

Name: _____

Geologic Time

Date: _____ Period: _____

Earth Science

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CLASS NOTES

4.6 Billion Years Ago

- _____ shows that Earth formed

4.5 Billion Years Ago

- During the early formation Earth heated up due to _____ of isotopes within the Earth's interior

4.4 Billion Years Ago

- During early Earth's melting, material separated into zones according to their densities

- _____
- _____
- _____

4.2 Billion Years Ago

- Solid crust formed and _____ started
- Gases trapped inside the Earth seeped out in a process called _____ and created a completely different second atmosphere

3.9 Billion Years Ago

- After the crust had cooled enough, _____ in the atmosphere began to precipitate and form _____ on Earth

3.8 Billion Years Ago

- Weathering erosion, and deposition began and the first _____ rock was formed

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3.5 Billion Years Ago

- Life forms that used _____ and released free _____ began to evolve
- This allowed for _____ to start collecting in our atmosphere

3.5 - 2.8 Billion Years Ago

- Oxygen in the atmosphere reacted with iron in the soil to produce _____
- Resembled the surface color of current day Mars

2.8 Billion Years Ago

- Most of the _____ compounds that could have reacted with the oxygen had done so, thus oxygen in the atmosphere _____

2.8 - Present Billion Years Ago

- Life slowly evolved from single-celled bacteria to multicellular to hard parts on life forms

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PART I QUESTIONS: MULTIPLE CHOICE

1. During which period can the earliest birds be found?
 - a. Cretaceous
 - b. Jurassic
 - c. Triassic
 - d. Permian
2. According to Earth's geologic history, studies of the rock record suggest that
 - a. humans first appeared at the time of the intrusion of the Palisades sill
 - b. the period during which humans have existed is very brief compared to geologic time
 - c. evidence of the existence of humans is present over much of the geologic past
 - d. the earliest humans lived at the same time as the dinosaurs
3. For which segment of the Earth's geologic history are fossils rarely found?
 - a. Mesozoic
 - b. Cenozoic
 - c. Paleozoic
 - d. Precambrian
4. According to Earth's geologic history, which rock is most likely the oldest?
 - a. conglomerate containing the tusk of a mastodon
 - b. sandstone containing fossils of flowering plants
 - c. shale containing trilobite fossils
 - d. siltstone containing dinosaur footprints
5. Which two forms of life existed together on the Earth during the same time period?
 - a. dinosaurs and mastodons
 - b. trilobites and birds
 - c. flowering plants and trilobites
 - d. mastodons and flowering plants
6. The fossil record indicates that most of the plants and animals that lived on Earth in the past
 - a. lived on land
 - b. have become extinct
 - c. appeared during the Cambrian Period
 - d. became index fossils
7. For which geologic period are no fossils found in New York State?
 - a. Silurian
 - b. Ordovician
 - c. Devonian
 - d. Permian

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8. Geologists have subdivided geologic time into units based on
 - a. rock type
 - b. erosion rates
 - c. fossil evidence
 - d. landscape development

9. Which statement about dinosaurs is supported by information in your reference tables?
 - a. The number of dinosaurs increased before dinosaurs became extinct.
 - b. Dinosaur fossils and trilobite fossils may be found in the same rocks.
 - c. Dinosaurs only lived on land.
 - d. Dinosaur fossils first appeared in rocks of the Paleozoic Era.

10. According to Earth's geologic history, when did many land and marine organisms become extinct?
 - a. before the appearance of terrestrial plants
 - b. after the appearance of human
 - c. before the appearance of dinosaurs
 - d. after the appearance of birds

11. Which fossil has not been found in the New York State rock record?
 - a. Silurian eurypterids
 - b. Triassic dinosaur footprints
 - c. Permian trilobites
 - d. Pleistocene mastodont bones

12. The existence of which group of organisms spans the shortest geologic time?
 - a. birds
 - b. dinosaurs
 - c. humans
 - d. placoderm fish

13. Most of the oceanic oxygen that began to enter Earth's atmosphere in the early Proterozoic Era was probably produced by
 - a. formation of silicate rocks
 - b. photosynthesis by cyanobacteria
 - c. impact events on Earth's surface
 - d. outgassing from volcanoes

14. During which geologic period did plants and animals first appear in land environments?
 - a. Cambrian
 - b. Silurian
 - c. Ordovician
 - d. Devonian