**Earth’s History EOG STUDY GUIDE**

1. The center of earth is made of metal, not rocks because metal is more \_\_\_\_\_\_\_\_\_\_ than rocks and it sinks.
2. Many fossils were discovered of organisms that lived millions of years ago. Many of those organisms are now extinct.

3. In undisturbed sedimentary rock layers the oldest layer is on the \_\_\_\_\_\_\_\_\_\_. This is known as the \_\_\_\_\_\_\_\_\_ of \_\_\_\_\_\_\_\_\_\_.

4. Volcanic igneous intrusion, faulting or a crack in the rock layers and erosion called \_\_\_\_\_\_\_\_\_\_ can cause disturbance to layers.

5. A fault is always \_\_\_\_\_\_\_\_\_\_ than the layers that it cuts through. So are igneous intrusions.

6. The heating and cooling of magma in the mantle (asthenosphere) creates a \_\_\_\_\_\_\_\_\_\_ current which causes the tectonic plates to move. This convection current can be compared to a pot of \_\_\_\_\_\_\_\_\_\_ water.

7. The units of the geological time scale from largest to smallest are \_\_\_\_\_, era, period, and \_\_\_\_\_\_.

**8. \_\_\_\_\_\_\_\_\_\_** are organisms that was widespread and lived for a short period which are used to determine the actual age of sedimentary rocks layers.

9. The geological time scale is broken into divisions based on fossils evidence and major \_\_\_\_\_\_\_\_\_\_ events.

10. Humans are very effective at causing changes such as destroying natural habitats thereby increasing the rate of extinction of many organisms.

11. \_\_\_\_\_\_\_\_\_\_ intrusions occur when magma moves up into layers of sedimentary rocks. Sometimes a new intrusion can occur within an existing intrusion.

12. Fossils of a fern-like tropical plant (Glossopteris) were found on all continents and were used to support the theory of \_\_\_\_\_\_\_\_\_\_.

13. Dinosaurs lived during the \_\_\_\_\_\_\_\_\_\_ era.

14. The position of Earth’s oceans is always changing. Currently, the **\_\_\_\_\_\_\_\_\_\_ is getting bigger and the Pacific Ocean is closing up**. Eventually fossils of ocean-dwelling organisms will be discovered on the newly created continent where the Pacific Ocean is.

**15. \_\_\_\_\_\_\_\_\_\_** are used to analyze changes in Earth’s atmosphere over time because they contain air from different periods in Earth’s history.

**16. Similar fossils of plants and animals** were found in both South \_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_ indicate that the two landmass were once join together,

**17. New \_\_\_\_\_\_\_\_\_\_** is forming on the sea floor and the sea floor is spreading but the planet is not getting any bigger because the **old crust is melting (subduction)** at the same rate that the new crust is being created.

**18. \_\_\_\_\_\_\_\_\_\_** is a process that wears rocks down into individual sediments which can become a part of the soil near the rocks. **Mechanical weather** is caused the water, wind and gravity. **\_\_\_\_\_\_\_\_\_\_ weathering** is cause by chemicals damage to the rocks.

19. Sea level can change as a result of global warming. When this occurs it can change the land area near the coast, expands the continental shelf to include the coastline and contaminate nearby freshwater seas and rivers with saltwater.

20. The asthenosphere can impact Earth’s climate because the \_\_\_\_\_\_\_\_\_\_ currents there causes the plates to move. The movement cause volcanic activity that releases greenhouse gases. The gases blanket the Earth and trap the energy from the sun in the atmosphere.

**21. Evidence that the continents were once joined include**: fossils of the same organisms found on different continents, tropical plant fossils found in non-tropical regions, and the same type of \_\_\_\_\_\_\_\_\_\_ found on different continents.

22. When a species of animals is divided or separated it is known as \_\_\_\_\_\_\_\_\_\_, and the diversity of the species increases. Animals \_\_\_\_\_\_\_\_\_\_ to new their surroundings in order to survive.

**23. \_\_\_\_\_\_\_\_\_\_** occurs when an older, denser plate sinks below another plate.

**24. Increased levels of carbon dioxide** in the atmosphere will result in a **\_\_\_\_\_\_\_\_\_\_ climate**.

25. The **Hawaiian Islands** were formed by a tectonic plate moving over a **\_\_\_\_\_\_\_\_\_\_**.

**26. \_\_\_\_\_\_\_\_\_\_** ice caps increase **sea level.**

27. The idea that Earth is always changing and has always been changing and the same forces of change at work today were at work in the past is known as \_\_\_\_\_\_\_\_\_\_\_.

**28. \_\_\_\_\_\_\_\_\_\_ boundaries** create **mid-ocean ridges** in the ocean and a **rift valley** on land.

**29. \_\_\_\_\_\_\_\_\_\_ boundaries** can create **mountains**.

**30. \_\_\_\_\_\_\_\_\_\_ current** in the Earth’s asthenosphere is the **driving force** of plate tectonics.

31. The **\_\_\_\_\_\_\_\_\_\_** is located in the **upper part of the mantle**.

**32. Superposition** states that in undisturbed sedimentary rock, the bottom layer is the oldest.

**33. Denser** materials will **\_\_\_\_\_\_\_\_\_\_** to the bottom and less dense materials \_\_\_\_\_\_\_\_\_\_ to the top.

34. Know the following eons: Proterozoic, Phanerozoic, Hadean and Achean are Eons.

35. Know the following eras: Paleozoic, Mesozoic, and Cenozoic are Eras.

36. Animals must \_\_\_\_\_\_\_\_\_\_ for limited resources (food, shelter, water, and space) soon after birth. Those who are best adapted to their environment will survive the competition.

37. Scientists currently believe the Earth formed when particles collided and fused together to form a ball of molten rock.

38. The **theory of evolution** states that variations among members of a species result in a higher probability that the species will undergo the process of adaptation.

39. \_\_\_\_\_\_\_\_\_\_ is the process of cutting down trees in a forest) is a human factor that affects climate (Trees process Carbon Dioxide into Oxygen, less trees = more Carbon Dioxide)

40. Sedimentary rock can be used to find the \_\_\_\_\_\_\_\_\_ age of a fossil (By using index fossils)

41. Species become \_\_\_\_\_\_\_\_\_\_ because they cannot adapt to changes

42. A convergent oceanic – continental boundary occurs when the two plates collide together (**\_\_\_\_\_\_\_\_\_\_ zone**)

43. When two plates collide, the plate with the **\_\_\_\_\_\_\_\_\_\_ density** will sink (or become **subducted)**

44. Since the 1960’s, weather satellites have been responsible for much of the advancement in predicting and tracking hurricanes.

45. The most recent technology used to verify the movement of tectonic plates is **remote sensing.**

46. Radio waves collect images and send them back to Earth.

A system that uses underwater sound waves to measure distance and locate objects is known as \_\_\_\_\_\_\_\_\_.