

Engage: Think-Pair-Share with the following questions:

- How old do you think the Earth is?
- What does the word *extinct* mean?
- What kind of story do fossils tell about the past?
- What does it mean to *evolve*?

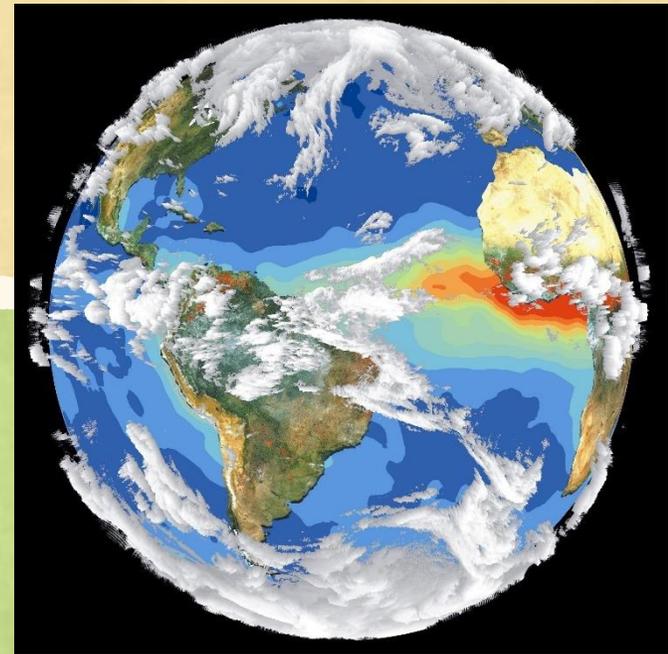
History of the Earth

Mrs. O'Bier



The Earth

- Continually evolving (developing gradually from a simple form to a complex form)
- Approximately 4.5 billion years old
- History of Earth is gathered from evidence and artifacts left behind from many years ago



Fossils

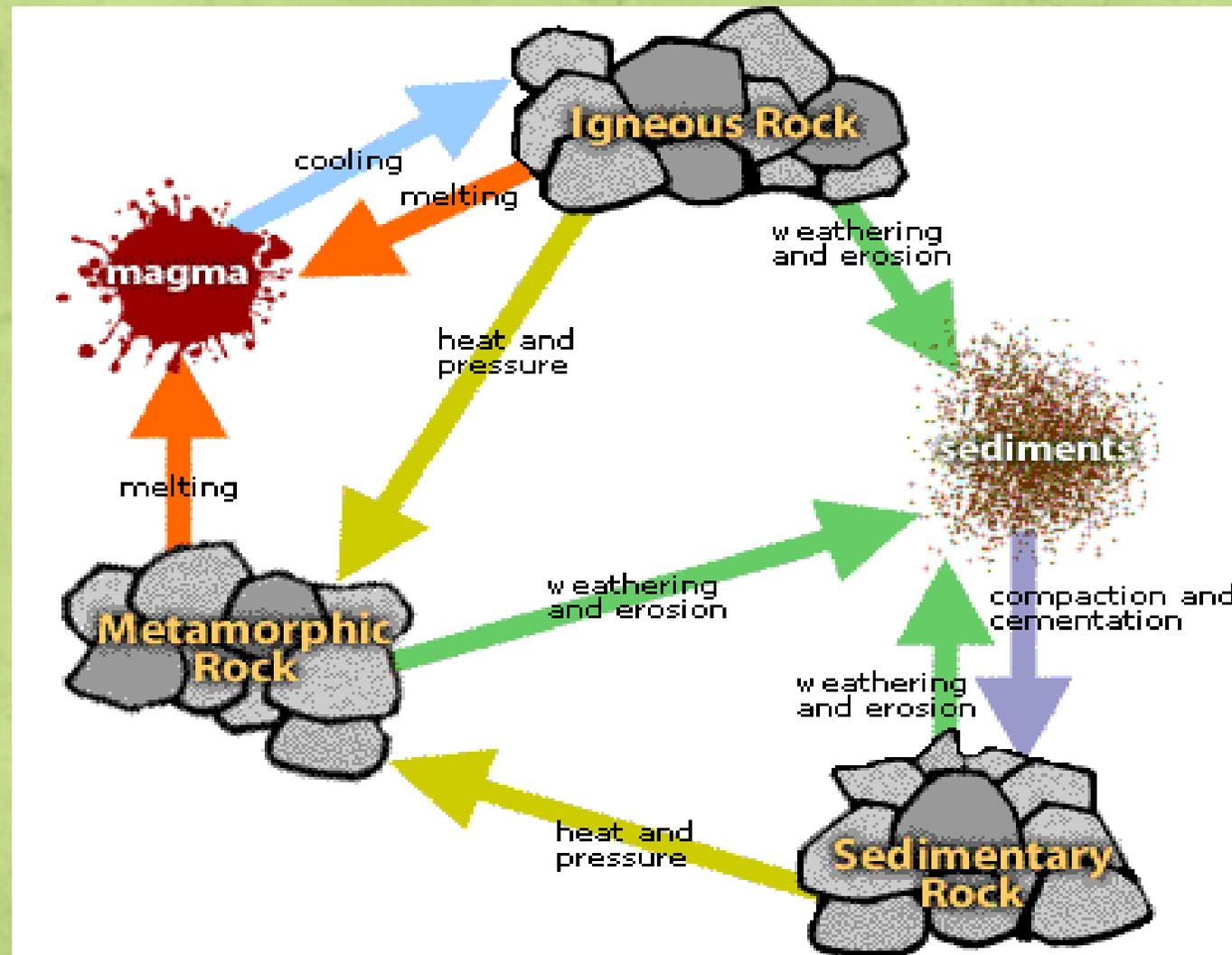
- Fossils, rocks, and other formations provide information for scientists about what life on Earth used to be like
- Tell how certain species became extinct
- [Fossils Video](#)



