top five uses for home energy. The style and size of your fridge are important factors. For more information see “*Guide to Energy-Efficient Refrigerators*” at <https://www.constellation.com/guides/appliances/energy-efficient-refrigerators.html>.
4. **B. 7-14%**¹ You can also improve fuel efficiency by making sure your car's tires are properly inflated.
5. **True**¹ Unplug electronic devices when not in use, or plug them into a power strip and turn the power strip off. Find out how much wasted energy you could save with this “Energy Vampire Calculator”:
<https://www.duke-energy.com/energy-education/energy-savings-and-efficiency/energy-vampires>.
6. **False** Toilet paper made from virgin wood pulp has a significantly higher carbon footprint than tissue made from recycled waste paper. See “Buyer's Guide to the Sustainability of At-Home Tissue Products” in this report:
<https://www.nrdc.org/sites/default/files/issue-tissue-how-americans-are-flushing-forests-down-toilet-report.pdf>.
7. **False** Hundreds of thousands of coffee cups are thrown into recycling bins in the USA every day, but most of these are not recyclable. Get a reusable cup and remember to take it along to the coffee shop. You will reduce your carbon footprint, and you won't contribute to the billions of cups and lids added to landfills globally each year.
8. **E. A-D** Scientists around the world are working on ways to remove carbon from the atmosphere using plants, rocks or engineered chemical reactions and store it in soil, ocean waters and sediments, and manmade products. Some of these strategies are early in development and may not be practical. What we can definitely do now is stop cutting and plant trees—lots of them. Currently worldwide forests sequester around two gigatons of CO₂ per year². This amount can be increased through afforestation (planting trees in new places) and reforestation (replanting deforested acreage). Besides, trees are a home for birds and wildlife, and a necessary component of healthy watersheds in our communities!

¹<http://css.umich.edu/factsheets/carbon-footprint-factsheet>

²<https://www.ecowatch.com/carbon-sequestration-2461971411.html>