

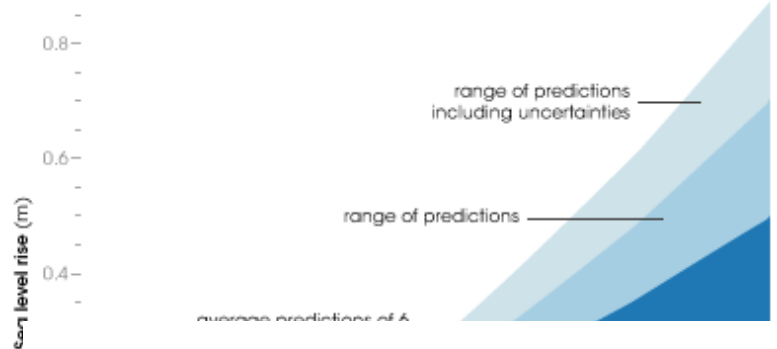
Global Climate Change Notes Outline

The Problems

- ✘ “_____ are usually able to maintain themselves. But eventually they get pushed to the limit of _____.”
 - + Terry Chapin, a Biologist and professor of Ecology at the University of Alaska, Fairbanks
- ✘ Burning _____ creates _____ but **releases** _____ that help to drive **Global** _____.
- ✘ _____ regions are heating up causing _____ to _____, dumping _____ in the _____.
- ✘ **Severe** _____ including rainstorms, _____, droughts, and _____ are disrupting lives.
- ✘ _____ caused by parched and arid _____.
- ✘ _____ turn fertile _____ into deserts, uprooting _____ and sparking _____.

Planet Earth – Sea Levels

- ✘ Global _____ levels have risen _____ **in. to _____ in.** during the 20th century.
- ✘ Global _____ levels are anticipated to rise _____ **in. to _____ in.** during the 21st century if the current trend _____.
- ✘ If the entire Greenland _____ sheet were to _____, the seal level would _____ an additional _____ **feet.**

