2018 UT GME_TEACHER Atmosphere POST

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1. What is the name of your school?

2. What is your name?

3. A white streak in the sky that is caused by a jet airplane is called:

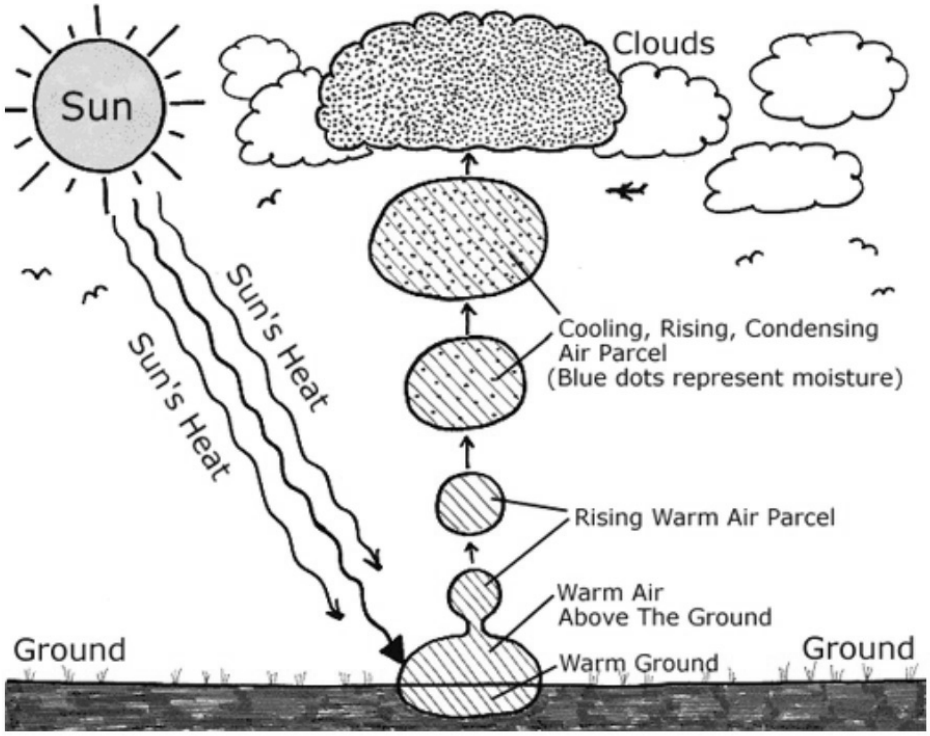
- smog
- a contrail
- a horizontal cloud
- a greenhouse gas

4. All of the following contribute to the formation of clouds in our atmosphere EXCEPT

- water vapor (humidity)
- oxygen to ozone amounts (ratios)
- condensation nuclei (aerosols)
- air temperature (warming and cooling air)

5. The image below best demonstrates _____.

- how clouds are formed
- the greenhouse affect
- how wind currents are distributed over earth's surface
- where/how sun energy radiates to earth's surface



6. Clouds are classified based on 3 factors:

- pressure, altitude, shape
- shape, altitude, whether they are producing precipitation
- pressure, whether they are producing precipitation, atmospheric temperature
- altitude, shape, atmospheric temperature

7. Fog is _____.

- a cloud that touches the ground
- greenhouse gases mixed together
- found only in coastal cities
- always present right after it rains due to atmospheric moisture

8. Clouds affect

- weather only
- climate only
- weather and climate
- neither weather nor climate

9. When identifying clouds in the atmosphere it is best to _____.

- have the GLOBE cloud chart memorized prior to going outside
- look only at the clouds on the horizon
- use the GLOBE cloud chart to accurately identify clouds in the upper, middle and lower atmospheres
- use the GLOBE cloud chart to determine the percent of clouds in the sky

10. A precipitation measurement should be taken

- at noon
- only after a rain event
- within 1 hour of solar noon
- always before noon

11. For GLOBE, rainfall is measured in

- gallons
- liters
- millimeters
- inches

12. If the temperature outside falls below freezing it is a good idea to _____.

- bring the rain gauge measuring tool indoors to prevent the plastic from cracking
- keep the rain gauge measuring tool outdoors, but check it at night to see if it is ok
- cover the rain gauge measuring tool with a damp cloth
- fill the rain gauge measuring tool with water so that it will freeze

13. When reading the scale on the measurement tube of the rain gauge, you need to make sure your eyes are _____ the level of the water in the measurement tube and that you are reading the bottom of the _____.

