

Name: _____

Chapter 7 Study Guide
Test Date: Tuesday, February 17

Terms:

molds	casts
petrified fossils	carbon films
trace fossils	law of superposition
index fossil	radioactive decay
geologic time scale	comet
mammal	invertebrate
half-life	

Concepts:

Know how fossils form.

Know the 6 kinds of fossils.

Know what substances other than rock that can preserve a fossil.

Know what are the 2 things fossil records provides.

Be able to explain the law of superposition.

Know what scientist use to show Earth's history.

Know the 3 things scientists believe Earth began as.

Know what pulls the mass of "Earth" together.

Know examples of invertebrates.

Know what era had the greatest number of different kinds of organisms evolving.

Know what era was the first to have organisms with hard parts.

Know what era had animals spreading widely on land.

Know what eras included mass extinction.

Know what era was known as the Age of Reptiles.

Know what era had mass extinction due to an asteroid striking Earth.

Know what era mammal had to compete with dinosaurs.

Know what era mammals evolved to live in many different environments.

Know which period of the Cenozoic Era is the shortest.

Skills:

Be able to identify rock layers using the law of superposition.

Be able to read and answer questions about the geologic time scale using a diagram.

This study guide must be signed by a parent and returned the day of the test. Please remember to review what you highlighted in class in the text, worksheets, and use the study guide found in your textbook on page 240.

Dear Parents/Guardians,

Please verify the amount of time your student studied for our Ch. 7 Test.

Date: _____	Amount of time studied: _____
Date: _____	Amount of time studied: _____
Date: _____	Amount of time studied: _____
Date: _____	Amount of time studied: _____
Date: _____	Amount of time studied: _____

Parent Signature: _____

Study guides are general guidelines as to what will be on the test and are not test specific.

Name: _____

Chapter 7 Vocabulary (RH)

1. fossil -
2. mold -
3. cast -
4. petrified fossil -
5. carbon film -
6. trace fossil -
7. paleontologist -
8. evolution -
9. extinct -
10. relative age -
11. absolute age -
12. law of superposition -
13. extrusion -
14. intrusion -
15. fault -
16. index fossil -
17. unconformity -
18. radioactive decay -

19. half-life -

20. geologic time scale -

21. era -

22. period -

23. comet -

24. invertebrate -

25. vertebrate -

26. amphibian -

27. reptile -

28. mass extinction -

29. mammal -

Review and Reinforce

Fossils Ch. 7 Section 1

Understanding Main Ideas

Fill in the blanks in the table below. Answer the questions that follow on a separate sheet of paper.

Type of Fossil	Description
1. Petrified fossil	Fossils in which _____ replace all or part of an organism
2. _____	A hollow area in sediment in the shape of an organism
3. _____	A solid copy of the shape of the organism
4. Carbon film	An extremely thin coating of _____ on rock
5. Trace fossils	Evidence of the _____ of ancient organisms
6. _____	Remains of organisms in tar, amber, or ice

- Describe how a mold is related to a cast.
- What can a paleontologist tell from fossil footprints of a dinosaur?
- What does the fossil record reveal about the evolution of life on Earth?

Building Vocabulary

Match each term with its definition by writing the letter of the correct term in the right column on the line beside the definition in the left column.

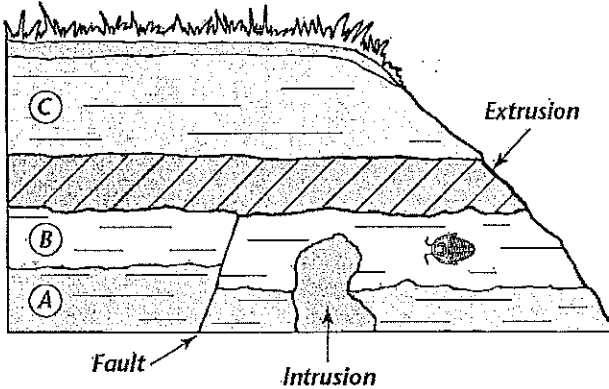
- | | |
|--|---------------------|
| 10. _____ no longer and never again existing as an organism on Earth | a. evolution |
| 11. _____ the preserved remains or traces of living things | b. sedimentary rock |
| 12. _____ the process by which all the different kinds of living things have changed over long periods of time | c. extinct |
| 13. _____ the type of rock that is made of hardened sediment | d. paleontologist |
| 14. _____ an extremely thin coating of carbon on rock | e. fossils |
| 15. _____ a scientist who studies fossils | f. carbon film |

Review and Reinforce

The Relative Age of Rocks Ch. 7 Sec. 2

Understanding Main Ideas

Look at the diagram below. Then answer the questions that follow on a separate sheet of paper.



