

PART 2:

*Climate Facts (But
Make It Accessible)*

CLIMATE SCIENCE

SOME BRIEF FACTS

So we've dealt with the at-times difficult (but definitely necessary) touchy-feely side of climate change. Now we're going to cover some facts about climate science and climate policy for those who want more information.

We've read enough guides ourselves to know that these can be incredibly boring- but don't worry, we've tried our best to keep these sections brief, accessible to read, and vaguely sarcastic/enjoyable reading.

We're hoping that the definitions included here are fairly self-explanatory, but if you're unsure of any specialised terminology we use, it should be covered in the glossary on page 52. If it's not, please let us know.

If you are an individual or group campaigning on climate change, you have to find or invent ways of explaining the science behind what's going on. Fortunately this is not difficult. Our favourite one is this:

You are lying in bed under a duvet on a nice Sunday morning. It is not too hot or too cold. If your mum comes in and shouts at you to get up and stop being lazy, and pulls away the duvet, well pretty quickly, you'll be too cold. If she's in a surprisingly good mood and for some reason throws another duvet over you, for a minute it might feel great. But pretty soon you're overheating.

Well, there is a duvet of what's called greenhouse gases around the planet we have known about since 1824, when [Fourier](#) published a scientific paper that there must be something trapping a certain amount of the sun's heat, otherwise, the planet would be a lot colder, based purely on its distance from the sun.

In the 1850s and 60s, [Eunice Foote](#), and the more well-known [John Tyndall](#) pointed the finger at "carbonic acid", now called carbon dioxide (CO₂). In 1896, a Swedish scientist [Svante Arrhenius](#) calculated -

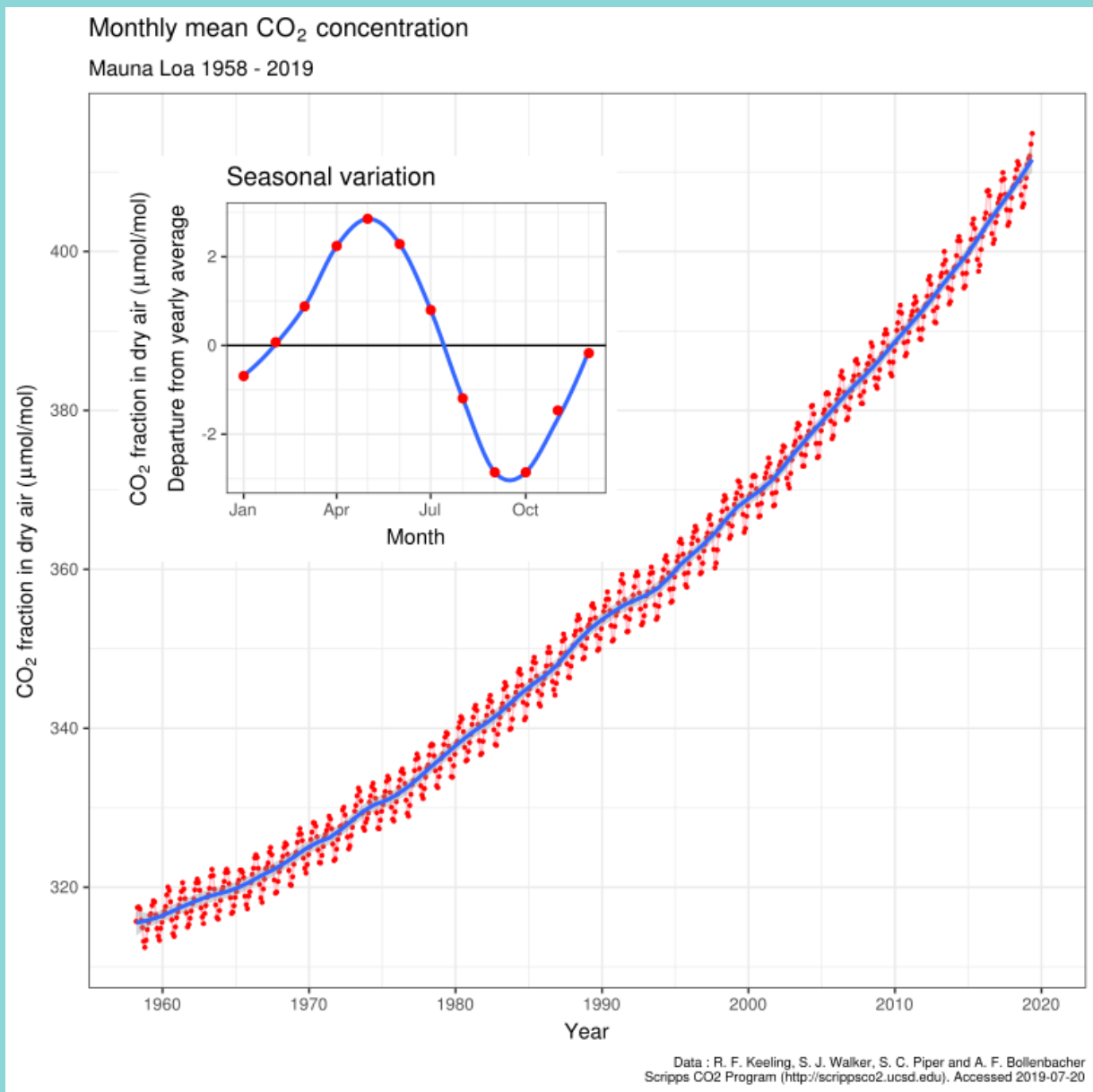


and it took him a year - that if you'd doubled the amount of CO₂ in the atmosphere, you would get somewhere between roughly three and four degrees of additional global warming.

Since the late 1950s, scientists have documented that carbon dioxide is building up in the atmosphere thanks to our relentless obsession with burning fossil fuels. We are making the "duvet" thicker and thicker. The consequences are melting ice caps, rising sea levels, changing ecosystems, melting tundra, more extreme weather events. These changes will continue, with consequences for humans and other animals on this planet.

[The metaphor is not perfect. In the duvet analogy the heat is coming from inside the human body, and it's not being able to get out into space because of the duvet. In our planet's reality, the heat is coming from the sun. But it's still a helpful illustrative tool.]

Once people understand the duvet metaphor, you can then explain that there's a scientific assessment called the [Keeling Curve](#) which measures the amount of CO₂ in the atmosphere, and that nobody denies that is going up and up and up. This is just about the base level of information you need to know to explain climate change basics to a complete beginner.



Credit: [Wikipedia](#)

The Keeling Curve, first developed and monitored by Charles David Keeling, is a graph detailing the accumulation of carbon dioxide in the Earth's atmosphere. It's based on continuous measurements monitored from 1958 to the present day from the Mauna Loa Observatory, Hawaii. As you can see, the presence of CO₂ in the atmosphere has climbed, and continues to climb significantly- which holds terrifying consequences for the planet, as discussed on the previous page.