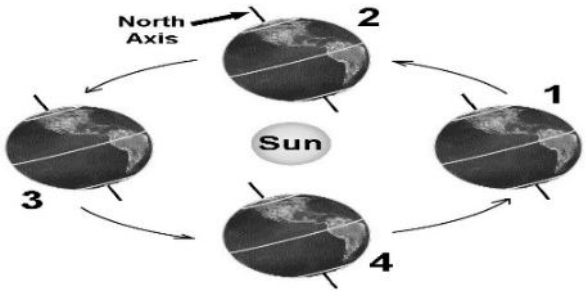
Unit 2 Atmosphere – Study Guide – Due Thursday 11/21 **Name _____**

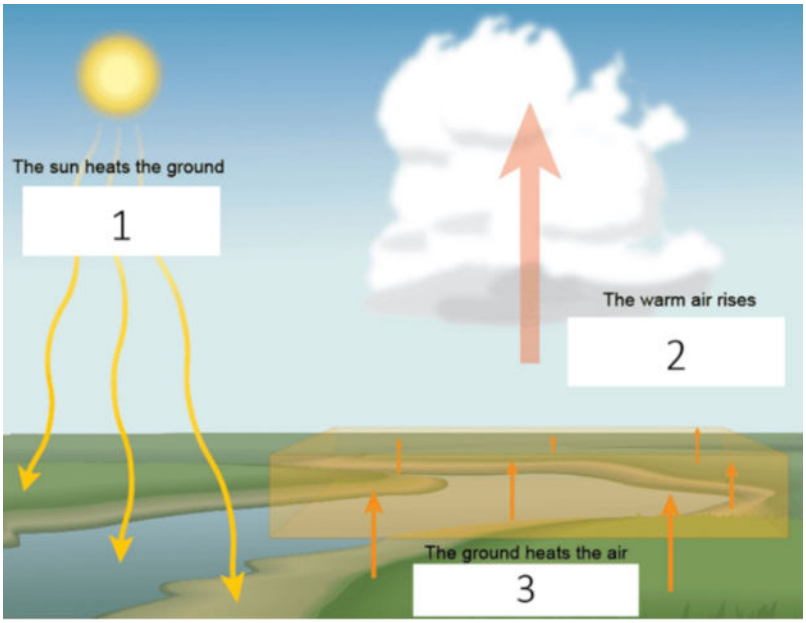
1. Where did the gases in the atmosphere originally come from?	
2. What process added oxygen to Earth's early atmosphere? Explain.	
3. What two gasses are found in the greatest amount in our atmosphere? (the permanent gases) 4. What percent of the atmosphere is each?	
5. What is the main **natural** greenhouse gas?	
6. What other two gasses are the **most** responsible for trapping the sun's energy (Greenhouse Effect) near the earth contributing to global warming? 7. Name one way each of those gases is produced.	
8. Which layer of the atmosphere do people live in and is weather created in? 9. Why does the troposphere contain most of the atmosphere's air? 10. What happens to temperature as you increase in elevation in the troposphere, and why?	
11. What happens to temperature as you increase in elevation in the stratosphere, and why? 12. What special molecule is found in the Stratosphere and what is its chemical formula? 13. Why is this layer so important to humans? 14. What efforts were made to try to fix the hole in this layer, how did it work?	
15. In which layer of the atmosphere do satellites orbit?	

16. How does the tilt of the Earth create seasons?
17. Which point in the diagram shows summer? Which point shows winter?



For each type of energy transfer, identify which number in the picture is showing that process, and explain how it affects the atmosphere in your own words.

18. Radiation
19. Conduction
20. Convection



Carbon Cycle

21. Name 3 reservoirs of carbon.

22. For each reservoir, explain how carbon can flow in and out of it.

23. Explain the role that humans have played in changing the carbon cycle.

24. Model the Greenhouse Effect (in a drawing) and show how it affects Climate Change. Include two greenhouse gasses and their source in the diagram.

Evidence for climate change:

25. Review all 6 of the graphs and state 2 pieces of evidence for climate change.

26. What are 3 human impacts we are observing as a result of climate change?

27. Propose 3 solutions to help combat climate change and explain how each would work.

Optional: Explain how increased atmospheric carbon dioxide has caused ocean acidification and the effects of ocean acidification.	