Name Date Class

Directed Reading for Content Mastery

Section 3 ■ Middle and Recent Earth History

Directions: *Use the following terms to fill in the chart below.*

present **birds** ***Homo sapiens*** **Pangaea**
Alps and Himalayas **dinosaurs** **angiosperms**

Era	Time Span	Period	Life-forms	Geologic Events
Mesozoic	245 to 65 million years before present	Triassic	The first small 2. _____ appeared.	6. _____ separated into two large land masses.
		Jurassic	The first 3. _____ appeared.	
		Cretaceous	New plants called 4. _____ evolved.	
Cenozoic	65 million years before present to 1. _____	Tertiary	Dinosaurs became extinct.	7. _____ begin to rise. Ice Age began.
		Quarternary	5. _____ appeared.	Ice ages begin.

Directions: *For each of the following, write the letter of the term or phrase that best completes the sentence.*

_____ 8. The Mesozoic Era is also known as the era of _____.
a. middle life **b.** new life

_____ 9. Birds appeared during the _____ Period.
a. Triassic **b.** Jurassic

Meeting Individual Needs

Name Date Class

Directed Reading for Content Mastery

Key Terms
Geologic Time

Directions: *Draw a line to connect the description on the left to the correct term on the right.*

1. major subdivisions of geological time based on differences in life-forms
2. organisms that lived hundreds of millions of years ago with bodies divided into three sections
3. the longest geological part of Earth's history
4. one of the earliest life-forms, which gave off oxygen
5. flying animals that evolved from dinosaurs
6. the single landmass that once contained all Earth's continents
7. smaller units of time in a geologic period
8. the time period where dinosaurs were the dominant life-form
9. the division of Earth's history into time units
10. the longest subdivisions of geologic time
11. major divisions of an era
12. the change in organisms over time
13. a group of organisms that normally reproduce with other members of their group
14. process by which certain organisms survive and reproduce

Precambrian

geologic time scale

eras

species

trilobites

periods

Pangaea

natural selection

cyanobacteria

eons

birds

organic evolution

Jurassic

epoch

Meeting Individual Needs

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LC

SECTION 3 Reinforcement

Middle and Recent Earth History

Directions: *Match the descriptions in Column I with the terms in Column II. Write the letter of the correct term in the space provided in the left-hand column.*

Column I

_____ 1. seed plants which first appeared in the Paleozoic Era

_____ 2. era of "middle life"

_____ 3. most recent period in the Mesozoic Era

_____ 4. oldest period in the Mesozoic Era

_____ 5. northern part of Pangaea

_____ 6. southern part of Pangaea

_____ 7. fast-moving dinosaur

_____ 8. dinosaur thought to nurture hatchlings

_____ 9. winged animal resembling both dinosaurs and birds

_____ 10. milk-producing animals; first appeared in the Triassic Period

_____ 11. flowering plants

_____ 12. most recent era

_____ 13. most recent period in the Cenozoic Era

_____ 14. climate change that allowed flowering plants to increase

_____ 15. where most marsupials live

_____ 16. animals with pouches

Column II

a. Gondwanaland

b. mammals

c. Australia

d. Laurasia

e. Cretaceous

f. gymnosperms

g. angiosperms

h. Mesozoic

i. Quaternary

j. *Maiasaura*

k. Triassic

l. Cenozoic

m. marsupials

n. tyrannosaurs

o. cooling

p. *Archaeopteryx*

q. *Gallimimus*

Directions: *Complete the following statements.*

17. The bones of cold-blooded animals have _____.

18. The bones of dinosaurs resemble those of _____-blooded animals.

19. Some dinosaurs may have _____ their young.

Meeting Individual Needs

Name _____ Date _____ Class _____ LC

SECTION 1 Enrichment

The Earliest Primates

Fossils have allowed scientists to trace the evolution of not just trilobites, but of many species of animals. From the fossils, scientists have learned a tremendous amount about what earlier forms of these animals looked like. One of the problems, though, in studying fossils is that often not all of the fossil skeleton can be found. Therefore, scientists have to draw conclusions about the animal without being able to see and study the animal's entire structure. This particular problem led to some interesting "reconclusions" about primates in 1990.

Primates

Primates are a group of about 200 species of animals that include lemurs, monkeys, apes, and humans. They are grouped together on the basis of similar skeletal and other features. It's believed that they have a common ancestor and developed into separate species over millions of years.

For a long time, paleontologists thought that the oldest primates were the 60-million-year-old creatures they named plesiadapiforms. Plesiadapiform fossils included teeth, jaws, and parts of skulls. From the fossils, scientists concluded that plesiadapiform was a primate. Certainly, its teeth were like those of other primates. They were adapted for grinding, designed for a diet of insects, fruits, and seeds.

Is it a primate?

In 1990, new plesiadapiform bones were dug up in Wyoming. These included the first complete skull and some fingers and wrists which were parts that had never been found before. The paleontologists who studied the finger bones were surprised to find that they did not resemble those of primates. The only living animal with a similar arrangement of finger bones is a small, tree-dwelling mammal of the Borneo and Philippine rain forests, called a colugo. The scientists who examined the intact skull identified it as resembling that of the colugo. The conclusion was the plesiadapiforms were not primates, since colugos are not primates.

Other scientists were studying an animal discovered at the foot of the High Atlas Mountains in Morocco. The creature, called the *Altiatlasius,* lived 60 million years ago. The paleontologists found ten tiny teeth similar to those in one of today's smallest primates, the 57-gram mouse lemur of Madagascar.

The earliest primate?

Another animal, less advanced but much larger than the *Altiatlasius,* has also been found. Many scientists are calling it an earlier primate. It's a house-cat-sized microsyopid and may have lived more than 60 million years ago. It's identified as an early primate from its bone structure.

1. If the microsyopid is proved to be a primate, what conclusion about primates might be changed?

2. Why do you think the *Altiatlasius* was so named?

3. What does the reading tell you about scientific inquiries?

Meeting Individual Needs