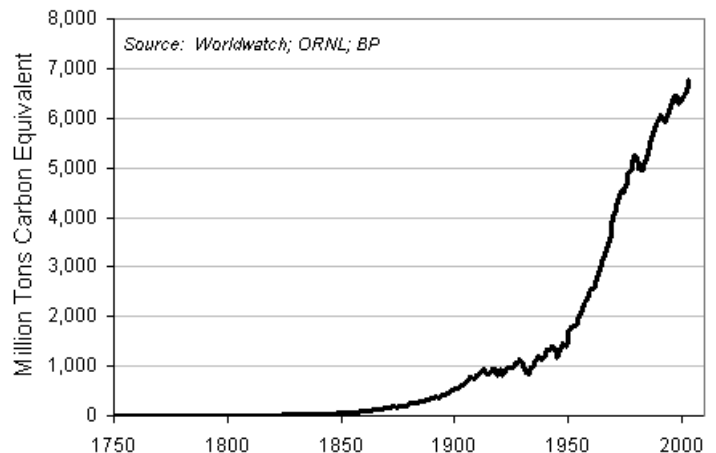


Global Carbon Emissions from Fossil Fuel Burning, 1751-2003

Planet Earth – Sea Level Change impact

Planet Earth – Carbon Dioxide Levels

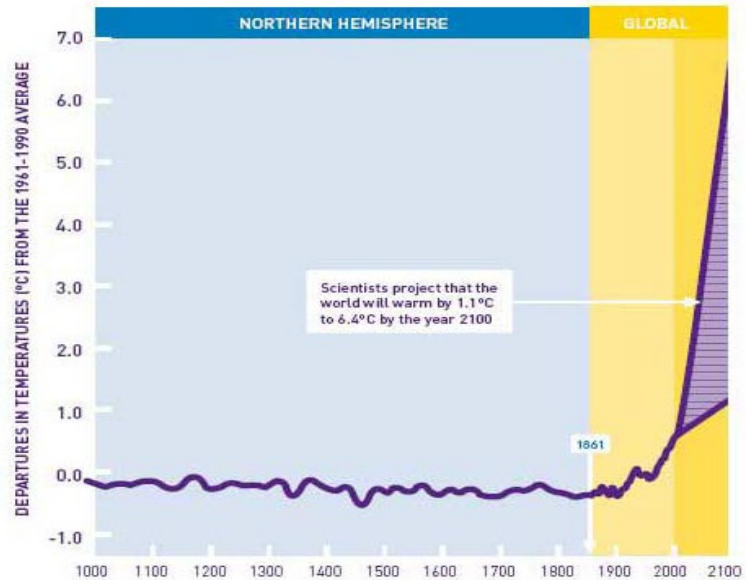
- ✘ Greenhouse _____ rose **less than** _____% in the _____ years before the _____.



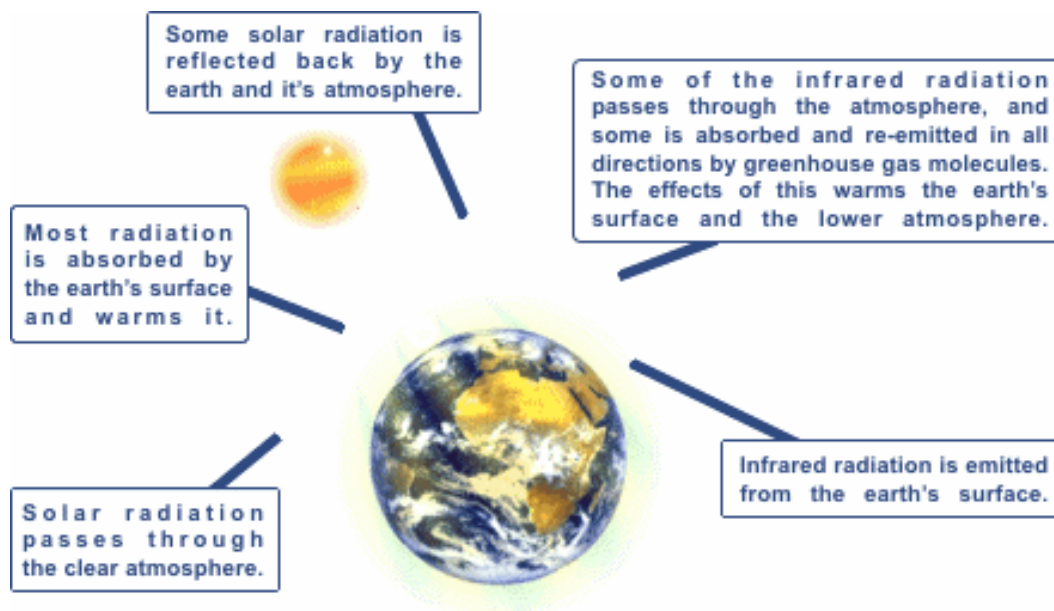
- ✗ Greenhouse gasses have risen _____% since the Industrial Revolution.
- ✗ The annual _____ emission released by a typical 500-megawatt _____ fired power plant is _____ million tons.
- ✗ The _____ has _____% of the world's people, yet it produces _____% of the CO₂ emission on the _____.

