

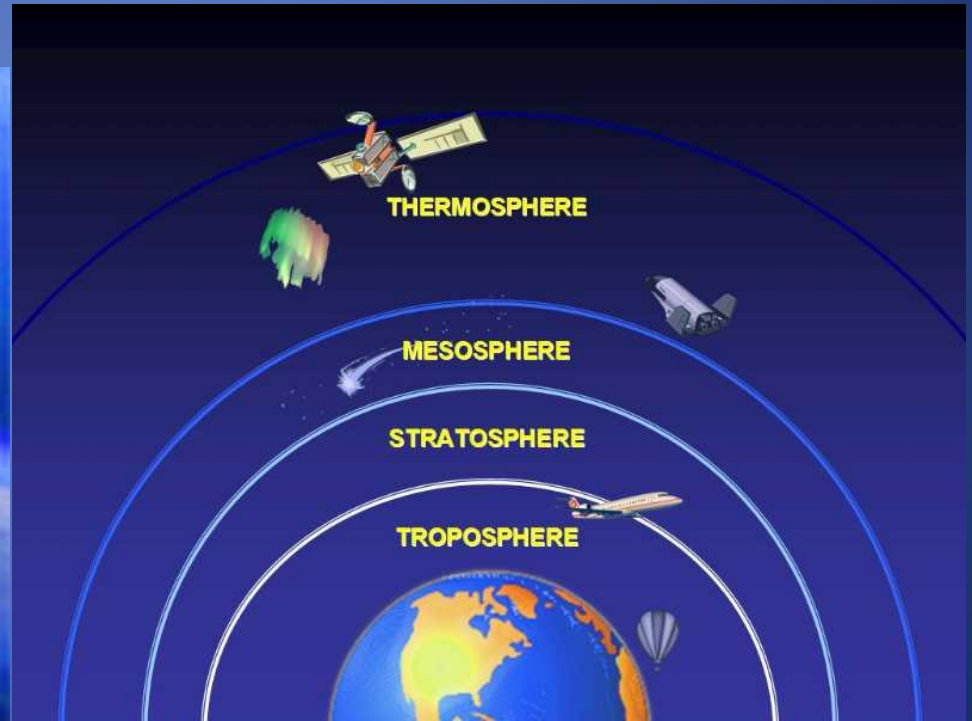
Handout 1 (pink)

Properties of the Atmosphere

Standard 3 Objective 1 Indicator e.
Characteristics of the Atmosphere

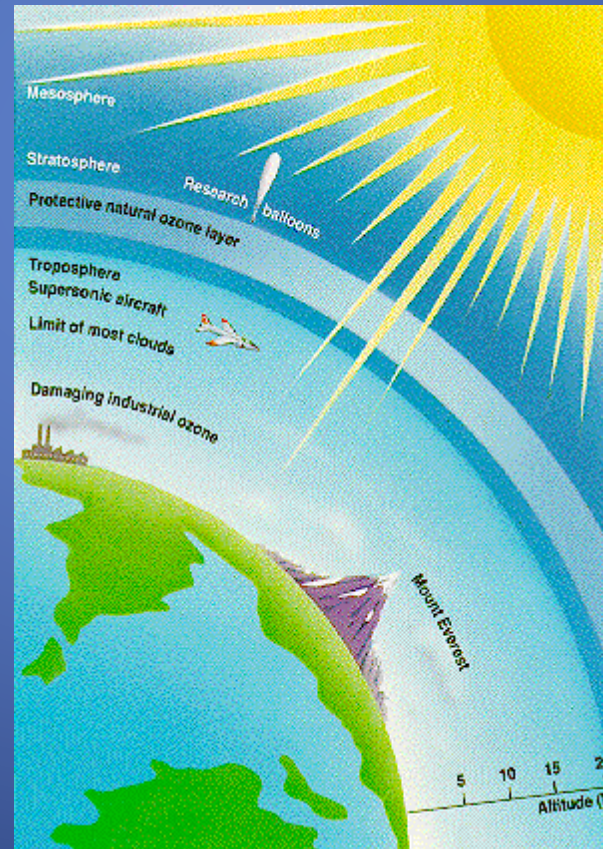
1. Define atmosphere:

- A mixture of gases that surrounds a planet.



2. Describe two important functions served by Earth's atmosphere.

- The atmosphere protects Earth's surface from the sun's radiation and helps regulate the temperature.



