Chapter 11 Section 2 Guided Reading

1. The atmosphere can be described by five conditions, including _____, _____, _____, _____, and _____.

2. These (above) conditions are known as the _____.

3. T/F Convection cells are a series of wind patterns caused by global convection and Earth's rotation.

4. Explain the Coriolis effect.

5. Draw Figure 11.11 to show global wind patterns. Make sure to include labels!

6. As temperature _____, evaporation _____.

    a) decreases, increases
    b) increases, decreases
    c) increases, increases

7. As pressure _____, rate of evaporation _____.

    a) decreases, increases
    b) increases, decreases
    c) increases, increases

8. _____ and _____ occur in the atmosphere all the time.

    a) evaporation, condensation
    b) evaporation, precipitation
    c) condensation, transpiration

9. Describe what happens when the rate of evaporation is greater than the rate of condensation and vice versa.

10. Air masses can hold a certain amount of water depending on whether they are cold or warm masses. A cold air mass can hold _____ water than a warm air mass.

11. For water vapor to condense into liquid, water droplets must condense on _____, _____, or _____.

12. Match the weather terms with the correct definition.

rain	air near the ground is cooled below the dew point, and condenses
snow	when water droplets are about the size of 1 mm and fall
sleet	formed when ice crystals and water droplets are present in the sky
frost	when dew freezes
dew	consists of water droplets and is considered a ground-level cloud
fog	temperature variation in the atmosphere refreezes the particles as they fall

13. T/F Climate is different from weather, in that climate is the type of weather a place has over a short period of time.

14. What are biomes?

15. The six major biomes are _____, grasslands, temperate deciduous forests, _____, _____, and _____.

16. How are biomes different?

17. Complete the table.

Biome		Location	Precipitation	Characteristics
Desert			< 35 cm/yr	
	savanna	A wide band on either side of the equator, or on the edges of rainforests	35 – 65 cm/yr	
			25 – 75 cm/yr	
		Mid-latitudes		Four distinct seasons, many broad-leafed trees that lose their leaves at the end of the growing season (deciduous)
Rainforest		Between 23.5° N and 23.5° S		
taiga			30 – 85 cm/yr	Largest biome, temperature below freezing for at least six months out of the year. Also known as the boreal or coniferous forest
		Arctic region/high mid-latitude mountains	15 – 25 cm/yr	

18. _____ help plants and animals survive in their respective biomes.

19. What is an ecosystem?

20. Name four variables that contribute to creating the biomes on Earth.