

## 3<sup>rd</sup> 9 Weeks Exam – Study Guide

1. Name the Earth's systems and explain what each one contains.

**Hydrosphere – all Earth's water**

**Cryosphere – All Earth's frozen water**

**Biosphere – life on Earth**

**Atmosphere – gases surrounding Earth**

**Geosphere – rock and solid Earth**

2. Where is the ozone layer found? What is the ozone layer composed of? What does the ozone layer do for Earth?

**The ozone is made of 3 oxygen atoms. The ozone layer protects the Earth from harmful UV rays from the sun. The ozone layer traps heat to keep the Earth from freezing during the night (greenhouse effect).**

3. Define Erosion. Define Deposition.

**Erosion is when sediment is naturally moved from one location to another. Deposition is when sediment is dropped off in a new location after being naturally moved.**

4. Explain how atmospheric pressure and altitude are related.

**Atmospheric pressure decreases as altitude increases.**

5. What does "precipitation" mean?

**Precipitation is any form of water falling to Earth from the atmosphere. Rain, sleet, hail, snow.**

6. Compare air masses that are formed over land to air masses that are formed over water.

**Air masses that form over water have a lot of moisture or water vapor. Air masses that form over land are dry, with little water vapor.**

7. Explain what evaporation means.

**Evaporation occurs when water becomes a gas and enters the atmosphere**

8. Where is the beginning of the water cycle? Explain.

**There is no beginning nor end to the water cycle. Most of Earth's water only travels through parts of the water cycle and never goes through all of the processes the water cycle contains.**

9. Explain where the Earth and the atmosphere receive their energy.

**The Sun.**

10. Name and define the three types of heat transfer. Provide an example of each one.

**Conduction – heat transfer from particles of two objects touching**

**Convection – heat transfer through gases and liquids by convection currents.**

**Radiation – Heat transfer through waves.**

11. Define warm and cold front.

**A warm front is when warm air is traveling towards a cool air system. A cold front is when cold air is traveling towards a warm air system.**

12. Define weather? Define climate? Write an example for each ( 1 sentence for each).

**Weather is the current atmospheric conditions of a region. Climate is the average atmospheric conditions of a region over a long period of time.**

**Weather = It is raining today and 70 degrees outside.**

**Climate = The average annual temperature in Florida during June is 92 degrees.**

13. Define relative humidity.

**Relative humidity is the amount of water vapor in the air compared to the maximum amount of water vapor the air can hold at that temperature.**

14. Compare tornadoes to hurricanes. Which one has stronger winds? Which one can cause more damage? Why?

**Tornadoes are a swirling air system formed over land. Hurricanes are a swirling air system formed over water. Tornadoes have stronger winds. Hurricanes are larger than tornadoes and last longer, so they can cause more damage.**

15. What is the relationship between mass and force?

**The more mass an object has the greater the force it exerts. The more mass an object has the more force is needed to move that object.**

16. What is the difference between kinetic and potential energy? When does a falling object have most PE & KE?

**Kinetic energy is energy of motion. Potential energy is stored energy. A falling object had the most potential energy at the very top of the fall. This falling object has the most kinetic energy just before it hits the ground.**

17. What is a sea breeze? What is a land breeze?

**Sea breeze is where the wind blows from the sea towards the land. It happens during the day. The land is warmer than the sea because the air above the land is warmer.**

**Land Breeze is where the wind blows from the land towards the sea. It happens at night. The land is cooler than the sea because the air above the land is cooler.**

18. List the types of natural disasters that are specific to Florida.

**Thunderstorms**

**Tornadoes**

**Hurricanes**

**Floods**

**Sinckholes**

19. What are some ways that we can protect ourselves from hazardous weather?

**Board up windows, get food and water, seek shelter, get sandbags, evacuate, get batteries, etc....**

20. What tool is air pressure measured with?

**Barometer**

21. Why is Earth's atmosphere important?

**The atmosphere makes life on Earth possible. It protects the Earth from harmful UV rays. It is responsible for the greenhouse effect (trapping heat). It prevents the Earth from experiencing extreme temperature (from freezing to boiling hot). Living organisms also breathe the gases in the atmosphere.**

22. What are the gases that make up Earth's atmosphere? (Include the percentages)

**Nitrogen = 78%**

**Oxygen = 21%**

**Other gases = 1%**

23. List the layers of the atmosphere starting with the layer closest to the surface of Earth.

**Troposphere**

**Stratosphere**

**Mesosphere**

**Thermosphere**

**Exosphere**