

Prehistoric Life Guided Tour Pre-Visit Evolutionary Adaptations Lesson Plan

Grade	Suggested Time	NGSS Connections
6-8	45 minutes	<p>MS-LS4-1: Apply and interpret data for patterns in the fossil record that document the existence, diversity, extinction, and change of life forms throughout the history of life on Earth under the assumption that natural laws operate today as in the past.</p> <p>MS-LS4-2: Apply scientific ideas to construct an explanation for the anatomical similarities and differences among modern organisms and between modern and fossil organisms to infer evolutionary relationships.</p>

Learning Outcome

Students will be able to explain how fossils show evidence of evolution and will identify similarities in adaptations in modern organisms and organisms present in the fossil record.

Materials

“Evolution of Video Game Consoles” picture (included in this lesson)

Fossil Record Evidence worksheets (included in this lesson)

Stories from the Fossil Record website (Link:

<http://www.ucmp.berkeley.edu/education/explorations/tours/stories/middle/intro.html>)

Background and Key Vocabulary

A modern organism is something that is alive today. A fossil organism is something that was alive, but has been dead for a very long time. Their existence is only proven by the fossils people find around the world. Many of these organisms have adapted similar features, physical and nonphysical, as one another over time.

Activity

1. Display the “Evolution of Video Game Consoles” picture to introduce students to the concept of evolution.
2. Have students discuss the questions under the picture to allow them to begin to think of how fossils convey similar features of organisms today.
3. After this, assign students into groups of two to a computer (one set of worksheets per group) and have them navigate to the **Stories from the Fossil Record** website.
4. Have students move through the “**Past Lives**” and “**Biodiversity**” stories to complete their Fossil Evidence worksheets.
5. Review findings as a class.

Name:

Date:

Fossil Record Evidence

Source: <http://www.ucmp.berkeley.edu/education/explorations/tours/stories/guide/index.html>

Instructions:

As you visit the “Past Lives” and “Biodiversity” pages on the Stories from the Fossil Record (<http://www.ucmp.berkeley.edu/education/explorations/tours/stories/middle/intro.html>) website, in groups of two, record what each piece of evidence tells you about.

Past Lives:

Evidence:	What it tells us:
Growth rings in fossils or trees	<i>Growth rings tell us the number of years that trees lived</i>
Curled up fossil trilobites	
The contents of fossil nests	
Fossils of many individuals of the same species together	

Biodiversity:

Evidence:	What it tells us:
Fossils of organisms no longer alive today	
Features that are shared by more than one species	
The extinction of many fossil species at the same time	
The extinction of one group of organisms, like corals, on which another type of organism depended	

Fossil Record Evidence *Answer Key*

Source: <http://www.ucmp.berkeley.edu/education/explorations/tours/stories/guide/index.html>

Past Lives:

Evidence:	What it tells us:
Growth rings in fossils or trees	<i>Growth rings tell us the number of years that trees lived</i>
Curled up fossil trilobites	<i>Trilobites may have curled up to avoid predation just as pill bugs do today</i>
The contents of fossil nests	<i>Some dinosaurs cared for their young while still in the nest</i>
Fossils of many individuals of the same species together	<i>These animals probably lived in herds</i>

Biodiversity:

Evidence:	What it tells us:
Fossils of organisms no longer alive today	<i>Living things in the past were different from those of today</i>
Features that are shared by more than one species	<i>These species are probably related to each other</i>
The extinction of many fossil species at the same time	<i>This would indicate a mass extinction caused by a wide-ranging catastrophe</i>
The extinction of one group of organisms, like corals, on which another type of organism depended	<i>The extinction of one kind of organism often causes the extinction of others</i>

