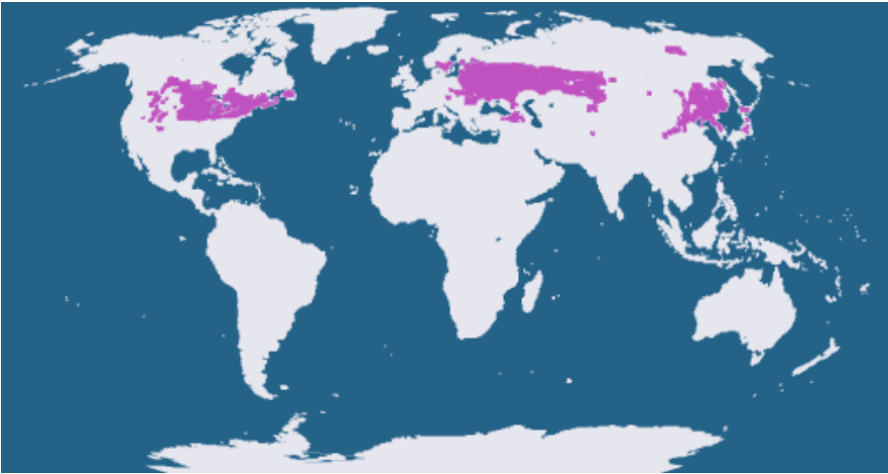


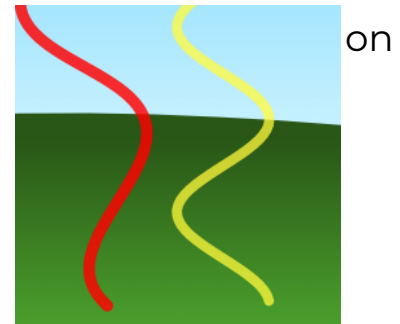
# How does the atmosphere contribute to this climate zone?

Write an explanation next to the map



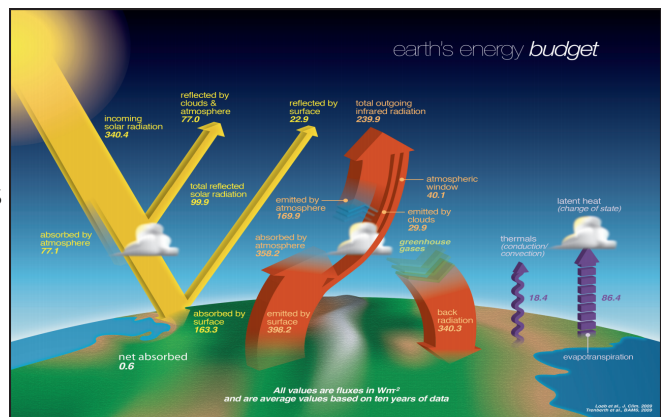
## Solar Energy Review!

- The energy we receive from the sun is our currency. It's the energy that powers everything on Earth.
- Solar energy comes in all forms of the \_\_\_\_\_
- \_\_\_\_\_ come in in the form of \_\_\_\_\_
- Transfers to \_\_\_\_\_ after being temporarily absorbed by the ground



## Earth's Energy Budget

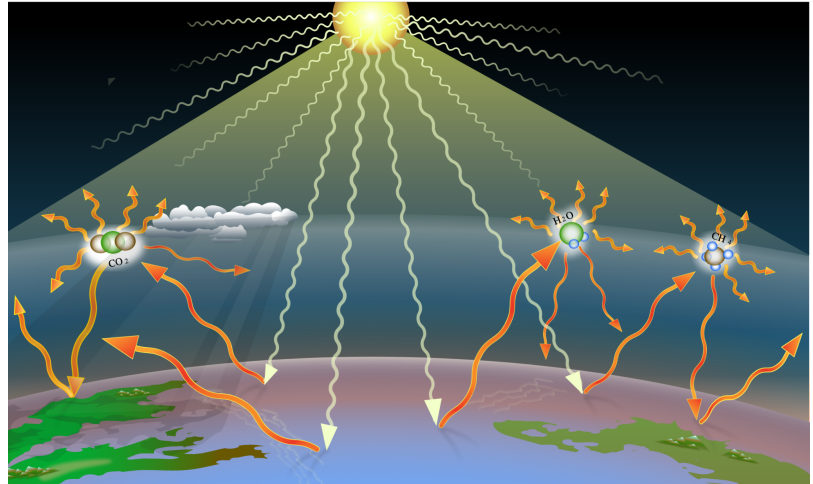
- The energy we receive from the sun is \_\_\_\_\_
- Some sunlight is \_\_\_\_\_ back into space (bounces off clouds and other high albedo things)
- Some is \_\_\_\_\_ by land and water as heat (\_\_\_\_\_)
- The Earth releases that heat over a period of \_\_\_\_\_ time
- Our atmosphere helps hold some heat through the \_\_\_\_\_
- What we want is the \_\_\_\_\_



of

# Greenhouse Gases!

- How do greenhouse gases affect the atmosphere?



- What would happen if there were too little greenhouse gases?
- What would happen if there were too much greenhouse gas?

- What are the top 4 Greenhouse gases?

## Carbon Dioxide on the Rise!

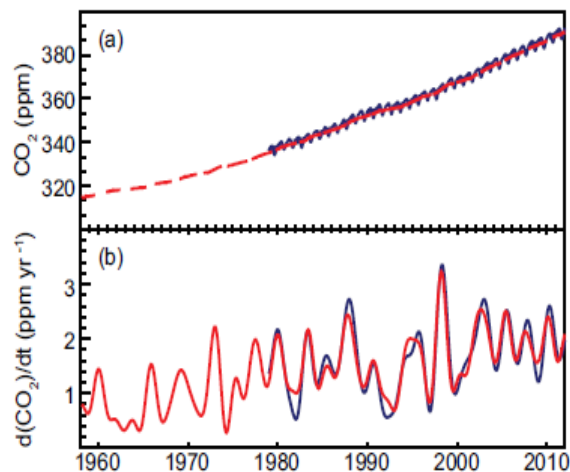
Before 1780 (Industrial Revolution) level of carbon dioxide was \_\_\_\_\_

the

By 1950 it was \_\_\_\_\_

Today Carbon Dioxide levels are \_\_\_\_\_

Currently, Carbon Dioxide levels increase by about 1.7 ppm per year



The hottest the planet has ever been with life on it was during the Paleo-Eocene Thermal Maximum (55mya) where CO<sub>2</sub> levels were \_\_\_\_\_

How long do we have if we keep increasing at this rate?

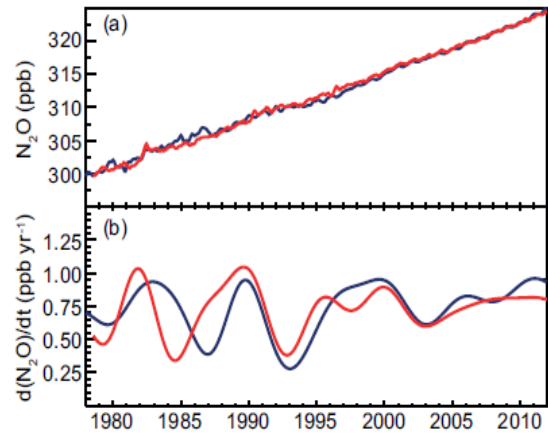
## Nitrous Oxide is also increasing!

The increase is likely from the use of

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Since systematic testing started in the 1970's N<sub>2</sub>O has increased nearly \_\_\_\_\_ each year



## What is happening to the land and ocean temperatures?

