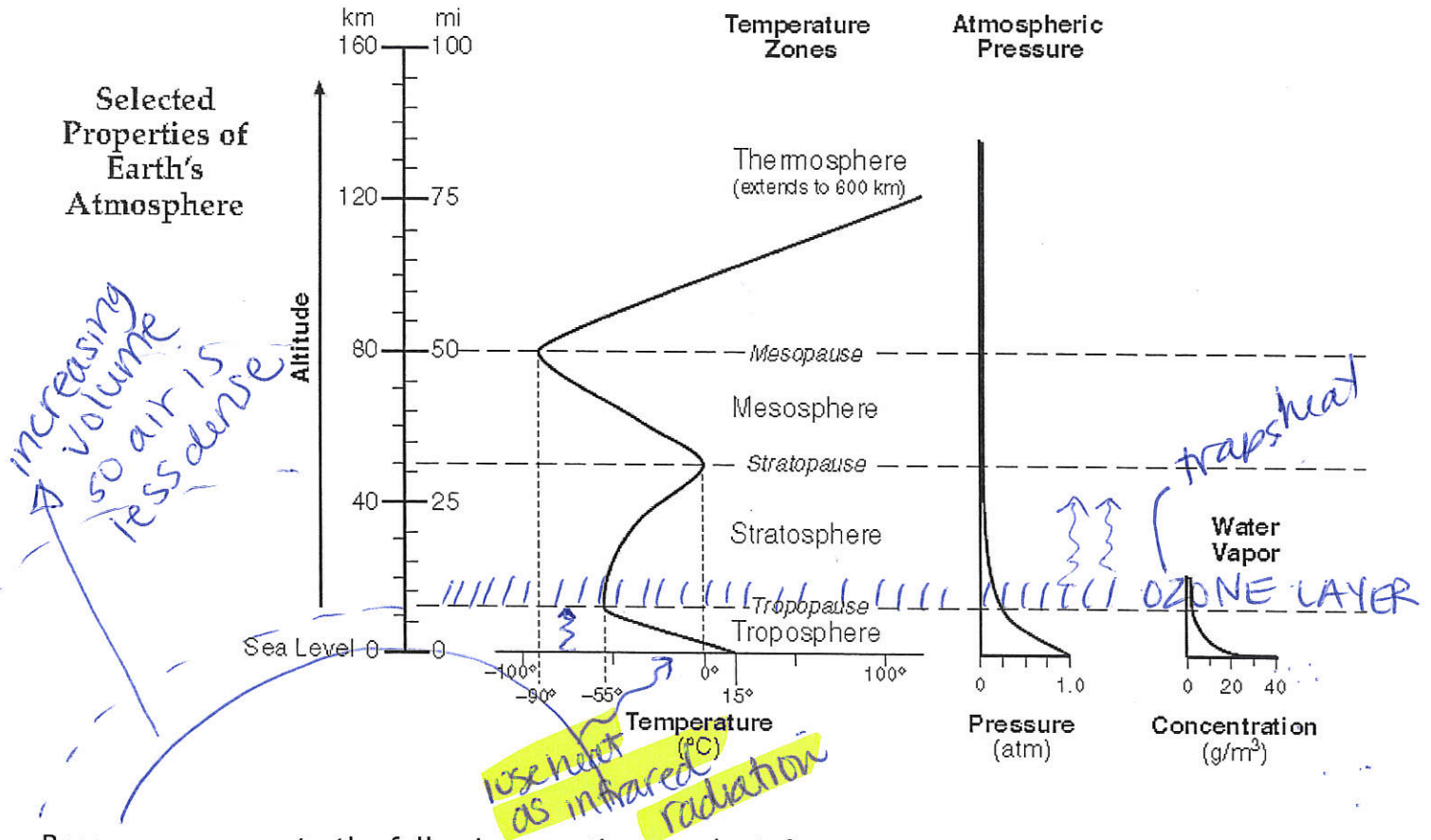


ATMOSPHERE AND ELEVATION

The diagram below illustrates the manner in which the temperature, atmospheric pressure and water vapor content vary with changes in elevation.



Base your answers to the following questions on the information contained in the three graphic relationships in the diagram.

- Using the words "increases, decreases or remains the same," complete the following statements.
 - As elevation in the troposphere increases, atmospheric temperature ↓ less particles to hold heat
 - As elevation in the stratosphere increases, atmospheric temperature ↑
 - As elevation in the mesosphere increases, atmospheric temperature ↓
 - As elevation in the thermosphere increases, atmospheric temperature ↑
 - As elevation above sea level increases, atmospheric pressure ↓ because less molecules
 - As elevation above sea level increases, water vapor content in the atmosphere ↓ bc volume increasing causing molecules to spread farther = cooling leads to condensation adiabatic cooling

2. Which layer of the atmosphere do you live in? troposphere

3. Explain why clouds are generally observed to form only in the troposphere.

not enough H₂O vapor in upper layers

4. What is the atmospheric pressure at sea level? 1 atm = 760 mm Hg = 101.3 kPa

5. At approximately what height in the atmosphere would the atmospheric pressure be at 1.0

atm
millibars? 0 m

6. List the four layers of the atmosphere in the table below, then correctly complete the table by determining the thickness of each layer. (Note: There is insufficient information to determine the thickness for one of the layers; leave the appropriate space blank.)

Layers of the Atmosphere	Thickness (km)
Troposphere	~ 12 km
Strato	~ 38 km
Meso	30 km
Thermo	- cont until exit 600 km

7. The four layers of the atmosphere are separated by thinner layers called "pauses." Describe the change that occurs in the pattern of atmospheric temperature at the "pauses."

temp trend reverses for ex. temp is increasing at the pause the temp will start to decrease

8. a. At approximately what elevation does the coldest temperature occur in the atmosphere?

80 km

b. What name is give to this point in the atmosphere? mesopause

9. What is the temperature at the stratosphere?

stratopause
0°C