Planet Earth – Warming Trend

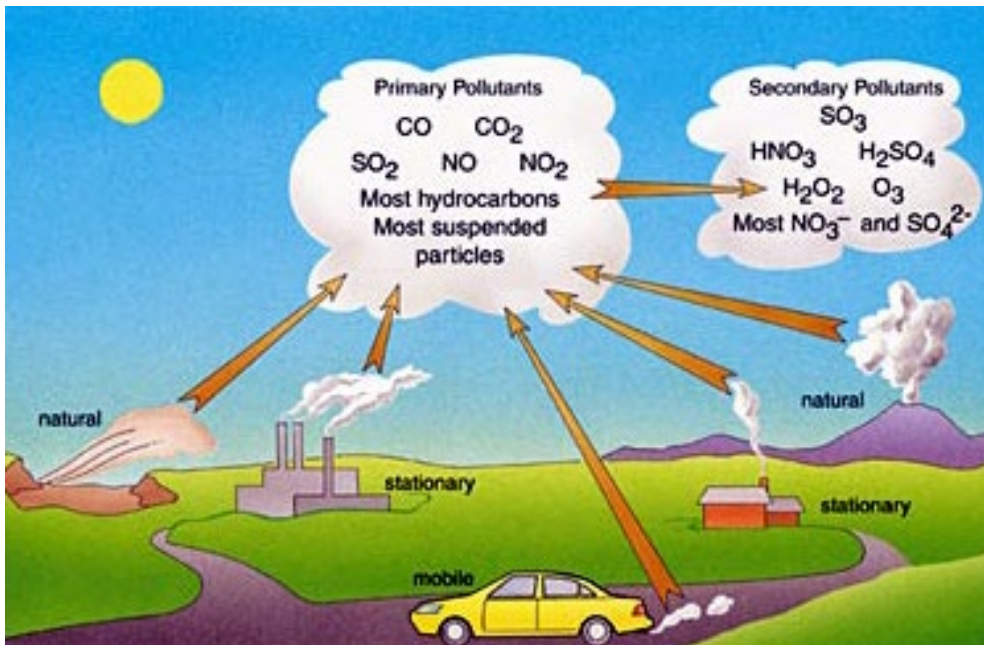
- ✗ Earth has warmed _____° F during the 20th century.
- ✗ The total _____ rise that is anticipated in the 21st century is _____° F to _____° F if current trends _____.
- ✗ _____ out of the past 12 years have been ranked as the _____ in modern history.



Global Warming – Greenhouse Effect



Types and Sources of Air Pollutants



Animals, Plants and Habitats at Risk

✘ Rain Forests

- + _____ and _____ methods
 - ✘ Send clouds of _____ into the _____.
 - ✘ Remove _____ that convert _____ into _____.
- + The _____ of many prescription _____.
- ✘ Many natural _____ may never be identified.

✘ Deserts

- + Higher _____ accelerate _____.
- + The land becomes too _____ to support _____.
- + The _____ and _____ of people are threatened.

✘ Polar Regions

- + _____ and _____ shelves are _____.
- ✘ _____ levels will rise and many land areas may be under _____.
- ✘ Rising _____ could _____ water supplies with _____.
- ✘ Warmer _____ could widen the range of _____-carrying _____ and _____.
- ✘ Many _____ of _____ may go extinct.

✘ Coral Reefs

- + Slight _____ changes in water can cause coral _____ that is devoid of _____.

× Higher temperatures cause the _____ to eject the algal tenants that are living within their tissues that provide the _____ and _____ the coral need to _____.

× **Permafrost**

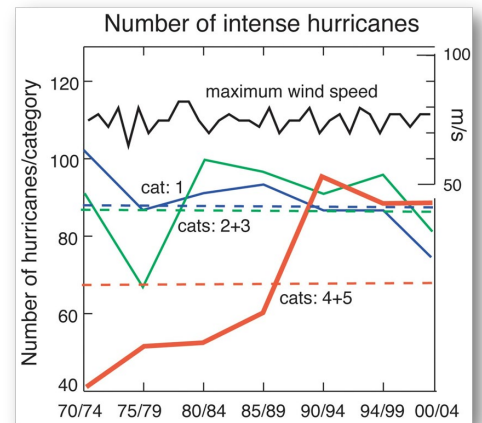
- + Global warming is causing an accelerated _____ around the globe.
- + Serious _____ erosion can occur.
- + Earth's _____ regions contain enormous quantities of trapped _____, a powerful greenhouse gas and other hydrocarbons.

× The release of large of large quantities of these _____ could create a feedback loop that would _____ global warming.

