



Revision Sheet

Term two – Final exam

Grade 8- Science

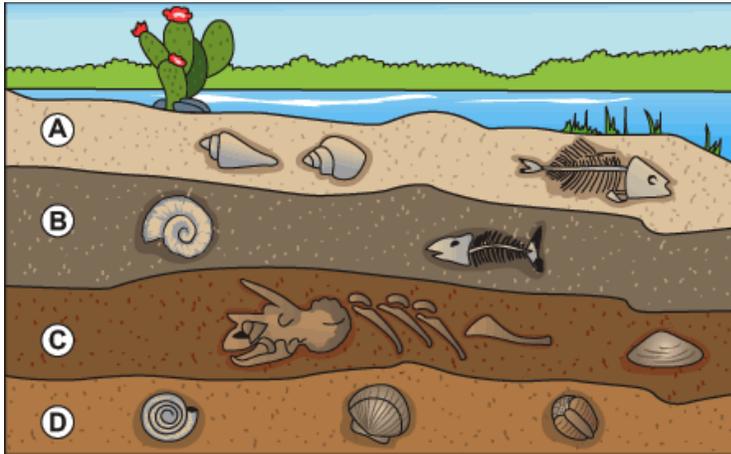
- **Material for final:**
- Unit 1 lesson 1 (The fossil record)
Explorations 1-2& 3 pages 5-25
- Unit 1 lesson 2 (patterns of change in life on earth)
Explorations 1&2 pages 27-45



- 1- This fossil is about 50 million years old. What might this fossil provide evidence for?
- the existence of flowering plants 50 million years ago**
- similarities in structure between ancient and modern flowering plants**

- 2- The diagram shows a portion of the fossil record in sedimentary rock. Different rock layers and fossils are clearly visible. How can you describe the sedimentary layers according to the fossils represented ?

the sedimentary layers are from different ages , according to super position principle and the fossil records layer A is the most recent layer.



- 3- Describe the process of radiometric dating as it relates to igneous rock and the fossil record.

Radiometric dating involves finding the age of igneous rock using uranium and lead samples. There are no fossils in the igneous rock, so scientists determine the age of the fossils in the sedimentary rock by identifying the age of the igneous rock layers above and below the sedimentary rock where the fossil is found.

- 4- Explain the unique information trace fossils and coprolites can help scientists infer about an organism

Trace fossils such as footprints can help scientists infer how a species moved, whether it lived alone or in groups, or how heavy it was. Coprolite fossils could give information about an organism's diet.

5- Scientists use the fossil record to give us information about the history of the earth and the organisms that lived on it.

- How does the fossil record change over time?
- Will the fossil record ever be complete? Explain.

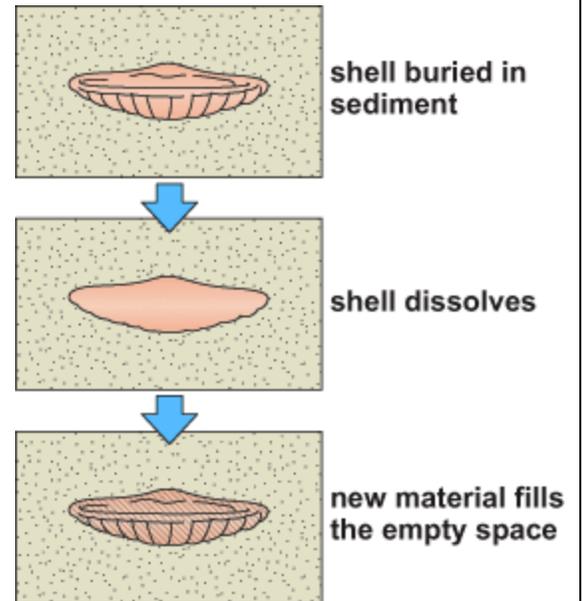
As scientists discover new fossils and new technologies to look at fossils, they revise the fossil record to include this new information.

The fossil record will never be complete because some environments were not good at forming fossils; therefore, there is not a fossil of every organism that ever lived.

6- The fossil record provides evidence of evolution.