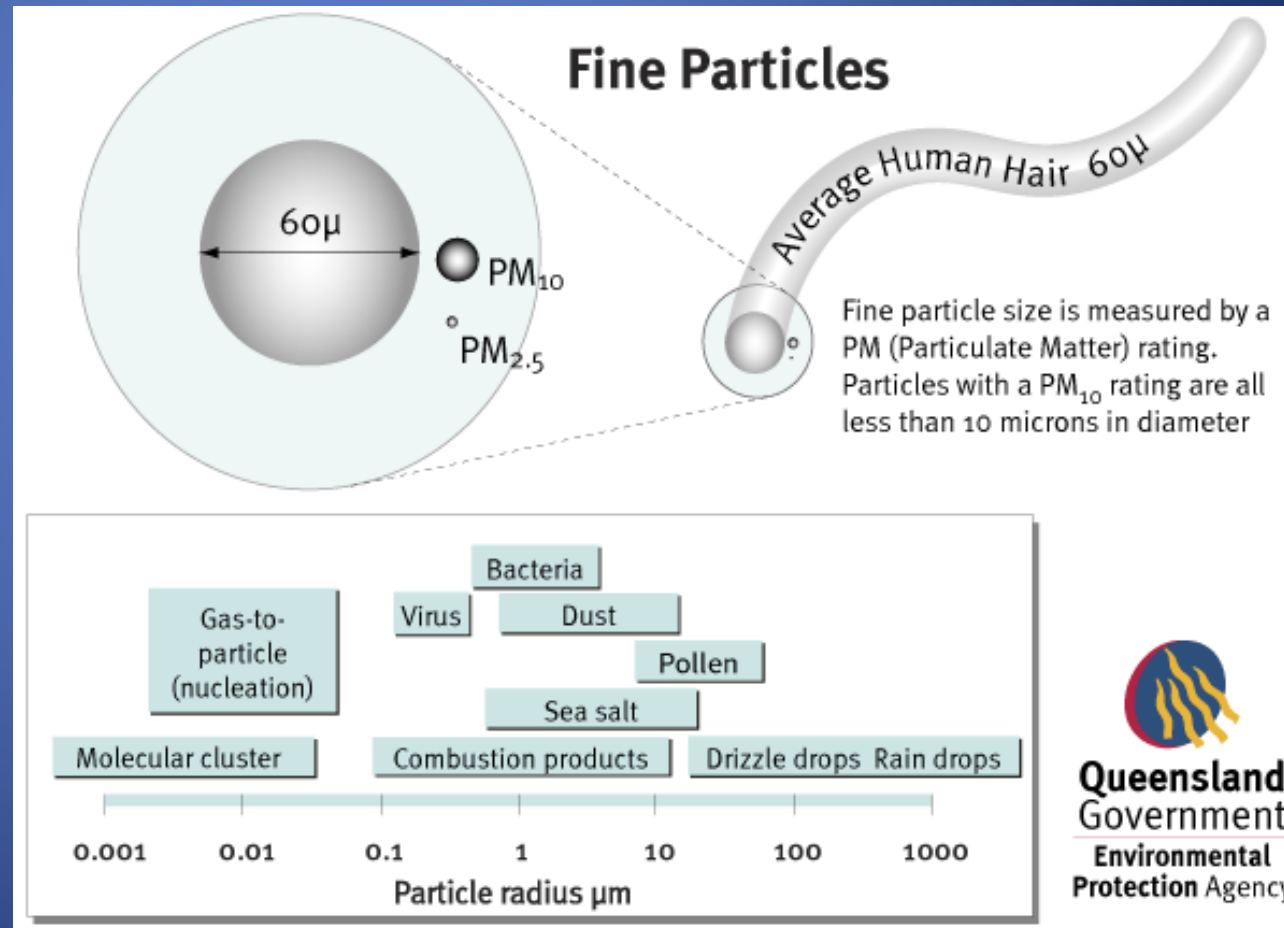
3. The two most abundant compounds in air are the gases carbon dioxide and

- C. water vapor.



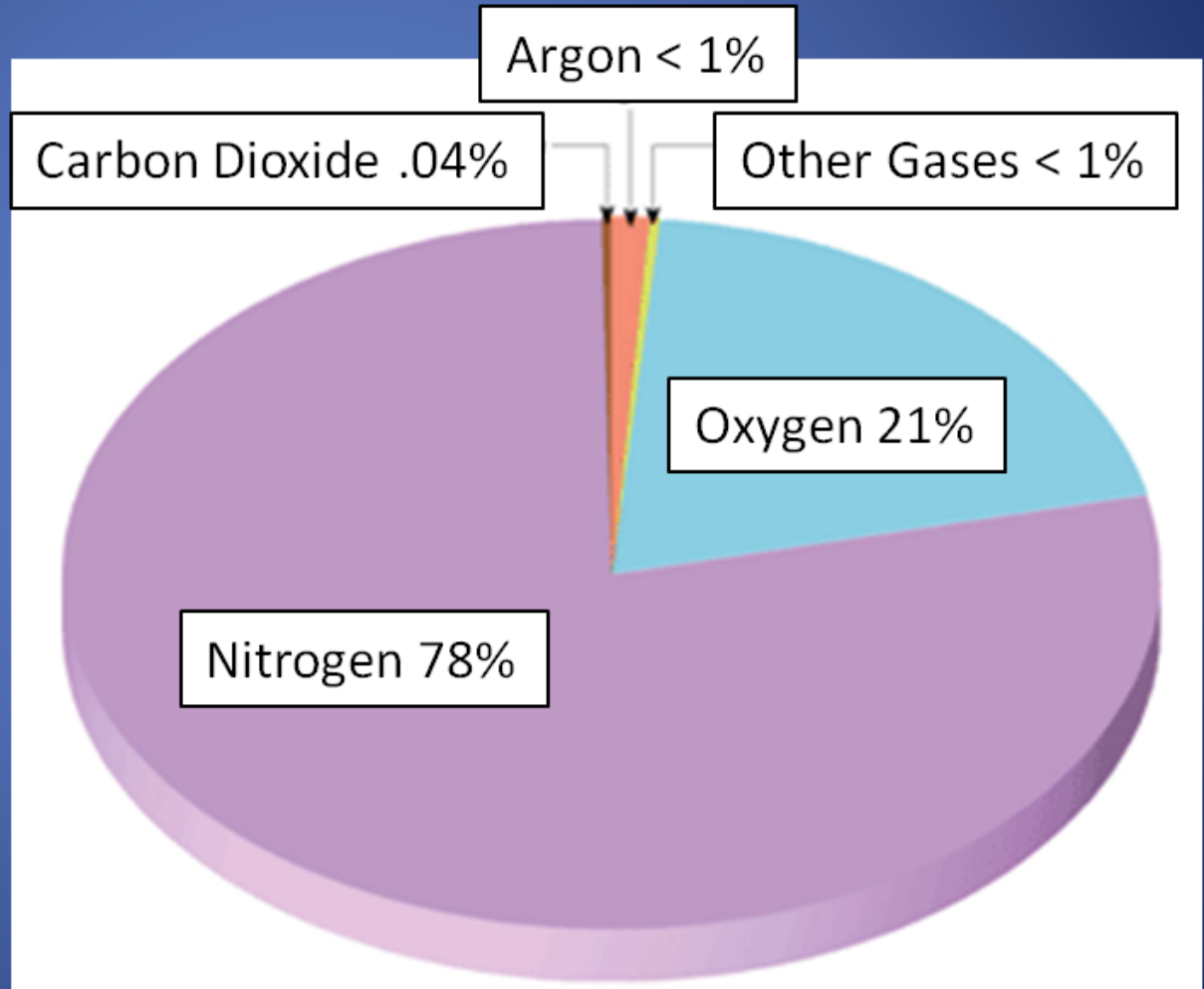
4. In addition to containing gaseous elements and compounds, the atmosphere carries various kinds of tiny solid particles such as dust and