- × **African** _____ – shrinking of _____ and _____ supply
- × **Wild** _____ – melting permafrost pours _____ into rivers, burying gravel needed for _____
- × **Prickly Pear** _____ – warming related _____ are causing disruptions in the life _____ of plants
- × **Harlequin** _____ – climate changes seem to make them more _____ to a deadly _____
- × **Pinon** _____ – moving their homes to higher _____
- × **Quiver** _____ – dyeing off and moving _____
- × **Adelie** _____, **Polar** _____, **Arctic** _____ – as polar ice _____, their habitats are _____

More Powerful Tropical Storms

× Over the past _____ years, the number of hurricanes each season has remained _____, but their average _____ has increased, with the number of category _____ and _____ storms (the most powerful) nearly _____.



Health Risks

- × _____
 - + Plants like _____ and other _____ sources will _____ under the warmer conditions.
- × _____

+ Hot weather could make the global _____ populations (carriers of _____) explode.

× _____ Sources

+ As rainfall levels _____, older cities run a risk that overflowing sewer lines may _____ supplies of drinking _____.

Cleaner Energy Solutions

× _____ **Farms** that harness the power of moving _____ can produce more and more of the world's power supply.

× _____ **power** that taps heat generated at Earth's fiery _____ can be a source of energy.

× _____ **Energy** draws energy from the warming _____ that threatens our planet.

× _____ **Power** can be used to provide energy.

× _____ **Power** can be used to fuel _____.

What actions can we take?

× Change your _____ to Compact Fluorescent Light Bulbs (CFL).

+ They use _____ the electricity and last several _____ longer.

× Build a "_____ " that is Smaller

+ Install energy efficient _____,

+ control _____, air and moisture leakage by _____ windows and doors,

+ _____ the garage, attic and basement with natural, nontoxic materials,

+ Reduce _____ heat in _____ with large overhangs and double-pane glass,

+ Consider renewable energy sources like _____ electric systems.

× Hang up a _____.

+ Over its lifetime, laundering a single T shirt can send as much as _____ lbs. of carbon dioxide into the _____.

× Purchase Fewer _____.

+ Every item of _____ you own has an impact on the environment. Some synthetic textiles are made with _____ products.

+ Invite friends over for a closet _____, everyone brings a few items they want to _____.

× _____ Close to _____.

- ✗ Ride the _____.
- ✚ Public transportation saves about _____ billion gal. of gas _____, which translates into about 1.5 million tons of _____.
- ✗ Move to a _____.
- ✚ The smaller your _____ the smaller your personal carbon _____.
- ✚ Commutes, shopping _____ and supply chains will be _____.
- ✗ _____ your _____ Online.
- ✚ Not only does this save _____, but it also reduces _____ consumption by trucks and planes that transport mail.
- ✗ Open a _____ instead of Running the _____.
- ✗ Ask the _____ for an _____ Audit of Your _____.
- ✗ Purchase _____ Star _____.
- ✗ Wrap your _____ Heater in an Insulated _____.
- ✗ Skip the _____.
- ✚ The international _____ industry generates _____% of the worlds greenhouse gas emissions.
- ✗ Say _____ to _____ Bags.
- ✚ They are typically made of _____ and can take up to _____ years to biodegrade in _____ that emits harmful greenhouse gasses.
- ✗ Support your Local _____.
- ✗ Plant _____, it will help absorb more _____ than a rosebush.
- ✗ Shut off the _____.
- ✚ The average _____ consumes 60 to 250 watts a _____.
- ✗ Use _____ Personal Care Products.
- ✗ Turn _____ the Lights at _____ Time.
- ✗ Reduce _____ Use and Buy _____ Paper.
- ✗ Grow a _____.
- ✗ _____.
- ✗ Check your _____.
- ✚ Keeping tires properly _____ can improve gas mileage more than ____%.
- ✚ Giving your engine a _____ can improve gas mileage ____% or more.
- ✗ Consume _____, Share _____, Live _____.
- ✚ _____ when you need to and _____ when asked.