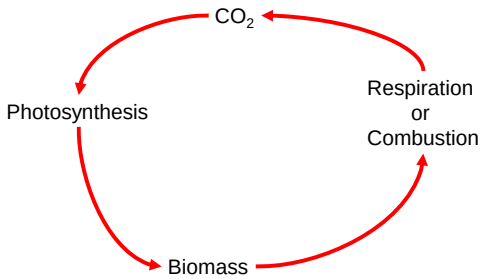
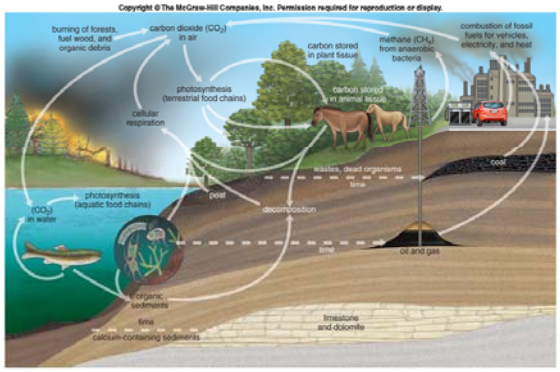
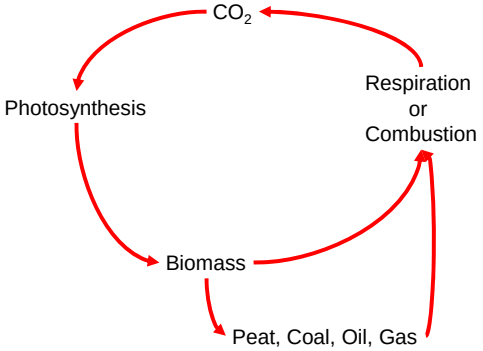
V. Photosynthesis & The Environment

A. Carbon Cycle (pp. 486-487)

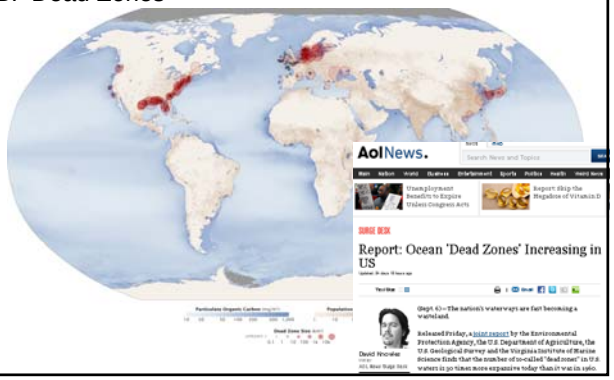






V. Photosynthesis & The Environment

B. Dead Zones



V. Photosynthesis & The Environment

B. Dead Zones

Erosion/Runoff

Eutrophication

Algal Blooms

Subsurface Decay

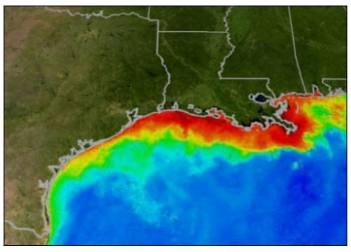
Hypoxia

One Dead Zone in Gulf is size of New Jersey (8,600 mi^2) – prior to 2010 BP Spill

Irony

The Dead Zone - How Farming is Killing the Fishing Industry

by ADAM S RAKE · 6 COMMENTS



Alexandra Cousteau, has created Expedition: Blue Planet. In this

V. Photosynthesis & The Environment

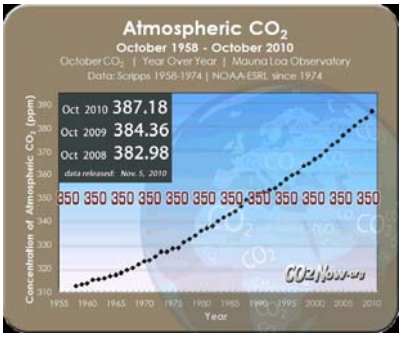
C. The Greenhouse Effect (pp. 493-495)

1. Greenhouse Gases

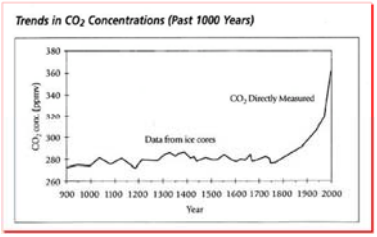
-absorb infrared radiation heat.

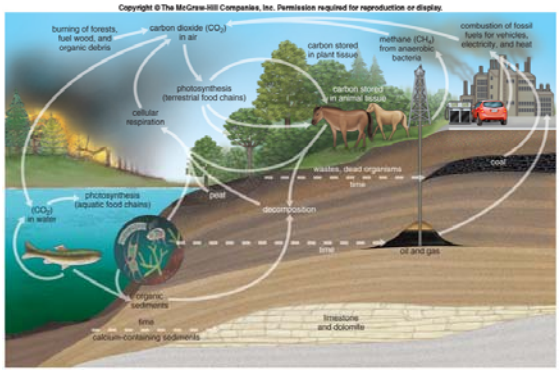
Gas	Formula	Contribution (%)
Water Vapor	H_2O	36 – 72 %
Carbon Dioxide	CO_2	9 – 26 %
Methane	CH_4	4 – 9 %
Ozone	O_3	3 – 7 %