- above; meniscus
- below; tube
- at; meniscus
- at; tube

14. It is important to periodically calibrate the thermometer that you use to collect GLOBE data

- because the climate is changing.
- to adjust for changes in air pressure.
- to adjust to the changes in seasons during the year
- to be sure the thermometer is reading an accurate measurement

15. Universal Time provides a common reference for time in

- all locations in the Universe
- all locations in the Milky Way galaxy.
- all locations in the solar system
- all locations on planet Earth

16. All of the following are examples of aerosols EXCEPT

- desert dust
- pollen
- smoke
- mosquito repellent lotion

17. Scientists measure the amounts and kinds of aerosols in the atmosphere because

- some aerosols can reflect sunlight and cool the planet
- some aerosols can absorb sunlight and warm the planet
- some aerosols can cause harm to human health
- all of the above reasons

18. Which one of the following statements about ozone is correct?

- The ozone in the local atmosphere is sometimes good for people's health and sometimes bad for people's health.
- The ozone in the upper atmosphere is bad because it blocks ultraviolet radiation from the Sun.
- Having more ozone in the local atmosphere is bad because this ozone can cause more smog.
- Having more ozone in the upper atmosphere is bad because it fills the ozone hole.

19. Which of the following statements best describes what happens when you use a sling psychrometer to measure relative humidity?

- On a day with very low relative humidity, the dry bulb thermometer will have a significantly lower temperature reading than the wet bulb thermometer
- On a day with very high relative humidity, the dry bulb thermometer will have a significantly lower temperature reading than the wet bulb thermometer.
- On a day with very low relative humidity, the wet bulb thermometer will have a significantly lower temperature reading than the dry bulb thermometer.
- On a day with very high relative humidity, the wet bulb thermometer will have a significantly lower temperature reading than the dry bulb thermometer.

20. Which one of the following statements about relative humidity is correct?

- The relative humidity is the exact percentage of water vapor in the air.
- The relative humidity is the amount of water vapor in air divided by the atmospheric pressure.
- The relative humidity is the ratio of the amount of water vapor in the air divided by the minimum amount of water vapor that the air could hold at the same temperature and pressure.
- The relative humidity is the ratio of the amount of water vapor in the air divided by the maximum amount of water vapor that the air could hold at the same temperature and pressure.

21. What is the relationship between a degree Celsius and a degree Fahrenheit?

- For each degree Celsius that the temperature changes, the change in temperature is 1.8 times larger in degrees Fahrenheit.
- For each degree Fahrenheit that the temperature changes, the change in temperature is 1.8 times larger in degrees Celsius.
- The temperature in Fahrenheit is always 32 degrees more than the temperature in degrees Celsius.
- The temperature in Fahrenheit is always 32 degrees less than the temperature in degrees Celsius.

22. Use the following word bank and place the correct word(s) associated with weather and correct word(s) associated with climate. You may use a word more than once or not at all.

Weather	
Climate	

Word Bank:

temperature	cloudiness	precipitation	radiation	tornado	region	aridity
hurricane	blizzard	El Niño	latitude	longitude	altitude	humidity

23. **High school only**

Justify/explain two of your choices for weather and two of your choices for climate from Question 20.

Weather word_____ _____ Explanation:

Weather word_____ _____ Explanation:

Climate word_____ _____ Explanation:

Climate word_____ _____ Explanation:

24. **High school only**

Explain how collecting weather data helps scientists understand “Climate Change”.

25. **High school only**

In terms of accuracy and precision, which one is the most important to have when collecting scientific data? (If you think both are equally important, you may write that.) Explain your answer by using examples from your experiences in weather data collection.