- B. pollen.



5. How much of Earth's atmosphere is composed of nitrogen?

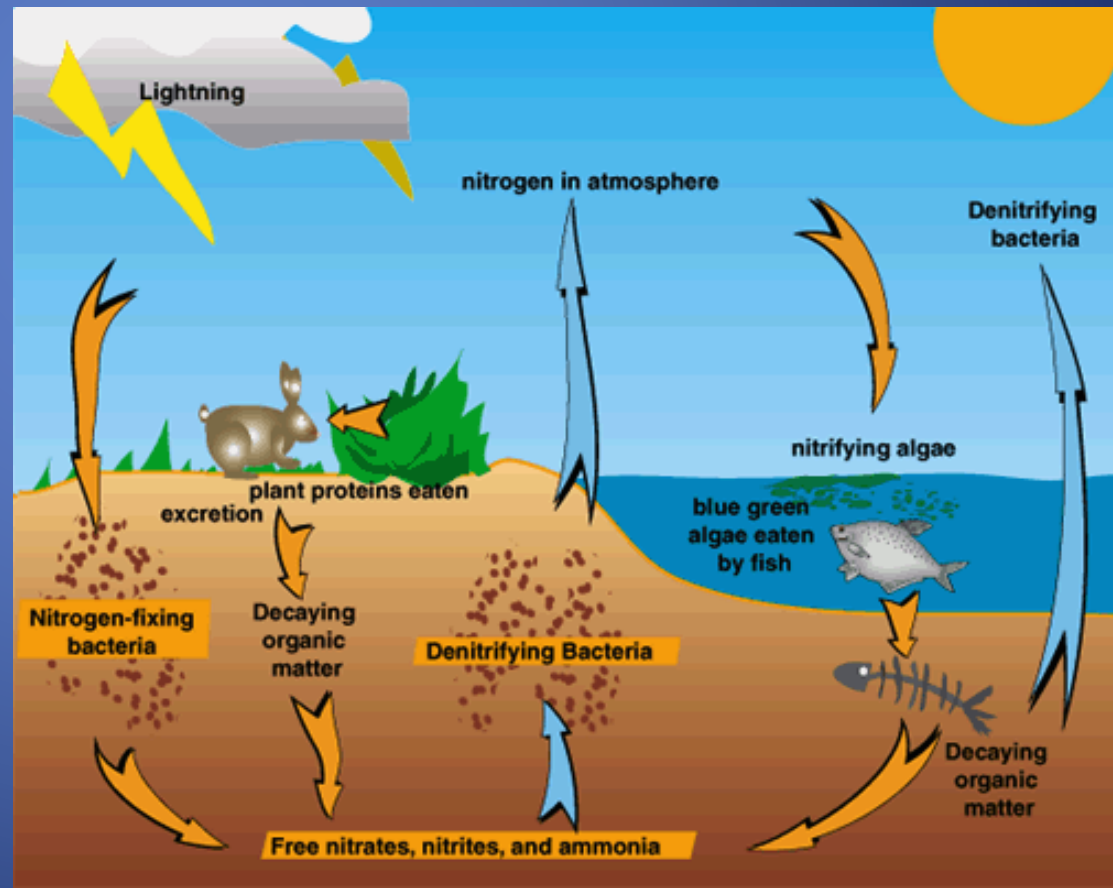
- B. 78%



Pie Chart: Gas Composition of Atmosphere

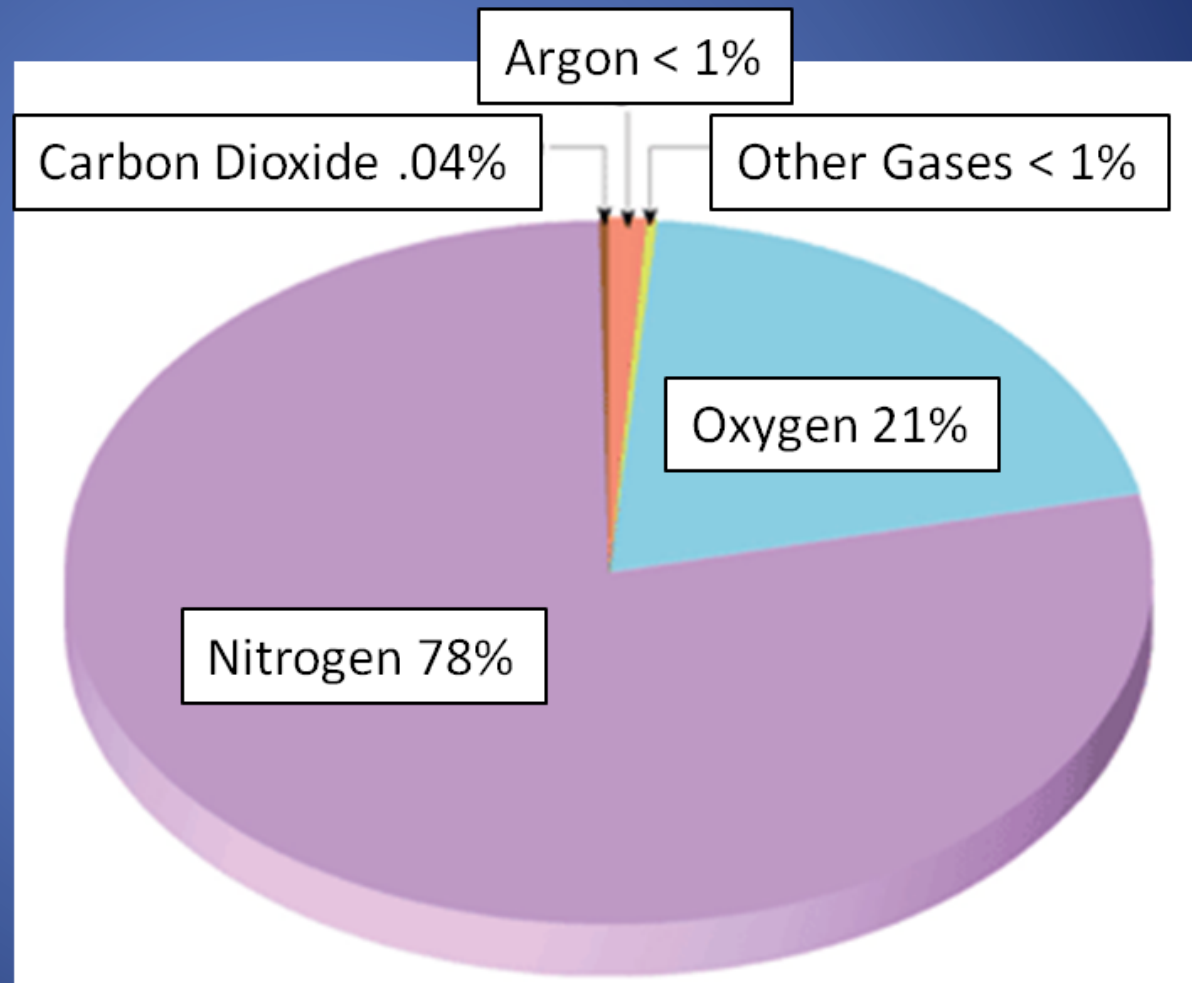
6. The process by which nitrogen moves from air to the soil and then to plants and