

OZONE DEPLETION

A. Complete the gaps with one of the words given

25	balance	chemical	destroyed
direct	equator	oxygen	ozone
produced	radiation	screens	stratosphere
strongest	troposphere	ultraviolet	wind
greenhouse			

Ozone is a ----- gas that can be found both in the ----- ('bad' ozone) and the ----- ('good' ozone) but it is concentrated at a height of about ----- km in the stratosphere. The ozone layer exists because ----- filtering from the top of the stratosphere reacts under the influence of ----- radiation to form ----- . This ----- the Earth from the Sun's harmful ----- . The stratosphere ozone is continuously being ----- , ----- and replaced by this ----- process, creating a dynamic ----- between our atmosphere and ultraviolet radiation. This chemical reaction is greatest above the ----- and tropics, where solar radiation is ----- and more ----- , and ozone is distributed to other regions by ----- in the stratosphere.

B. Decide if the following statements are true (T) or false (F).

1. The natural balance in the ozone layer has been disrupted by human activities.
2. Concentration of ozone has increased in the last few years.
3. Chlorine reacts with oxygen to produce more ozone.
4. Chlorine is found in the CFCs released by plastic manufacturing, air cooling systems, refrigeration fluid and aerosol sprays.
5. CFCs are long lived.
6. Ultraviolet radiation breaks down CFCs in the stratosphere and releases chlorine.
7. The ozone 'hole' was formed by ozone depletion.

8. This 'hole' protects us from ultraviolet radiation entering the Earth's atmosphere.
9. There is a seasonal depletion of in the layer of ozone above the Arctic.
10. The ozone 'hole' is more developed in the Arctic than in Antarctica because of the 'polar vortex'.
11. Polar vortex is the circulation of strong upper level winds that surround Antarctica and keep cold air locked in above the continent.

C. Decide if the following statements describe potential impact of ozone depletion on people (P) or on the environment (E).

1. Changes in biochemical composition makes some plant leaves less attractive as food.
2. Extra ultraviolet radiation inhibits the reproduction cycle of phytoplankton, which make up the lowest layer of some food webs. This could affect the population of other animals.
3. Higher levels of ultraviolet radiation causes retina damage and cataracts (a disease of the eye that clouds the eye's lens).
4. Higher levels of ultraviolet radiation causes sunburn and skin cancers.
5. Immune system can be suppressed.
6. Melting ice sheets, glaciers and permafrost can lead to a rise in sea levels