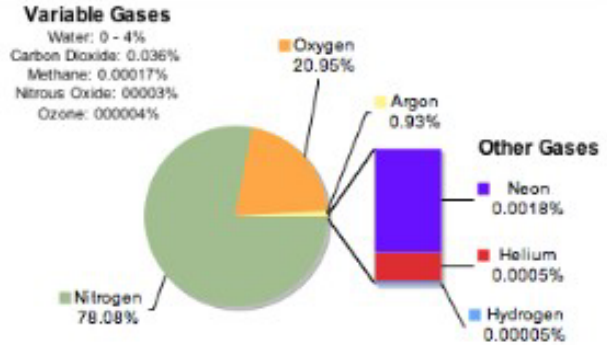


The Atmosphere

The atmosphere consists of five layers of varying sizes, temperatures, and roles. At the lower levels, it is composed of three major gases--nitrogen, oxygen, and argon. Its interaction with other components of the earth is complex, as it shields the earth's inhabitants from harmful rays of the sun while also providing the weather conditions that contribute to the maintenance of the living systems of the planet.



Climate and Weather

Weather is _____

Climate is _____

The Climate Controls (Factors Affecting Climate)

1) _____

2) _____

3) _____

4) _____

5) _____

6) _____

7) _____

(from the PowerPoint presentation)

Atmospheric Processes

The movement of air from areas of low pressure to those of high pressure causes wind. The influence of wind can include: the cooling effect of a summer breeze, the erosion/depositional capacity of removing and creating land forms, as well as causing waves in lakes and oceans.

Precipitation is present when air masses are forced upwards by heating (convection), over mountains (orographic), or the clash of air masses (frontal). As the air masses increase in altitude, they cool and the water vapour contained in the air mass will condense forming clouds. Depending on the conditions in the atmosphere, precipitation in the form of rain, sleet, hail, snow, freezing rain will fall. Contingent on the severity of the conditions, the precipitation can be damaging.

In addition to the influence that heat has on air masses, the energy from the sun will also cause differential heating of the oceans resulting in the movement of currents. As well, heat is an agent of mechanical weathering that occurs on rock surfaces causing them to break down through freeze/thaw cycle.

As the first paragraph said, the atmosphere is made up of five main layers each of which has the suffix "sphere" in its name. Between the first four are three transition zones each of which has the suffix "pause" in its name. Your assignment is to find the names of these layers and zones, give their altitude and describe the atmospheric temperature changes if you were to ascend through them. You may do this graphically or written. (Do not copy and paste from the internet.)