animals and eventually returns to the air is called the

- D. nitrogen cycle.



7. What percentage of Earth's atmosphere is made up of oxygen?

- 21%



Pie Chart: Gas Composition of Atmosphere

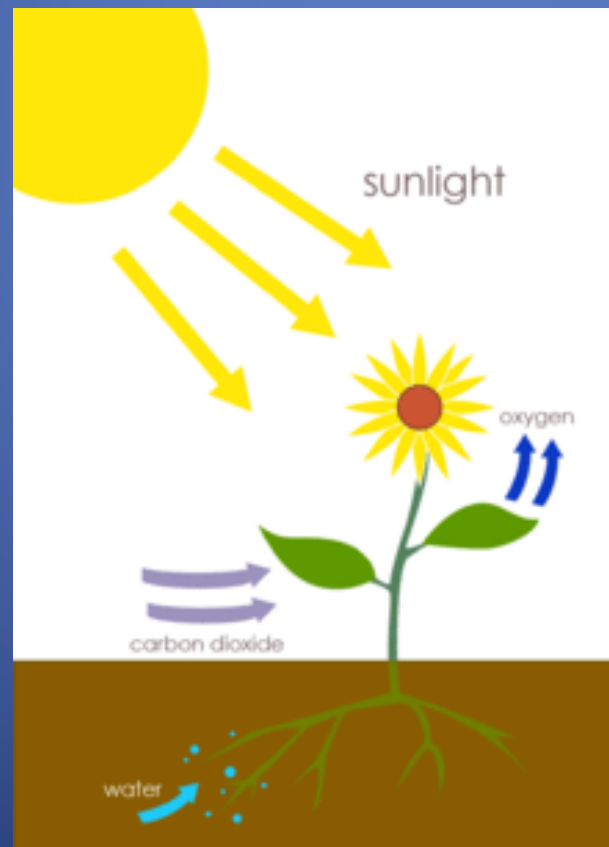
8. Identify six ways oxygen is removed from the atmosphere.