1. What is the youngest rock layer? Explain.
2. Is the extrusion older or younger than rock layer B? Explain.
3. Is the fault older or younger than rock layer A? Explain.
4. How could a geologist use the fossil in rock layer B to date a rock layer in another location?

Building Vocabulary

Match each term with its definition by writing the letter of the correct definition in the right column on the line beside the term in the left column.

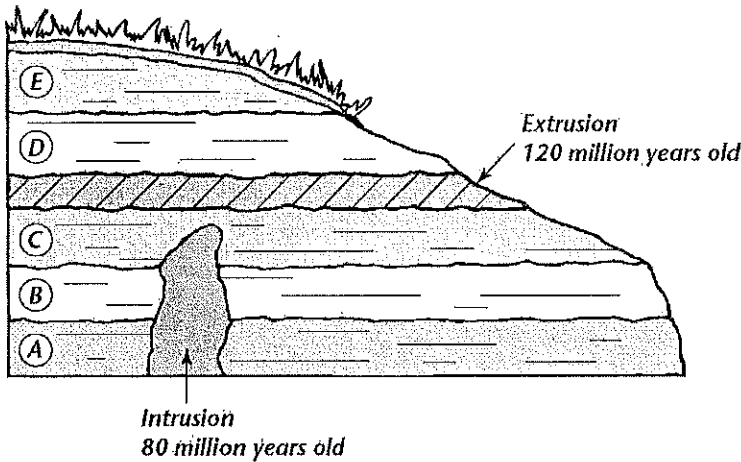
- | | |
|-----------------------------|--|
| 5. ___ fault | a. the number of years since a rock has formed |
| 6. ___ extrusion | b. a break in Earth's crust |
| 7. ___ unconformity | c. the way to determine relative ages of rocks |
| 8. ___ relative age | d. a hardened layer of magma beneath Earth's surface |
| 9. ___ law of superposition | e. the age of a rock compared with the age of other rocks |
| 10. ___ intrusion | f. fossils used to help geologists match rock layers |
| 11. ___ absolute age | g. the surface where new rock layers meet a much older rock surface beneath them |
| 12. ___ index fossils | h. a hardened layer of lava on Earth's surface |

Review and Reinforce

Radioactive Dating

Understanding Main Ideas

Look at the diagram below. Then answer the questions that follow on a separate sheet of paper.



1. Can geologists use radioactive dating to find the absolute ages of sedimentary layers A, B, C, D, and E? Explain why or why not.

Geologist **can / can not** radioactive dating to find the absolute ages of sedimentary layers because _____.

2. Can geologists use radioactive dating to find the absolute ages of the extrusion or the intrusion? Explain why or why not.

Geologist **can / can not** use radioactive dating to find the absolute ages of extrusion or the intrusion because _____.

3. What is the relative age of rock layer C? Explain how you determined its age.

Rock layers C is _____ years old. I determined the its relative age because we know the age of the intrusion that cuts partway across it. An _____ is always younger than the rock it cuts through.

4. Explain the natural process on which radioactive dating is based.

Radioactive dating is based on _____.

Building Vocabulary

Half-life

radioactive decay

radioactive

5. During a natural process called _____, the atoms of one element break down to form atoms of another element.

6. The elements formed after atoms have broken down and reformed are said to be _____.

7. The time it takes for half of the atoms in a sample of a radioactive element to decay is called the element's _____.

Review and Reinforce

The Geologic Time Scale Ch. 7 Sec. 4

Understanding Main Ideas

Put the following items in order from oldest (D) to most recent (A) by writing a letter in the blank beside each one.

1. ___ Mesozoic Era
2. ___ Precambrian Time
3. ___ Cenozoic Era
4. ___ Paleozoic Era

Answer the following questions on a separate sheet of paper.

5. Why is the geologic time scale used to show Earth's history?
6. How would you rewrite the following sentence to make it true?
Geologists subdivide periods into eras.
7. What methods did geologists use when they first developed the geologic time scale?
8. How did geologists decide where one division of the geologic time scale ends and the next begins?

