Name: _____ Key _____   Date:_____   Period/Mod #: _____

DIRECTIONS: FOR EACH QUESTION, CIRCLE THE BEST ANSWER AMONG THE FOUR CHOICES

1. What is another name for the water cycle?
    a. Hydrogen cycle
    b. Nitrogen cycle
    c. Hydrologic cycle
    d. Carbon cycle

2. Which gas is not a significant contributor to greenhouse gasses?
    a. Carbon dioxide
    b. Hydrogen
    c. Methane
    d. Nitrous oxide

3. How are climate and weather different?
    a. Climate and weather are not different.
    b. Weather is the accumulation of climate over time.
    c. Climate is long term weather conditions and weather is the state of the atmosphere at a place and time.
    d. Climate is the variability in the amount frost-free days on an annual basis.

4. What does an anemometer measure?
    a. Soil temperature
    b. Precipitation
    c. Evaporation
    d. Wind speed

5. Which is a response or action we take to cope with the actual or anticipated impacts of climate change?
    a. Adaptation
    b. Emancipation
    c. Consultation
    d. Mitigation

6. For growing plants indoors, what is the best source of light?
    a. Heat lamp
    b. Fluorescent light
    c. Flashlight
    d. Incandescent light

7. If you are planting corn seed in a 4-inch pot, what is the ideal amount of water to wet the potting soil and initiate seed germination?
    a. 1 milliliter
    b. 500 milliliters
    c. 100 milliliters
    d. 1000 milliliters

8. How can you depict annual precipitation at a site location, like a local airport?
    a. Graphing the data
    b. Using a rain gauge
    c. Using a soil probe
    d. Making a conclusion

9. What unit of measure is used to measure temperature?
    a. Joules
    b. Fahrenheit
    c. Meters
    d. Liters

10. Using different colors of a mulch in an experiment designed to help you understand how mulching can affect soil temperature and soil moisture, 'different colors of mulch' is an example of which kind of variable?
    a. Control
    b. Random
    c. Extraneous
    d. Treatment

11. What would we be trying to mimic through a water cycle demonstration?
    a. The effects of extreme light conditions
    b. The effects of extreme temperature conditions
    c. The effects of an unknown substance
    d. Where water molecules on Earth go and get stored

12. What is a logical dependent variable in a greenhouse effect experiment where we increase the number of plastic wrap sheets surrounding each pot and measure plant growth after 4 weeks?
    a. The soil type each plant grows in
    b. The layers of plastic wrap over the plants
    c. The height of each plant
    d. The amount of water each plant receives

13. What are we trying to understand by determining the precipitation trend in our area over the last 70 years?
    a. Relative humidity
    b. Climate variability
    c. Evaporation rates
    d. Weather conditions

14. What is the overall temperature trend in our area over the last 70 years?
    a. It has increased slightly (between 0 and 2 degrees F)
    b. It has increased greatly (over 2 degrees F)
    c. It has decreased
    d. There has been no change

15. What have been some contributing factors that have led to increasing temperatures on Earth?
    a. A decreased use of fossil fuels
    b. An increased reliance on solar and wind energy sources
    c. Increasing population adding more greenhouse gasses to the atmosphere
    d. Rainfall, sleet, hail and snow

16. What is the transformation of water vapor to liquid water droplets in the air?
    a. Transpiration
    b. Sublimation
    c. Evaporation
    d. Condensation

17. On average, how much has the human influence on the greenhouse effect increased the earth's temperature?

      a. An additional 1.4 °F

      b. An additional 10 °F

      c. An additional 60 °F

      d. Humans do not contribute to the greenhouse effect

18. Which of the following is not a component of a weather station?

      a. Anemometer

      b. Standard rain gauge

      c. Pan evaporator

      d. Ground water pump

19. The temperature on a particular day is an example of what?

      a. Weather

      b. Evapotranspiration

      c. Adaptation

      d. Climate

20. How is mitigation defined in terms of a changing climate?

      a. An effort to make climate change more severe

      b. A management decision to do nothing

      c. An effort to stop or slow climate change

      d. A natural phenomenon

21. If you were conducting an experiment to simulate the effects of drought or flooding on plant growth, which variable would you change?

      a. The amount of soil each plant is grown in

      b. The amount of daylight each plant receives

      c. The size of the pot each plant grows in

      d. The amount of water each plant receives

22. What unit of measurement would be best to use to measure plant height in a greenhouse effect experiment?

      a. Celsius

      b. Inches

      c. Milliliters

      d. Centimeters

23. What is the unit of measure used to measure annual precipitation?

      a. Depth in Celsius

      b. Depth in inches

      c. Depth in atmospheres of pressure

      d. Depth in grams

24. How can you best compare temperature and precipitation trends in our area?

      a. Purchase a rain gauge and outdoor thermometer

      b. Make hypotheses, test the hypotheses using climate data from the web, and draw conclusions

      c. Use an iPad or computer to look up stuff

      d. Look at last year's daily temperature and precipitation figures

25. How deep should your bark mulch be covering your soil to decrease soil temperature and increase soil moisture in the summer?
     a. 6 cm
     b. 8 inches
     c. 25.4 cm
     d. 1 foot

26. Which is the least likely outcome if a plant receives slightly less water than they need for optimal growth?
     a. They will wilt
     b. They will not grow as fast
     c. They will die
     d. Some leaves will dry and fall off

27. What are we trying to understand through a greenhouse effect experiment where we increase the number of plastic wrap sheets surrounding each pot and the plants in the pots, and place the pots under a heat producing light source?
     a. The relationship between plant growth and the amount of water received
     b. The relationship between plant growth and air and soil temperature
     c. The relationship between plant growth and light source
     d. The relationship between plant growth and the amount of fertilizer received

28. What is the precipitation trend in our area over the last 70 years?
     a. It has decreased
     b. It has increased
     c. There has been no change
     d. It increased then decreased
     e. Other:_____ (please specify)

29. What does global temperature data from the last 120 years indicate?
     a. Most locations on earth have gotten warmer
     b. Most locations on earth have gotten cooler
     c. There is no clear trend
     d. Most locations on earth have warmed then cooled

30. Which is not a strategy for mitigating the effects of accumulating greenhouse gasses in the atmosphere?
     a. Increasing our reliance on renewable sources of energy
     b. Increasing our reliance on nonrenewable sources of energy
     c. Energy conservation
     d. Improving energy efficiency in existing systems