Global Warming Review

1. Identify and describe the 5 major greenhouse gasses including their sources and how human activities are impacting them in the atmosphere.

Greenhouse gas	Sources	Human impacts
CO_2	fossil fuel combustion	Burn fossil fuels
CH_4	livestock, landfills, rice paddies	more meat/decomp. in landfills
NO_x	Cars/vehicles	more ICE engines
CFC's	Refrigerators/coolant	phase out w/Montreal protocol
H_2O (non anthropogenic)	evaporation/transpiration	Non-anthropogenic

also O_3

$NO_x + VOC \rightarrow O_3$

2. What type of radiation to greenhouse gasses absorb? InfraRed

3. Identify 5 consequences of global warming that we have already seen occur.

1. thermal expansion of Ocean 4-8 inches
2. stronger storms
3. more flooding
4. Climate Refugees (Syria, Mid. East, Islands)
5. Warmer temp.

4. Identify 5 consequences of global warming that we predict will happen in the future.

1. Sea level rise + icreased Coastal flooding
2. More extinction
3. Increased acidification of ocean = more coral bleaching
4. Unpredictable weather patterns
5. More climate refugees / invasive species / increased tropical disease

5. Identify 5 ways we can reduce climate change.

1. Use less fossil fuels
2. Plant Trees
3. Eat less meat
4. Buy locally grown food
5.

6. What current law could be modified to include reducing greenhouse gas emissions without passing a new law? Clean Air Act

STOP! GO AND GET YOUR ANSWERS CHECKED

C
_____7. Which of the following is TRUE of carbon as it cycles in nature?

a. Carbon dioxide is released during photosynthesis
b. Carbon compounds rarely exist in the gaseous state.
c. Carbon sinks include forests and oceans.
d. The carbon dioxide concentration in the atmosphere is reduced by cutting trees
e. Carbon is concentrated in igneous rocks.

D
_____8. If Earth had no atmosphere, the mean surface temperature would be approximately -15 degrees C. With our present atmosphere, Earth's mean surface temperature is approximately + 15 degree's C. Which of the following is the best explanation for the difference?

a. Reflection of incident solar radiation by clouds
b. Scattering of visible radiation by aerosols
c. Absorption of UV radiation by the ozone layer
d. Absorption of infrared radiation by atmospheric gases
e. The breakdown of oxygen molecules in the thermosphere

E
_____9. Which of the following will occur if the trend of global temperature increase continues?

a. Night temperatures will decrease as day temperatures increase.
b. Tropical areas will become cooler than they currently are.
c. Sea levels will drop due to increased evaporation
d. The incidence of insect-borne diseases will decrease.
e. The troposphere will contain more water vapor.

D
_____10. Many scientists maintain that a rise in sea level has occurred in the last hundred years as a result of global warming. If this is true, which of the following factors best explains such a rise?

a. Increased precipitation
b. Increased cloud cover
c. Increased evapotranspiration
d. Thermal expansion of the ocean
e. Melting of permafrost

C
_____11. How does the burning of fossil fuels contribute to the net increase in atmospheric carbon?

a. Photosynthesis is reduced by virtue of increased smoke and haze.
b. Carbon released by the burning is not in a form that can be readily absorbed by plants, leaving residual carbon in the atmosphere.
c. Carbon that has been sequestered underground is added to the carbon cycling between the atmosphere and the biosphere
d. Carbon released by the burning is more easily absorbed in the atmosphere than that produced by natural means
e. Carbon released by the burning increases plant growth, producing more carbon for the atmosphere.

B
_____12. Which of the following natural events would be most likely to contribute to the cooling of Earth's atmosphere?

a. Earthquake
b. Volcanism
c. Hurricane
d. Tsunami
e. Monsoon