Building Vocabulary

Match each term with its definition by writing the letter of the correct term in the right column on the line beside the definition in the left column.

- | | |
|---|------------------------|
| 9. ___ a unit of geologic time that subdivides eras | A. period |
| 10. ___ a long unit of time used to divide the time between Precambrian Time and the present | B. geologic time scale |
| 11. ___ a record of the geologic events and the evolution of life forms as shown in the fossil record | C. era |

Review and Reinforce

Early Earth Ch. 7 Section 5

Understanding Main Ideas

Put the six events or processes in the correct sequence by writing their letters in the correct order in the numbered blanks below.

- A. Volcanic eruptions release carbon dioxide into the atmosphere.
- B. Early organisms release oxygen into the air.
- C. Oceans form on Earth's surface.
- D. Hydrogen and helium are captured by gravity to form an atmosphere.
- E. A dense, iron core forms at Earth's center.
- F. Earth is a ball of dust, rock, and ice in space.

- 1. _____
- 2. _____
- 3. _____
- 4. _____
- 5. _____
- 6. _____

Answer the following questions on a separate sheet of paper.

- 7. What were the earliest life forms on Earth like?
- 8. What hypothesis explains why Earth and the moon are about the same age?
- 9. How did photosynthesis lead to the development of animals living on land?
- 10. How have scientists used radioactive dating to show that Earth is about 4.6 billion years old?

Building Vocabulary

Fill in the blank to complete each statement.

- 11. A(n) _____ is a ball of dust and ice that orbits the sun.
- 12. The process of _____ involves organisms using energy from the sun to make food.

Review and Reinforce

Eras of Earth's History Ch. 7 Sec. 6

Understanding Main Ideas

Fill in the blank with the correct era or period to complete each statement.

1. Until the _____, only one-celled organisms lived on land, but during this period, plants became abundant.
2. At the start of the _____, many organisms evolved with hard parts including shells and outer skeletons.
3. During the _____ animals began to spread widely on land.
4. At the end of the _____, most species of life on Earth died.
5. Reptiles were so successful that the _____ is often called the Age of Reptiles.
6. At the close of the _____, about 65 million years ago, a second mass extinction occurred.
7. The first dinosaurs appeared during the _____.
8. During the _____, mammals evolved to live in many different environments—on land, in water, and even in the air.
9. The fossil record suggests that humans migrated to most continents during the _____.

Building Vocabulary

Match each definition with its term by writing the letter of the correct term in the right column on the line beside the definition in the left column.

- | | |
|---|--------------------|
| 10. _____ animal with a backbone | a. reptile |
| 11. _____ animal without a backbone | b. mammal |
| 12. _____ animal that evolved from lungfish | c. invertebrate |
| 13. _____ animal with strong legs and eggs with thick shells | d. mass extinction |
| 14. _____ an event in which many types of living things die out at once | e. amphibian |
| 15. _____ animal that feeds its young with milk | f. vertebrate |

Name: _____

Class Period: _____

Geologic Time Scale Project (R)

Directions: You and your partner will be creating a poster board with information about a particular Period in the Geologic Time scale to include in our class Geologic Time Scale. You will need to purchase one poster board for the two of you. If you do not bring your poster board, you will lose 10% from your final grade for each day you do not have your materials.

You will have time in class to work on your poster and research your information. All information must be neatly handwritten and must be the student's own work (i.e. no plagiarizing) Students have all received information regarding plagiarism and any student plagiarizing the assignment will receive an automatic zero on the assignment.

After you prepare your poster board, you will present your information to the class. Since you have a partner, you will need to present the information in an equal manner. Please reference the rubric for specific requirements.

Class Days for Project: _____

Due Date for this project: _____

Eras:	<u>Cenozoic Era</u>	<u>Mesozoic Era</u>	<u>Paleozoic Era</u>	<u>Precambrian Time</u>
Periods:	Quaternary Neogene Paleogene	Cretaceous Jurassic Triassic	Permian Carboniferous Devonian Silurian Ordovician Cambrian	Precambrian Time

Poster Requirements

At the top of your poster, centered and in large lettering, include (in this order)

- The Era that your Period
- Name of assigned Period (Unless you are assigned Precambrian Time)
- Year the Period began and ended. *(in millions of years ago)

After you have completed the task above; include, anywhere on your poster;

