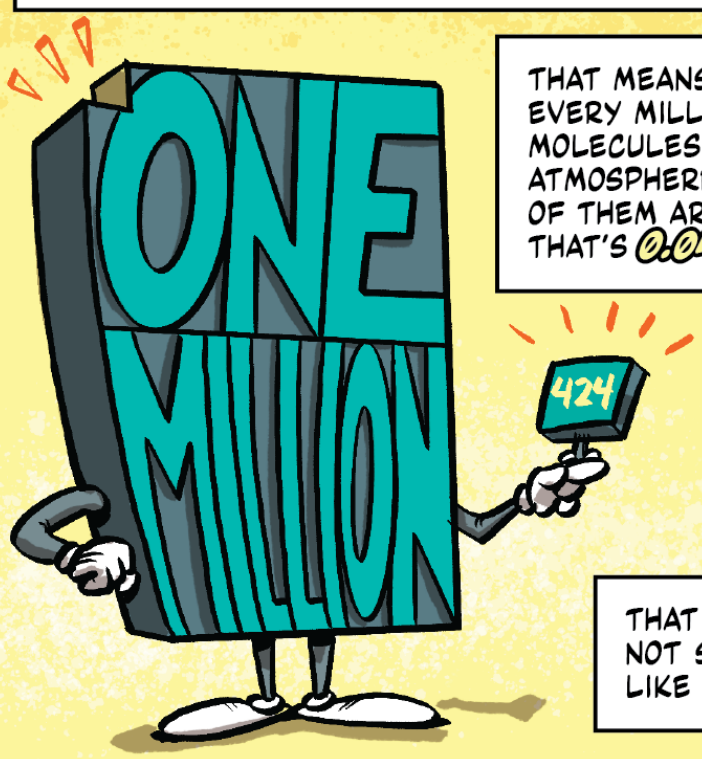
small PARTS, BIG IMPACTS

AS YOU READ ABOUT CLIMATE DATA, ONE MEASUREMENT YOU'LL SEE A LOT IS CALLED **"PARTS PER MILLION"** OR **"PPM."** IT'S HOW SCIENTISTS MEASURE THE CONCENTRATION OF A SUBSTANCE INSIDE OF SOMETHING.

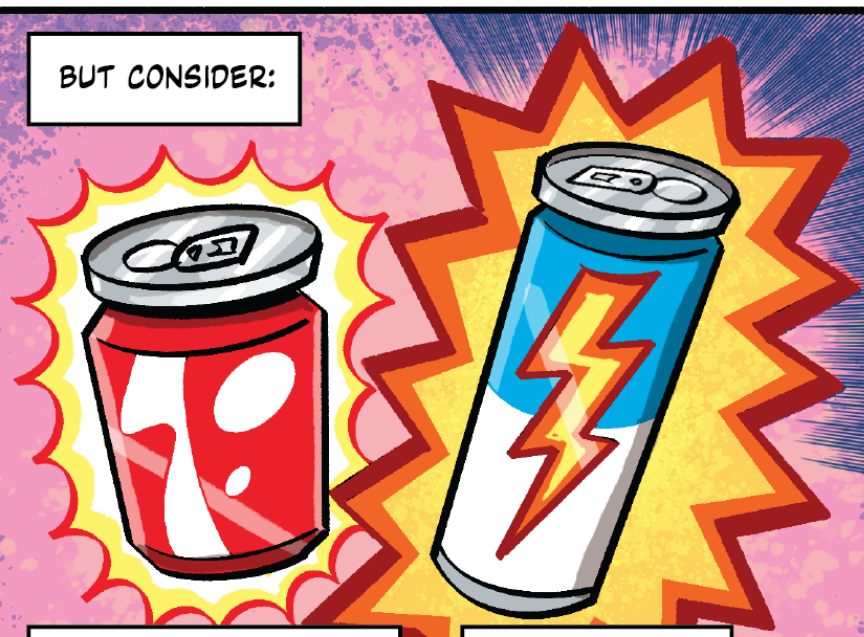
IN JUNE 2023, THE CONCENTRATION OF CARBON DIOXIDE (CO_2) IN EARTH'S ATMOSPHERE REACHED **424 PARTS PER MILLION (PPM).**



THAT MEANS, FOR EVERY MILLION MOLECULES IN OUR ATMOSPHERE, **424** OF THEM ARE CO_2. THAT'S **0.0424%**

THAT MIGHT NOT SEEM LIKE MUCH.