Fossils Continued...

- Where can we find fossils?
 - 1. extrusive igneous rock
 - 2. low-grade metamorphic rock
 - 3. sedimentary rock
- Two types:
 - 1. Body fossils (complete organisms)
 - 2. Trace fossils (plants and footprints)

The Rock Cycle



The Rock Cycle Continued...

- Weathering, Erosion, and the Rock Cycle
- How are sedimentary rocks formed?

Extinct

- **Definition**

- describes a species of animals that once lived on Earth but which no longer exists (related word: extinction)

Where Did Life On Earth Originate?

- CLICK

Explain Question

- What are some scientific explanations for the history of life on Earth?
 - Answer this directly in your notes (this is graded)

Evolutionary Tree & Sequence of Life

- CLICK

Explain Question

- What types of concepts are used to describe the evolution of life on Earth?
- How are fossils applied to studying the history of life on Earth?
 - Answer these directly in your notes (this is graded)

Ecosystem

- **Definition**

- all the living (biotic) and nonliving things (abiotic) in an area that interact with each other

- **Greek/Latin Etymology**

- Greek root systema meaning “organized whole, body”

Biodiversity

- **Definition**

- the variety of species that exist in an environment

- **Greek/Latin Etymology**

- Greek root bio meaning “life; Latin root diversitas meaning “difference”

Episodic Selection

- **Definition**

- the evolution of many new species in a relatively short period of time due to major climatic shifts

- **Greek/Latin Etymology**

- Greek root eisodos meaning “an entrance”; Latin root species meaning “a type”

Mass Extinction

- **Definition**

- the loss of many species throughout the world in a short period of time

- **Greek/Latin Etymology**

- Greek root maza meaning “lump”; Latin root extinguere meaning “to wipe out”

Geological History of the Earth

- A Documentary

Coevolution

- **Definition**

- the evolution of two different but complimentary characteristics in organisms that interact with each other

Coevolution Continued...

- CLICK

What is the Geologic Record?

- the history of Earth as recorded in the rocks that make up its *crust*. Rocks have been forming and wearing away since Earth first started to form, creating sediment that accumulates in layers of rock called strata



Exit Ticket

- 1. How old is the Earth?
- 2. What does the word *extinct* mean?
- 3. What kind of story do fossils tell about the past?
- 4. What does it mean to *evolve*?
- 5. Give an example of coevolution.