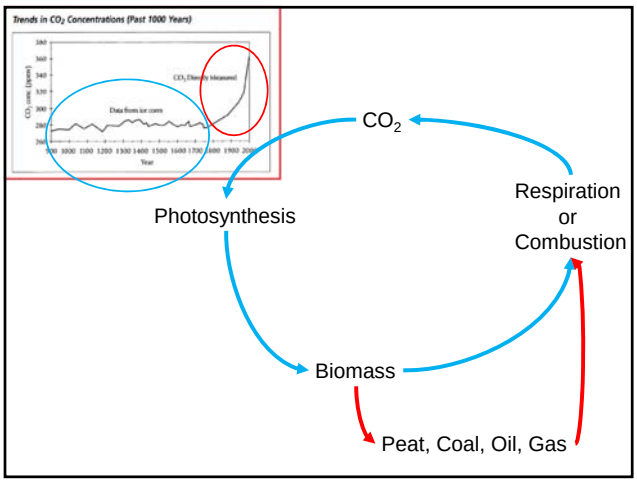
2. CO_2 data

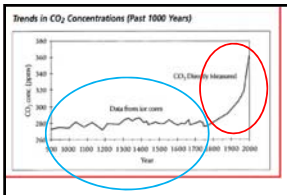


(Mauna Loa Observatory)





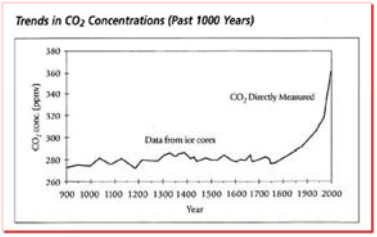




Trivia: Where was the first oil well (in 1859)?

3. Global Warming

1. Predictions:
   a. CO2 increase: 760 ppm by 2050



3. Global Warming

1. Climate & Geographic Predictions:
   b. Temp. increases:
      2050: 1.5 C.
      2100: 6.0 C.

      Context (20 Ka, T was 4 C colder)

3. Global Warming

1. Climate & Geographic Predictions:
   c. Rain/Temp Patterns altered =
      altered agriculture, disease biogeography

3. Global Warming

1. Climate & Geographic Predictions:
   d. Sea level rise due to…

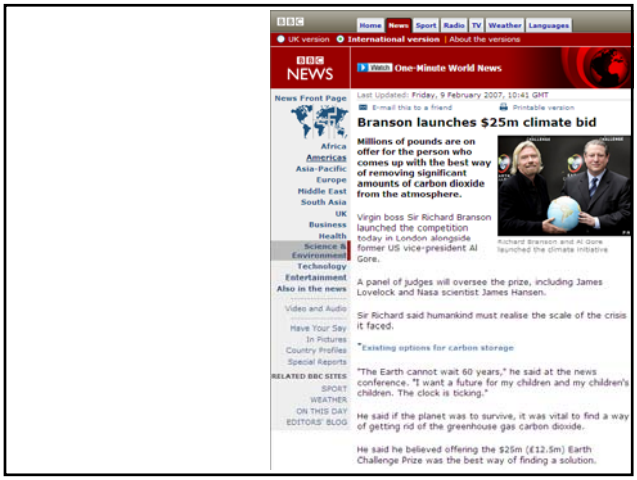
3. Global Warming

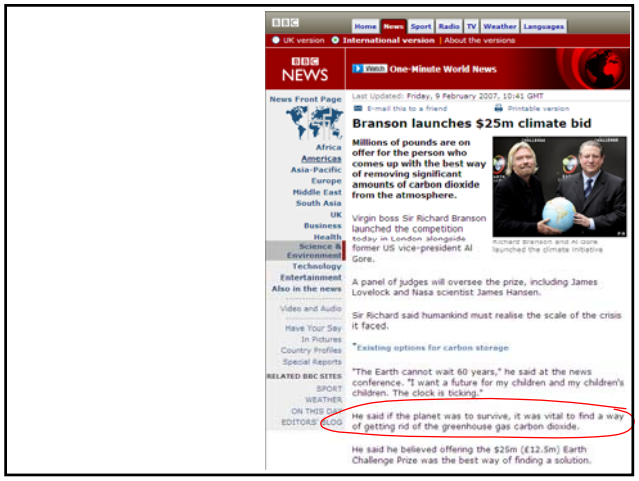
2. Sociopolitical Predictions:

   -Centers of commerce change?
   -Climate refuges?

4. Solutions: apply your knowledge.

a. Remove CO2 from atmosphere

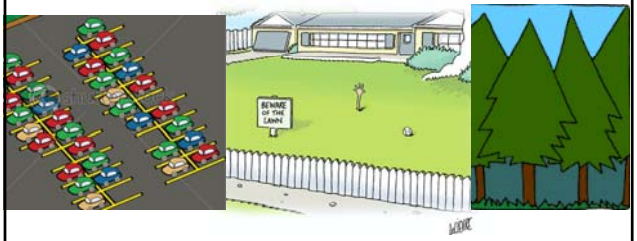




4. Solutions: apply your knowledge.

a. Remove CO2 from atmosphere

Which of these landscapes sequester's more CO2?



4. Solutions: apply your knowledge.

a. Remove CO2 from atmosphere

b. Lower consumption of fossil fuels
-conservation
-More C-neutral alternatives
(biomass fuels, biofuels)