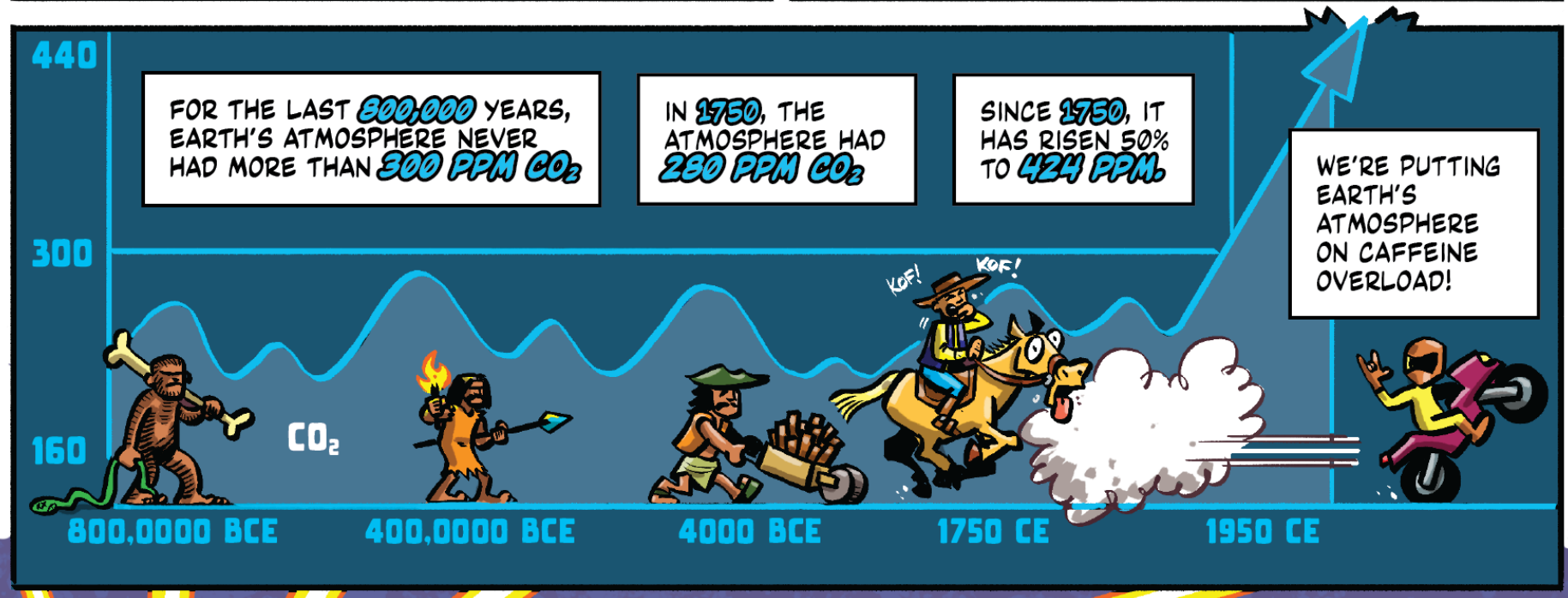
BUT CONSIDER:



THE AVERAGE COLA DRINK HAS UP TO **200PPM** OF CAFFEINE.

WHILE ENERGY DRINKS HAVE **400PPM.**

THINK ABOUT HOW YOU FEEL AFTER DRINKING EACH.



FOR THE LAST **800,000** YEARS, EARTH'S ATMOSPHERE NEVER HAD MORE THAN **300 PPM CO_2**

IN **1750**, THE ATMOSPHERE HAD **280 PPM CO_2**

SINCE **1750**, IT HAS RISEN 50% TO **424 PPM.**

WE'RE PUTTING EARTH'S ATMOSPHERE ON CAFFEINE OVERLOAD!

THAT'S BECAUSE GREENHOUSE GASES, LIKE CO_2, TRAP HEAT FROM THE SUN. THIS IS CALLED THE "GREENHOUSE EFFECT" –A NATURAL PROCESS THAT KEEPS EARTH LIVABLE.

CO_2 HELPS KEEP US WARM, AND CAFFEINE CAN HELP YOU WAKE UP, BUT YOU CAN HAVE TOO MUCH OF A GOOD THING.

AN INCREASE FROM **280 TO 424 PPM** MIGHT SEEM A SMALL AMOUNT TO ADD TO OUR HUGE ATMOSPHERE, BUT LIKE CAFFEINE, SMALL AMOUNTS OF CO_2 PRODUCE POWERFUL IMPACTS.

SINCE **1750**, THE BURNING OF FOSSIL FUELS HAS ADDED MORE AND MORE CO_2 TO THE ATMOSPHERE, RAPIDLY WARMING THE PLANET AND CAUSING CLIMATE CHANGE.

WE DON'T NEED TO QUIT ALL CAFFEINE–OR CO_2. SCIENTISTS BELIEVE THAT CUTTING TO JUST **350 PPM** WOULD BE ENOUGH TO AVOID THE WORST EFFECTS OF CLIMATE CHANGE.