- What major events in geologic history occurred during this time (formation of mountains, oceans, continents, volcanic activity, erosion) **(Include at least 2 events)**
- What was the climate like - temperatures, precipitation, ice ages, etc.
- What animals or life forms lived during this time. **Include 4 animals with a picture for each.**
- What plant life lived during this time. **Include 2 plants with a picture for each.**

Student Name: _____

Class Period: _____

RUBRIC

<u>Research</u>	<u>0</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>
Student returned rubric (go green!)					
Era, Period and Years listed on poster (3 pts)					
2 Geologic Events (2 points ea.)					
Climate (4 points)					
Animals with pictures (1 pt ea.)					
Plants with pictures (2 pt. ea)					
<u>Presentation</u>	<u>None-0</u>	<u>Poor-1</u>	<u>Acceptable-2</u>	<u>Good-3</u>	<u>Excellent-4</u>
Eye contact with audience					
Volume of presentation					
Equity of presentation					
<u>Poster Board</u>	<u>None-0</u>	<u>Poor-5</u>	<u>Acceptable-10</u>	<u>Good- 15</u>	<u>Excellent-20</u>
Includes attractiveness, neatness, effort, grammar and spelling					

Total: _____/53

Grading Scale

A- 47-53

B- 42-46

C- 37-41

D- 32-36

F- 31 and below

Name: _____

Class Period: _____

Geologic Time Scale Project (H)

Directions: You and your partner will be creating a poster board with information about a particular Period in the Geologic Time scale to include in our class Geologic Time Scale. You will need to purchase one poster board for the two of you. If you do not bring your poster board, you will lose 10% from your final grade for each day you do not have your materials. You will have time in class to work on your poster and research your information. All information must be neatly handwritten and must be the student's own work (i.e. no plagiarizing) Students have all received information regarding plagiarism and any student plagiarizing the assignment will receive an automatic zero on the assignment.

After you prepare your poster board, you will present your information to the class. Since you have a partner, you will need to present the information in an equal manner. Please reference the rubric for specific requirements.

Class Days for Project: _____

Due Date for this project: _____

Eras:	<u>Cenozoic Era</u>	<u>Mesozoic Era</u>	<u>Paleozoic Era</u>	<u>Precambrian Time</u>
Periods:	Quaternary Neogene Paleogene	Cretaceous Jurassic Triassic	Permian Carboniferous Devonian Silurian Ordovician Cambrian	Precambrian Time

Poster Requirements

At the top of your poster, centered and in large lettering, include (in this order)

- The Era that your Period
- Name of assigned Period (Unless you are assigned Precambrian Time)
- Year the Period began and ended. *(in millions of years ago)

After you have completed the task above; include, anywhere on your poster;

- What major events in geologic history occurred during this time (formation of mountains, oceans, continents, volcanic activity, erosion) **(Include at least 2 events)**
- What was the climate like - temperatures, precipitation, ice ages, etc.
- What animals or life-forms lived during this time. **Include 4 animals with a picture for each.**
- What plant life lived during this time. **Include 2 plants with a picture for each.**

Honors only:

- What organisms first appeared during this time?
- What organisms disappeared during this time?
- Provide a map of the globe that shows the location of the continents during your Period.
- Did any mass extinctions occur during your Period? If so, describe the affect of the mass extinction.

Student Name: _____

Class Period: _____

RUBRIC

<u>Research</u>	<u>0</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>
Student returned rubric (Go Green!)					
Era, Period and Years listed on poster (3 pt ea.)					
2 Geologic Events (2 pt ea.)					
Climate (4 pt)					
Animals with pictures (1 pt ea.)					
Plants with pictures (2 pt. ea)					
Organisms that appear/disappear					
Map with Globe					
Mass extinctions					
<u>Presentation</u>	<u>None-0</u>	<u>Poor-1</u>	<u>Acceptable-2</u>	<u>Good-3</u>	<u>Excellent-4</u>
Eye contact with audience					
Volume of presentation					
Equity of presentation					
<u>Poster Board</u>	<u>None-0</u>	<u>Poor-5</u>	<u>Acceptable-10</u>	<u>Good-15</u>	<u>Excellent-20</u>
Includes attractiveness, neatness, effort, grammar and spelling					

Total: _____/59

Grading Scale

A- 53-59

B- 47-52

C- 41-46

D- 35-40

F- 34 and below