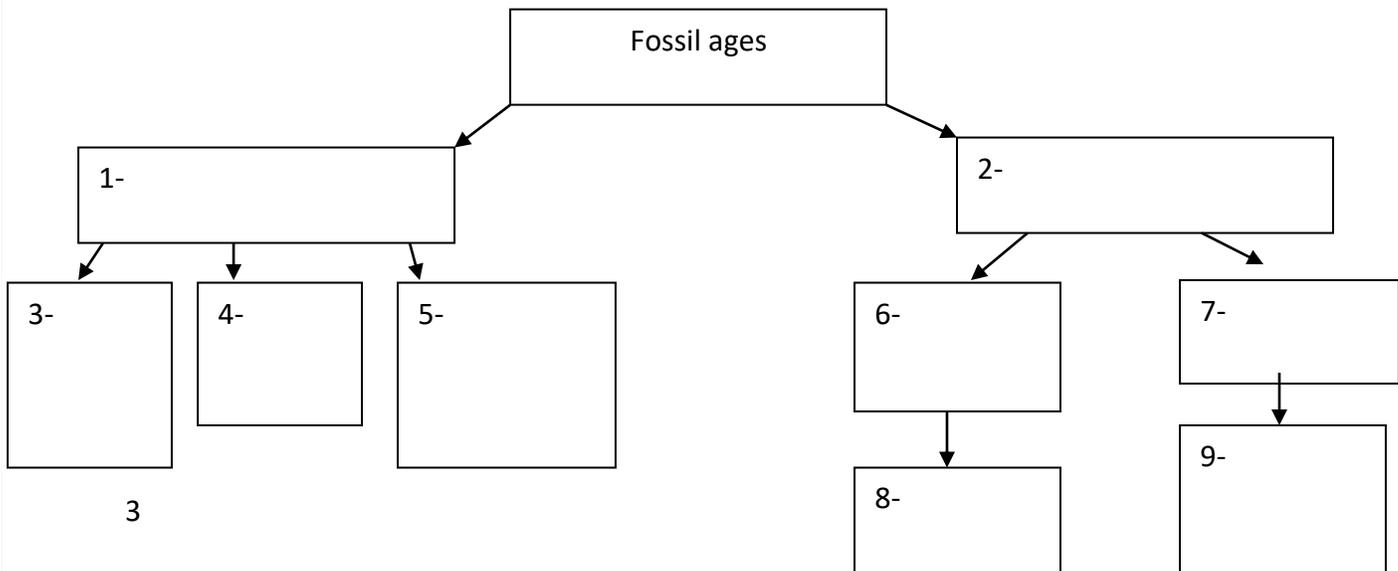
Look at the series of illustrations. They show one way in which a fossil forms, providing a record of an organism. What kind of fossil is being formed?

Cast, because the new minerals fill up the mold after dissolving the original materials (soft tissues and bones)



7- Complete the following graphic organizer about the age of fossils : you can use the terms inside the box provided :

Absolute age	Relative age	Index fossil	Radiometric method	Uniformitarianism	Superposition	Geological columns	Uranium – lead	Graptolite
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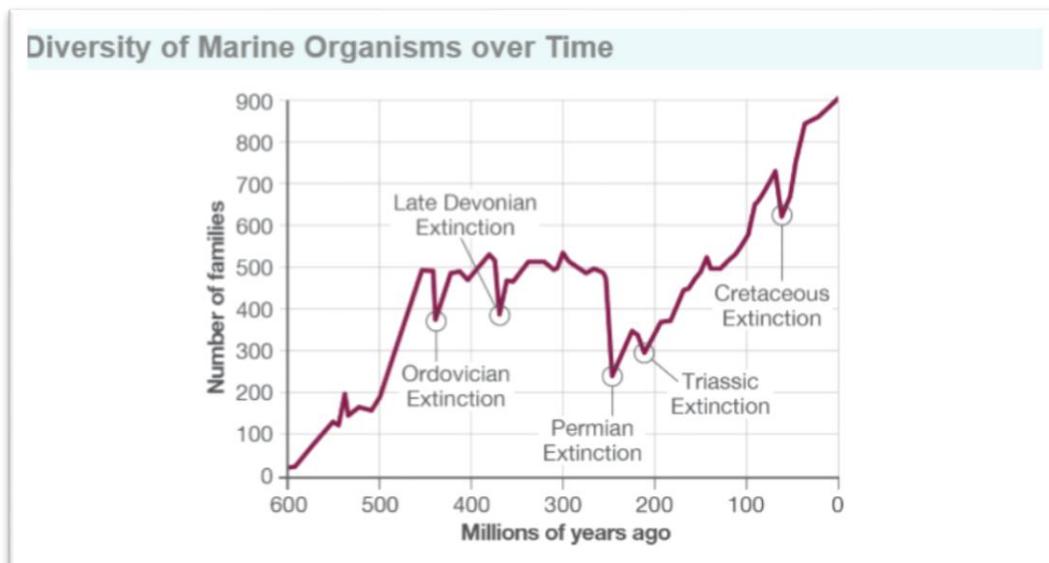
8- What is the difference between relative and absolute dating?

The relative dating depend on the position of the sedimentary layers in addition for the fossils which could be found in the layers , while the absolute dating depends on the chemical elements which rocks are made of and the rate of decaying of these elements in millions of years.

9- What are the advantages and disadvantages of extinction ?

Advantages	Disadvantages
<p>1- By extinction many harmful organisms disappeared</p> <p>2- By extinction any diseases was existed before the extinction it will not be exist anymore after the extinction.</p> <p>3- Extinction allow the development of the organisms and it can increase the evolution of the living things.</p>	<p>1- It reduces the amount of fossil records which prevent scientist from understanding the history of earth.</p> <p>2- Damaging the existed ecosystems in the time of extinction.</p>

10- Study the graph bellow about the diversity of marine organisms over time and answer the following questions



1- Explain the pattern of evolution after each extinction?

The evolution and the diversity of all organisms increased during time.

2- Name the main extinctions events :

Permian extinction – Ordovician extinction – late Devonian extinction – triassic extinction - cretaceous extinction

3- Which extinction has the most depression in the population of organisms ?

Permian extinction

4- What is the stromatolite ?

It's a rock formations contain the first forms of life which exist on earth before 4.6 billion years ago

5- What is the difference between geologist – biologist and paleontologist

Many types of scientists work together to collect evidence of ancient life.

- Biologists study how living things use chemicals in their bodies.
- Geologists determine the age of rocks and what Earth conditions may have caused them to form.
- Paleontologists find and study fossils