- animals
- bacteria
- plants
- forest fires
- burning of fuels
- weathering of some rocks

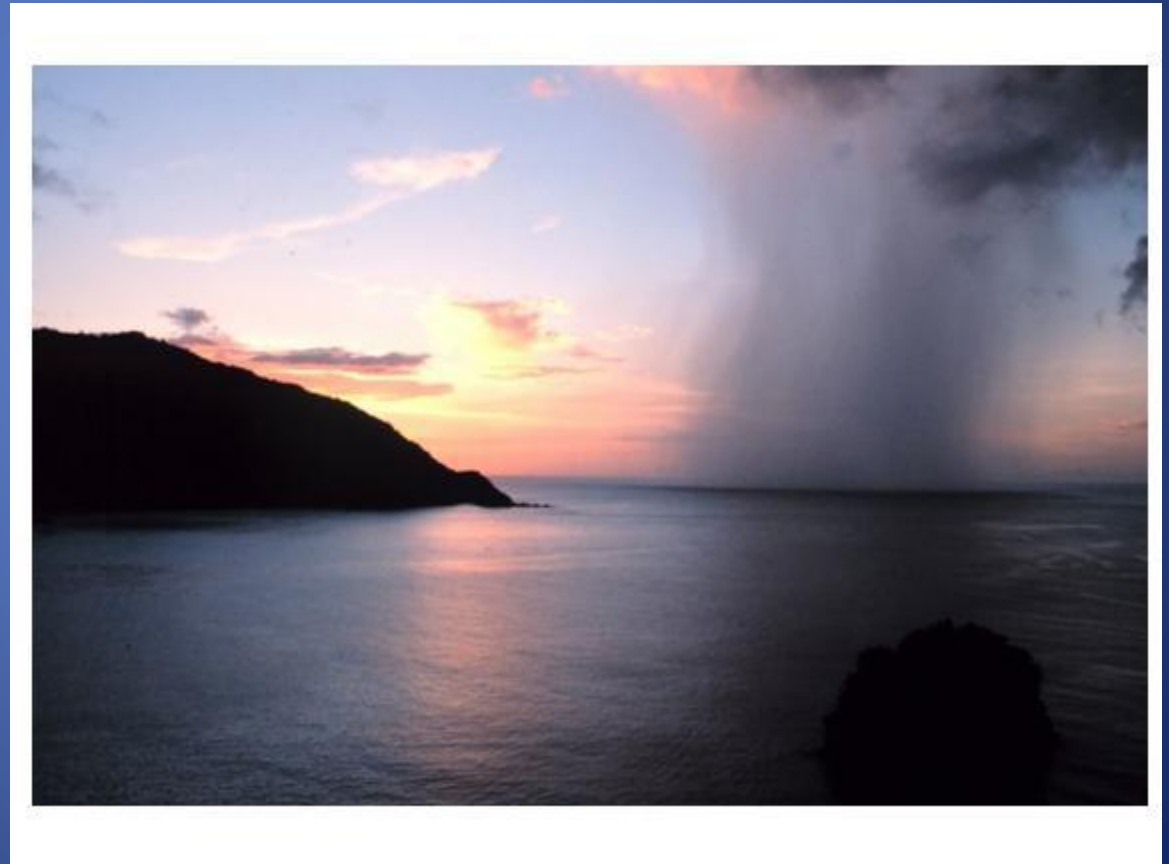


9. Explain how oxygen is returned to the atmosphere.

- Plants produce large quantities of oxygen during photosynthesis.

