Name:

Teacher’s Name:

Subject:

Date:

**Unit 2 Study Guide**

**Directions:** **Select the answer that best answers the question of completes the statement.**

1. Which statement is **not true** regarding carbon dioxide?
2. its concentration has increased steadily over the last several decades
3. it absorbs longwave radiation from Earth
4. it’s only been in the atmosphere since society developed technology and industry
5. it helps keep Earth’s temperature habitable
6. Good climate science will involve
7. experiments that no one else can repeat
8. review from fellow scientists and colleagues
9. suppressing data to create graphs with nice, smooth trends
10. personal influences that are not factual
11. Dust and gas released into the upper atmosphere by volcanoes
12. primarily increases solar radiation reaching Earth
13. on average does not affect solar radiation reaching Earth
14. is an anthropogenic source of climate change
15. primarily decreases solar radiation reaching Earth
16. What is the most ***likely*** reason that the Intergovernmental Panel on Climate Change says there is a strong relationship between climate change and greenhouse gas emissions?
17. scientists show that greenhouse gases are emitted by human activities
18. data show global temperatures rising sharply as carbon dioxide concentrations rise
19. ice core data show the historical climate has fluctuated based on the amount of greenhouse gases in the atmosphere
20. fossil fuels are of finite quantity, so it is necessary to consider alternative sources of energy
21. Climate is the weather
22. on a day to day basis
23. extremes of specific regions
24. averaged over a long time period
25. on a year to year basis
26. An appropriate example of an adaptation strategy is
27. water conservation
28. driving a hybrid vehicle
29. improving flood evacuation plans
30. using public transportation when possible
31. Mitigation strategies may involve
32. protecting species from irreversible impacts of climate change
33. reducing greenhouse gas emissions by using clean technology
34. using drought resistant crops to deal with heat waves and drought
35. improving fire suppression in areas experiencing wild fires
36. Rising global temperatures
37. are responsible for increased precipitation everywhere
38. do not affect the oceans
39. are primarily due to natural causes
40. cause sea levels to rise
41. Impacts of climate change include
42. less evaporation from Earth’s surface and hence, drought conditions
43. more record lows in temperatures than record highs
44. fewer tropical storms that are much more intense
45. coastal flooding due to rising sea levels
46. Natural sources of global climate change
47. contribute to climate change as much as anthropogenic sources
48. may include agricultural sources, such as using fertilizer
49. involve variations in incoming solar radiation
50. do not include Milankovitch Cycles
51. An enhanced greenhouse effect may occur if
52. methane concentrations in the atmosphere increase
53. the overall albedo of Earth increases
54. there is an increase in volcanic eruptions
55. less longwave radiation is emitted by Earth

**Directions:** **Choose whether the statement is true or false. *If the answer is false, describe why the statement is false or what can be written so that it is true.***

1. True/False: The IPCC implements policies to reduce climate change based on their assessment reports.
2. True/False: Global climate change is something that everyone needs to be concerned about as it affects everybody though perhaps in different ways.
3. True/False: Milankovitch Cycles describe the 11 year cycle of sunspots on the Sun.

**Directions:** **Fill in the word or words that best completes the statement.**

1. Saying that Alaska is a much colder state than Hawaii is a description of Alaska’s \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
2. Greenhouse gases emitted by anthropogenic sources that contribute to global climate change from greatest to least are carbon dioxide, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, nitrous oxide and fluorinated gases.
3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ occur when a region experience multiple days of extremely hot weather and may lead to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ in areas also experience drought conditions.
4. A temperature \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ describes the deviation of the temperature from a long-term average or normal condition.

**Directions:** **Read the question and write your response in the space provided using complete sentences.**

1. Explain how the greenhouse effect works. In your answer include a description about what happens to incoming solar radiation.
2. Describe how melting ice caps act as a positive feedback mechanism in climate change.
3. How can rising temperatures affect agriculture? Provide a specific example.
4. What is the anthropogenic activity that contributes most to global warming? Describe how it contributes to global warming.