HW 8: Weather & Climate Study Guide

**Directions:** Each night read the questions and answer all questions you can. 1) Write in the date(s) we learned how to answer the question. 2) Answer the questions on a separate sheet of paper. Number each one. 3) Add to previous answers and correct previous misconceptions (use a different colored pen).

*\* indicates that you must know for the quiz as well as the test.*

Use each of the following terms in a separate sentence.

\*1. Atmosphere \*2. Coriolis effect \*3. Air mass

\*4. Stationary front \*5. Warm front

For each pair of terms, explain how the meanings of the terms differ.

\*6. Nimbus and Cumulus 7. Climate and Weather

\*8. stratus cloud and cumulus cloud \*9. Relative and absolute humidity

\*10. Midlatitude cyclone and hurricane \*11. wind vane and anemometer

\*12. cold front and warm front

\*13. List and describe the main layers of the atmosphere.

\*14. List the three main elemental gases that compose the atmosphere and their %.

\*15. What is atmospheric pressure, how is it measured, how does elevation affect it?

\*16. How is heat energy transferred by Earth’s atmosphere, how does this cause wind?

\*17. List and describe the different types of fronts: Warm, Cold, Occluded, stationary, polar, midlatitude cyclone.

\*18. How are clouds formed, where did the H2O come from?

\*19. How does the combination of cold and warm air masses create more rain?

\*20. Create a chart stating the different clouds, with elevation and anticipated weather.

\*21. How come warm fronts passing over Mountain Ranges don’t need a cold front to create rain?

22. How does latitude affect the temperature of a region?

23. Explain how the greenhouse effect helps to warm the atmosphere.

24. What causes the Coriolis effect? Explain how the winds are affected in the Northern and Southern Hemispheres.

25. How do surface features influence local wind patterns?

26. Describe how the climate in California might be affected if all of the trees in California were cut down.

27. If a breeze is blowing from the ocean to the land on the coast of Maine, about what time of day is it? Explain your answer.

28. Describe the Milankovitch theory, including how it may explain some climate changes.

29. What are the possible effects of global warming?

30. Explain why climates cannot be classified only by latitude.

31. What is the difference between a tornado and a hurricane? Where are you likely to find each?