Welcome To 7th grade Life Science!

Mrs. Winters

Materials Needed Today

Please take these materials out of your backpack.

- Pencil
- Age of the Earth Research Assignment

Hot Sync

Tuesday 12/10/13

Answer the following questions in *complete sentences* on a BLANK sheet of paper.

What do you think the earth will look like 1,000-10,000 years from now given evolutionary processes? (5 complete sentences at least)

Chapter 6 Lesson 1
FOSSILS

Welcome To 7th grade Life Science!

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Materials Needed Today

Please take these materials out of your backpack.

- Pencil
- Age of the Earth Research Assignment To turn in!!!

Hot Sync

Wednesday 12/11/13

Answer the following questions in *complete sentences* on a BLANK sheet of paper.

When you think of "Fossils" what do you think of? Why? (2 complete sentences at least)

What are fossils?

- **Fossils** are the naturally preserved remains, imprints, or traces of organisms that lived long ago.
  - Includes bones, shells, and footprints.
  - Microfossils can only be seen under a microscope.

What are fossils? (cont.)

- A **paleontologist** is a scientist who studies fossils.
- They determine:
  - the relationships among organisms
  - the approximate times when life first appeared on Earth
  - when organisms became extinct

When do fossils form?

- Decomposition—breaking down into substances that can be used by other organisms—is part of an organism's life cycle.
- For an organism to become a fossil, it must be protected from decomposers, scavengers, and environmental factors.

How are fossils formed?

- Fossils only form under certain conditions.
- Most frequently found fossils are preserved hard structures, but occasionally soft structures are preserved.

Permineralization

- When substances inside the tiny spaces of dead organisms decompose, water seeps in and deposits minerals, such as silica or calcite.
- This process—permineralization—forms a strong, rock-like fossil.

Replacement

- The hard parts of an organism are replaced by minerals in replacement.
- Only the shape of the original organism remains.

Carbonization

- If a dead organism is quickly buried under conditions without oxygen, the elements of the living tissue are removed.
- A thin carbon film remains and is compressed by sediment, preserving the image of the organism on a rock.

Molds and Casts

- **Molds** can be the imprints from a shell or the skin of an animal.
- Molds fill in with sediment that hardens into rock creating **casts.**
- No parts of the original organism remain.

Original Material

- Organisms preserved in materials such as amber are called original material fossils.

- They are rare and provide much information because none of the hard or soft structures have been altered or replaced.

What do fossils tells us?

- Much of the evidence for the pattern of evolutionary relationships comes from fossils.
- Scientists also study fossils to understand some processes and rates of evolution.
- Fossils provide a record of different organisms that lived in the past.

Relative Fossil Ages

- Generally, younger fossils are in shallow sedimentary rock layers and older fossils are in deeper layers.
- In this way, fossils can be compared by relative age and the changes to species can be documented.

Species and Environmental Changes

- The **fossil record** is all the known fossils and their placements in the formation of rocks and positions in time.
- The fossil record is evidence of the evolution of plants and animals, and their extinction.

Species and Environmental Changes (cont.)

- Fossils provide evidence of how life and environmental conditions have changed throughout time.
- Scientists use fossils to determine how organisms lived, what they ate, and what kind of environment they lived in.

Virtual Lab

How can fossil and rock data determine when an organism lived?

LESSON 1 Review

CheckPoint

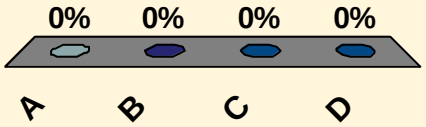
What describes the deposit of minerals into the tiny spaces that have decomposed in an organism?

A permineralization

B decomposition

C replacement

D molds



LESSON 1 Review

CheckPoint

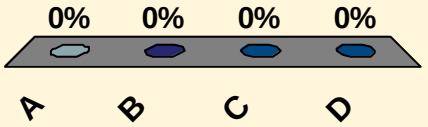
What describes the preservation of the impression of an organism if no parts of the organism remain?

A carbonization

B replacement

C molds or casts

D original material



LESSON 1 Review

CheckPoint

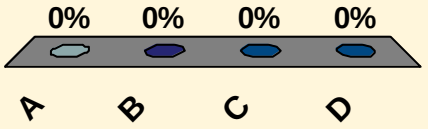
What are the most commonly found fossils?

A original material

B hard structures

C soft structures

D footprints



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Hot Sync

Thursday 12/12/13

Answer the following questions in *complete sentences* on a BLANK sheet of paper.

What new thing did you learn about fossils yesterday? (explain in 2 complete sentences)

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Materials Needed Today

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- Pencil
- Mystery Bones Lab

Hot Sync

Friday 12/13/13

Answer the following questions in *complete sentences* on a BLANK sheet of paper.

From what you know, explain how earth quakes happen. (this is your own answer no right or wrong I just want to know what you think.)