Science

Chapter 9 Atmosphere Study Guide Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Due\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. What is the definition for:
2. Conduction
3. Convection
4. Radiation
5. Condensation
6. How does atmospheric pressure change as it moves away from the Earth?
7. What provides the source for all energy in our atmosphere?
8. What causes these wind patterns, what type of weather do they cause, and where are they located?
   1. Jet stream
   2. Doldrums
   3. Polar easterlies
   4. Trade winds
   5. Prevailing westerlies
9. What are the different atmospheres? What is their order away from Earth? Explain their temperature and composition?
   1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   4. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
10. What affect does the ozone have on reflection and absorption of solar energy? What would happen to life if we lost our ozone layer?
11. Draw a picture of what happens when solar energy comes toward and Earth.
12. What do differences in heating and the Coriolis effect do the Earth’s wind and weather patterns?
13. Draw a diagram to explain the water cycle.
14. What causes winds?

11. Which gas makes up the largest quantity in Earth’s atmosphere?

12. What percent of incoming solar radiation reaches and is absorbed by the surface of the Earth? \_\_\_\_%

13. Why do some areas of Earth’s surface receive different amounts of radiation?

14. Why is air above the equator heated more than at any other place on Earth?

15. Why is it warmer near the equator?

16. What is an inversion layer?

17. Why do we have sea and land breezes?

18. What happens as heated air expands and becomes less dense than the air surrounding it?

19. What is a downdraft?

20. List the steps in the process of air circulation in the order they occur.

21. What might happen if the radiation balance (the amount of solar energy received and the amount of thermal energy returned to space) became unequal?

22. True or false. The surface of the Earth absorbs energy from the Sun.