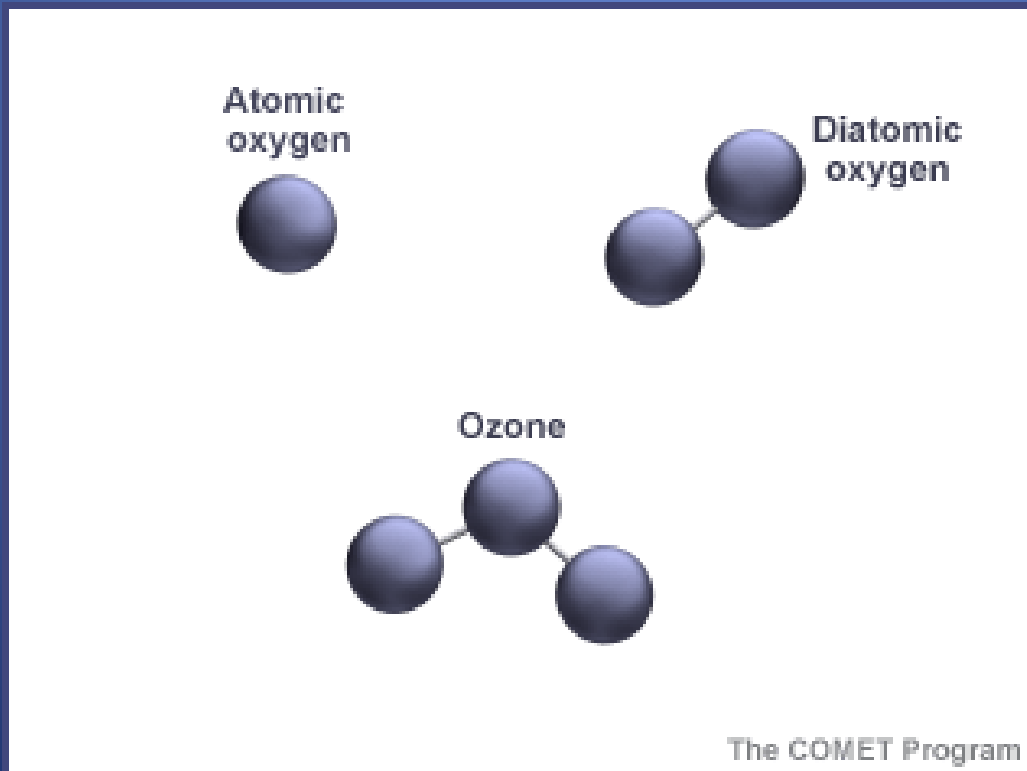


10. As water evaporates from oceans, lakes, streams, and soil, it enters air as water vapor.



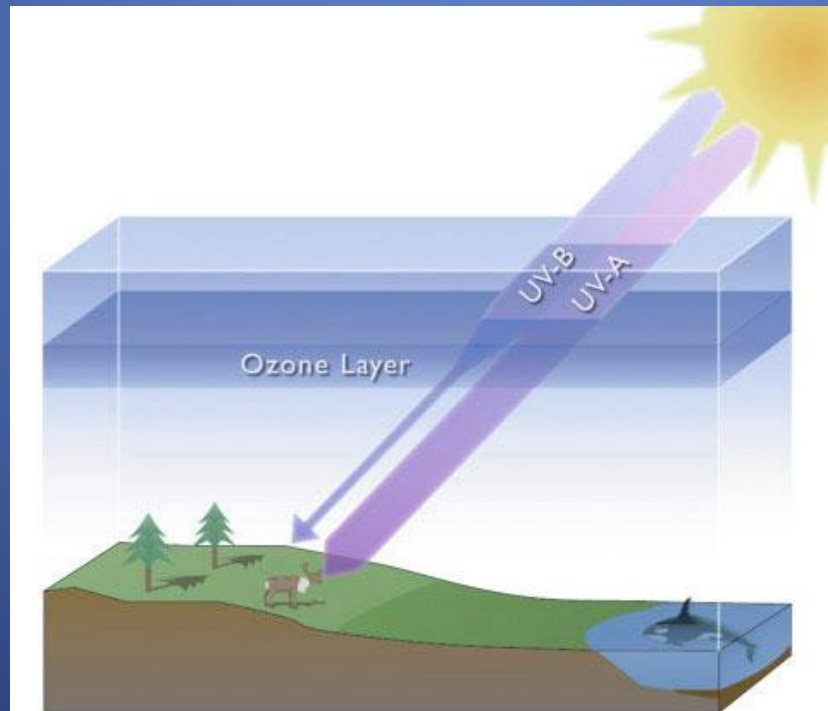
11. What is ozone? How does it differ from oxygen?

- Ozone is a form of oxygen present in the atmosphere in small amounts. Ozone is made of 3 oxygen atoms O_3 .



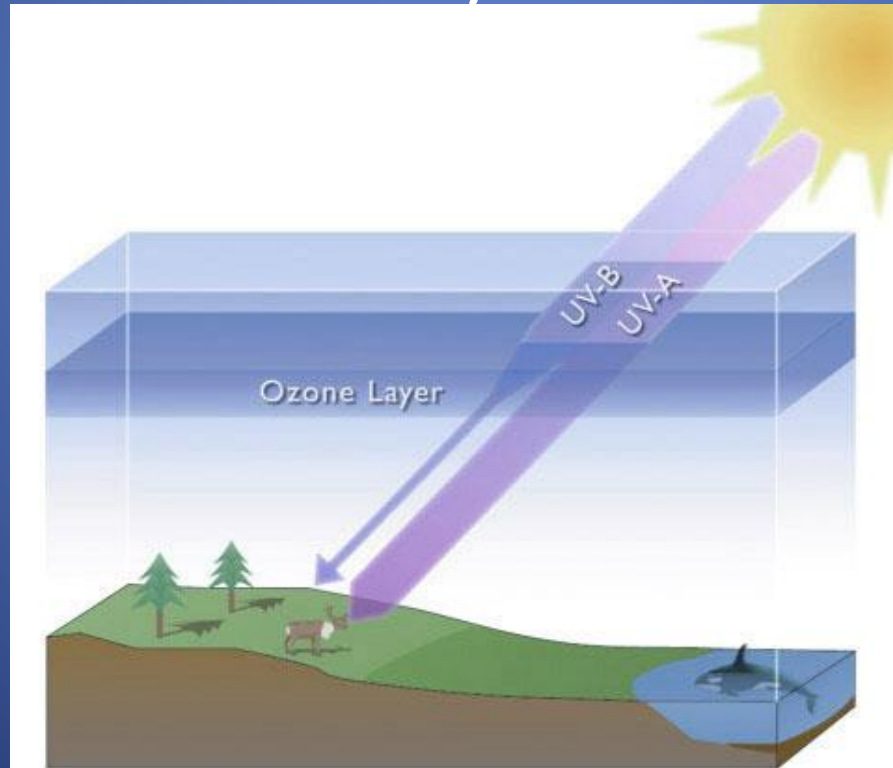
12. What purpose does the ozone layer serve?

