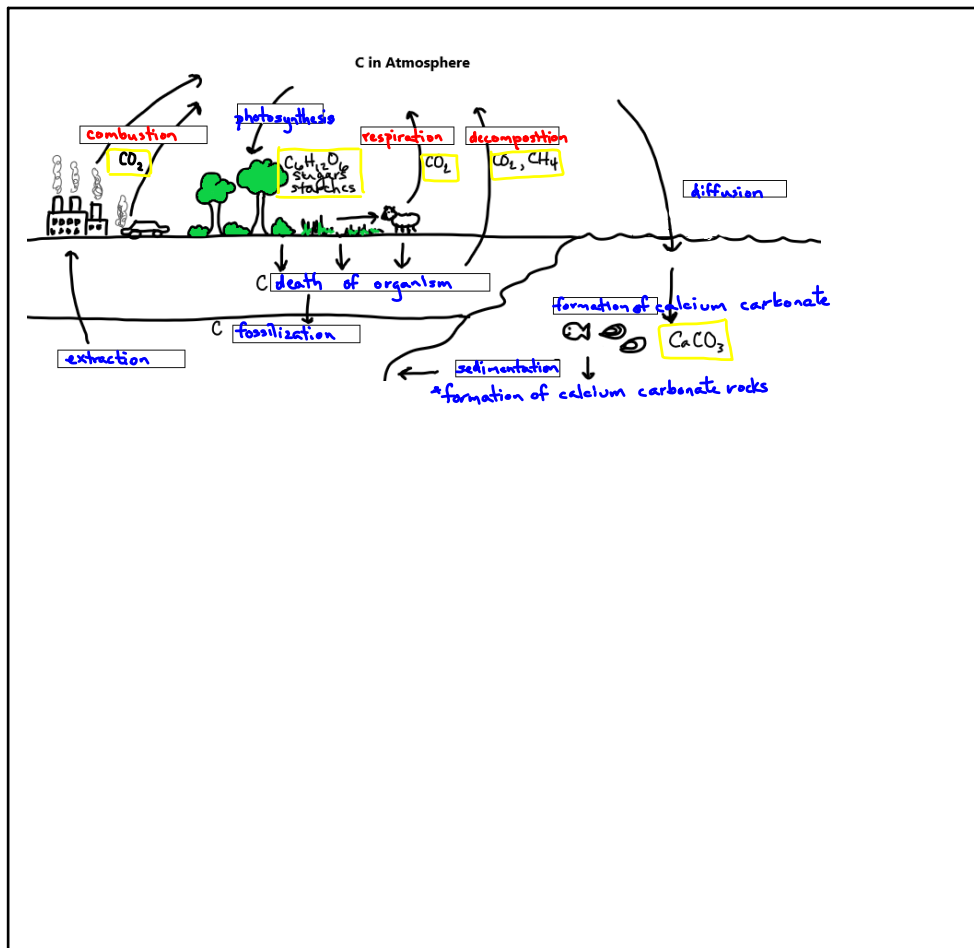
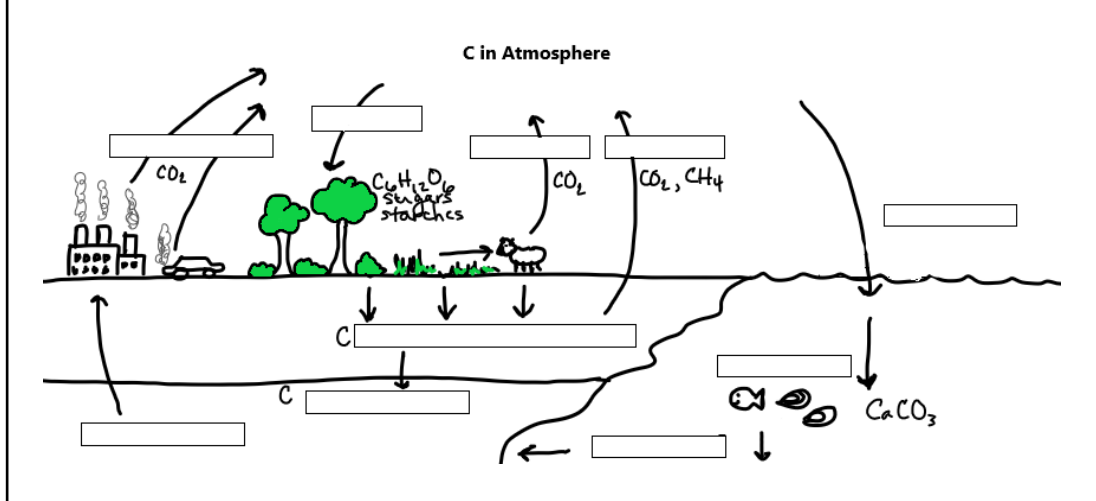


The Carbon Cycle

- The process by which carbon travels from the atmosphere, into organisms and the earth and back into the atmosphere.
- Carbon is continually being recycled.

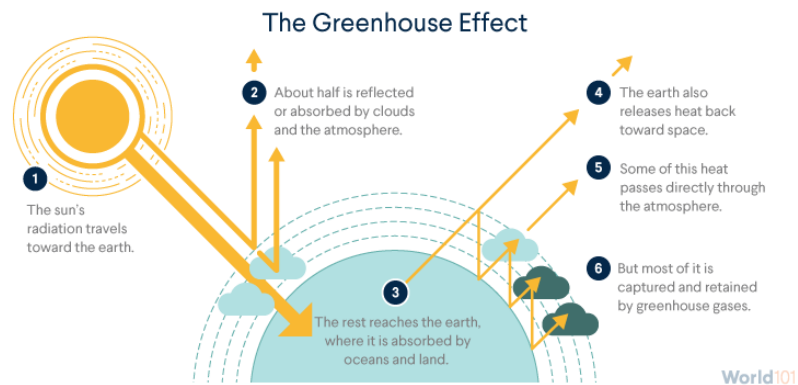


The Greenhouse Effect

Due to carbon dioxide and other greenhouse gases (H₂O, CH₄, N₂O) in the atmosphere.

They help trap the sun's energy which allows us to live comfortably on Earth.

The greenhouse effect is a natural process.



The Greenhouse Effect - Anthropogenic Change

Increase in levels of greenhouse gases

- more heat is being trapped
- temperatures on Earth are increasing

Why are levels of CO₂ /CH₄ increasing?

- ↑ combustion
- ↓ photosynthesis
- ↑ temperature of the oceans
- ↑ melting of the permafrost

Consequences?

1. Melting of polar ice caps
 - a) rise in sea levels
 - b) change in thermohaline circulation
 - c) loss of habitat
2. Melting of permafrost
 - a) release of more CH₄, CO₂ (bacterial decomposition)
.....leads to more melting of the permafrost!
 - b) infrastructure damage
 - c) landslides
 - d) change in flora/fauna
3. More frequent and severe weather
 - a) droughts, forest fires, hurricanes
4. More acidic oceans
 - a) absorption of CO₂ (but harder to absorb as oceans warm)
5. Increase in air pollution
 - a) more ground level ozone = more smog