



## What's your carbon footprint?

Carbon is an essential element on our planet. It is the core of all living things and is found in proteins, fats, sugars that are our most important nutrients. All plants have structures based on carbon, from the tallest tree to the smallest lichen. Carbon is captured by plants as carbon dioxide (CO<sub>2</sub>) from the atmosphere and turned into food that animals eat. As living things respire, they release CO<sub>2</sub> back into the atmosphere so that here is a cyclic pattern to the capture and release of carbon. Under ideal conditions, this should be a balance between uptake and release (see Figure 1). But ever since humans have been burning fossil fuels, more CO<sub>2</sub> has been pumped into the atmosphere than has been removed. This really started with the Industrial Revolution in the 18<sup>th</sup> century and accelerated through the 19<sup>th</sup> and 20<sup>th</sup> centuries and continues today.

Fossil fuels, i.e. coal, oil and natural gas, were formed millions of years ago from plants that captured sunlight as they grew. Layers of dead plants were formed and buried under rocks and sediment where pressure and heat turned them into the fossil fuels we know and use. For millions of years after their formation, the temperature of the Earth remained fairly constant but as we started burning the fossil fuels, the rapidly increasing level of CO<sub>2</sub> (Figure 2) increased global temperatures through the greenhouse effect, driving climate change.

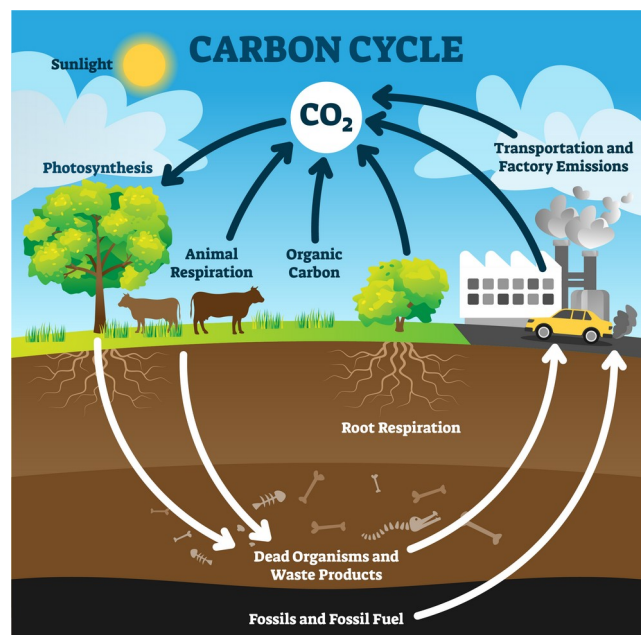


Figure 1. The Carbon Cycle (US Dept of Energy)

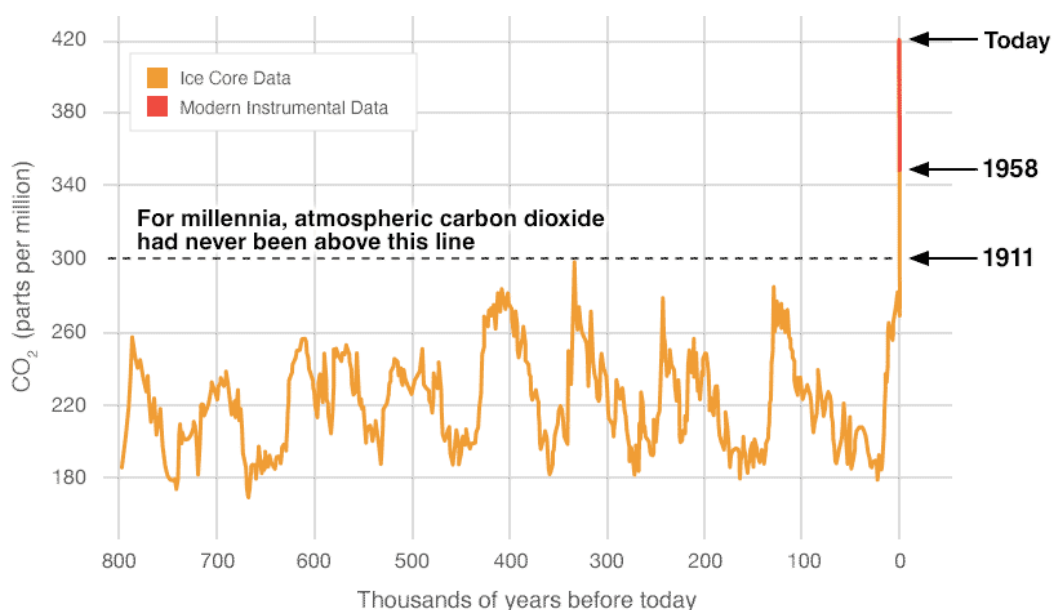


Figure 2. Concentration of carbon dioxide in the atmosphere (US National Aeronautic and Space Administration)

Since the Paris Agreement was signed by most nations in 2016 to limit global warming to 2 ° C, and preferably 1.5 °C above the long-term average, countries have introduced measures to limit CO<sub>2</sub> production. The UK government passed the Climate Change Act in 2008 and since then we have seen a gradual fall in our CO<sub>2</sub> emissions.

Whilst governments can set targets, individuals can play their part in reducing emissions. Most of us now use LED light bulbs and have well-insulated houses that save energy. However, there is always more we can do. One way of finding out is to estimate the carbon footprint of our own household members. This is a fairly straight forward exercise that can be carried out on-line and various websites. One of the most accessible is the carbon footprint calculator of the Worldwide Fund For Nature (WWF) and can be found at <https://footprint.wwf.org.uk/> Check it out and calculate yours. If you can, post yours on the Greening Group Facebook page (anonymously if preferred): <https://www.facebook.com/groups/1529643330594064>

Would you like to learn more about what's driving climate change, the politics and what you can do to cut your carbon footprint? Then there's a course for you! You will find ways of cutting your emissions, by buying from businesses that are doing the same and switching your banking and investments to companies that do not invest in the fossil fuel industry, cutting out unnecessary flying, using more public transport and pressuring MPs to do more.

The *Carbon Literacy* course is a day's worth of learning about nature and climate, to help protect our future and that of our children and grandchildren. You'll learn how people are not only helping the planet but lowering energy bills, having warmer homes and better health. The course is certified by the Carbon Literacy Project, which is recognised under the Paris Agreement as one of 100 transformative programmes. The course is free for a limited time only and is presented by Dr Pat Watson. She comes from a farming background and has 15 years in scientific research followed by 15 years in education. She is taking action to improve her family's future. The course, which can be face-to-face or on-line, is suitable for individuals who want to know more and also for businesses who would like to help their staff become more aware and improve their business. It is supported and promoted by West Berkshire Green Exchange.

For more information, see poster elsewhere in this Parish News, or email [drwatson.eco@gmail.com](mailto:drwatson.eco@gmail.com) or scan the QR code →



## **Richard Marshall**

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