- Absorbs harmful ultraviolet radiation from the sun. Without it living organisms would be severely damaged by the sun.



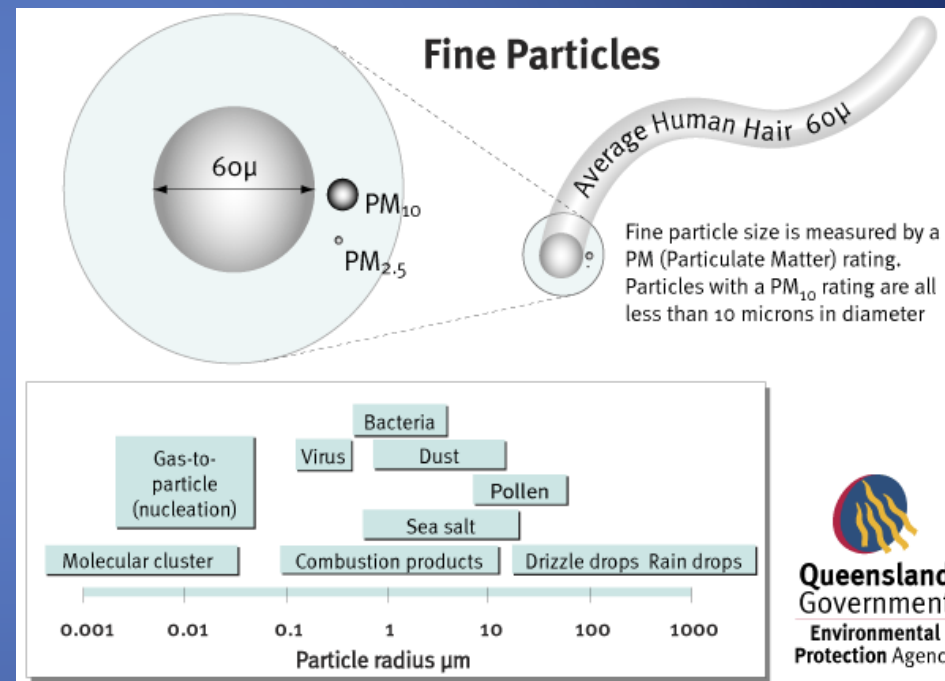
13. Describe the effect of chlorofluorocarbons (CFCs) on the ozone layer.

- They break down Ozone and have caused parts of the ozone layer to weaken.



14. What are particulates?

- Various tiny solid particles in the atmosphere.
 - volcanic dust
 - ash from fires
 - microscopic organisms
 - mineral particles
 - pollen
 - particles from meteors
 - salt



Matching #'s 15-19

15. troposphere

a. the layer of atmosphere between the troposphere and the mesosphere, in which temperature increases as altitude increases

16. stratosphere

b. the uppermost layer of atmosphere, in which temperature increases as altitude increases

17. mesosphere

c. the coldest layer of the atmosphere, between the stratosphere and the thermosphere, in which temperature decreases as altitude increases

18. auroras

d. phenomena caused by interactions between solar radiation and the ionosphere

19. thermosphere

e. the lowest layer of the atmosphere, in which temperature drops at a constant rate as altitude increases



20. What is an air pollutant?

- Any substance in the atmosphere that is harmful to people, animals, plants, or property.



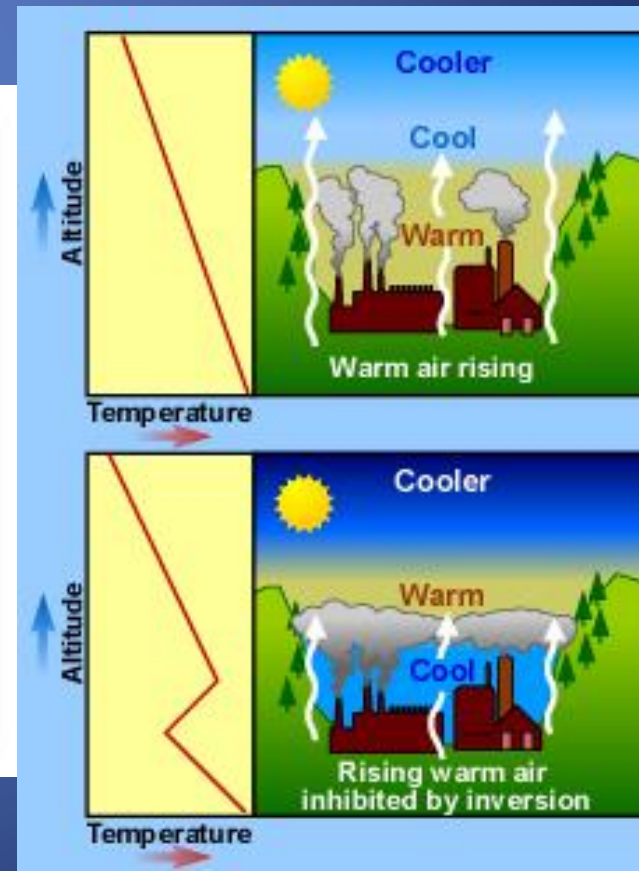
21. How do fossil fuels cause air pollution?

- As fossil fuels burn, they release substances in the air.



22. What is a temperature inversion?

- A layering of warm air on top of cool air.
 - The warm air traps the polluted air beneath it



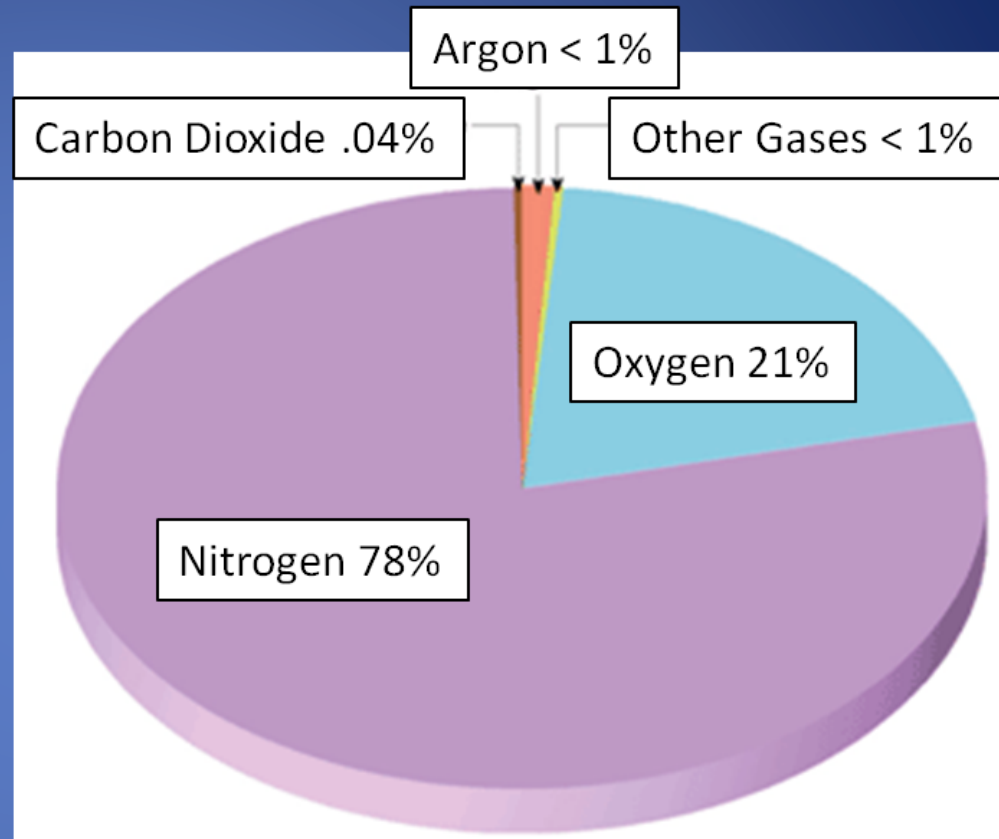
23. What is smog?

- A general term for air pollution that indicates a combination of smoke and fog.

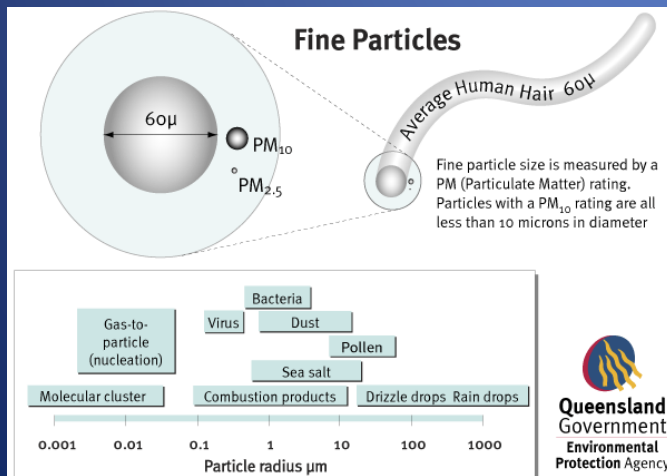


24. Identify five main components of the atmosphere.

- nitrogen
- oxygen
- water vapor
- ozone
- particulates



Pie Chart: Gas Composition of Atmosphere



25. Identify the layer of the atmosphere in which weather occurs.

- The troposphere



The End!



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