

GALLERY RESOURCE GUIDE

Ancient Seas

Grades: 3, 4, 5, 6, 7, 8, World Geography, Earth and Space Science

Academic Standards:

Social Studies: 4.3.5, WG.3.4

Science: 3.2.4, 4.2.2, 6.2.2, 6.3.3, 7.2.3, 7.2.4, 7.2.7, 7.2.8, 8.2.1, 8.3.9, ES.4.6, ES.5.6, ES.5.7, ES.6.4

Overview:

Was Indiana covered by an ocean? Did sharks swim in these oceans? Were there dinosaurs in Indiana? Discover answers to these questions and more as this gallery allows guests to examine creatures that once occupied Indiana and the fossils they left behind.

Gallery Highlights:

- > **Cambrian-Ordovician Tower:** This tower features evidence of Mollusks, arthropods, bryozoans, and the nautiloid, just a few examples of creatures living in Indiana during this period.
- > **Silurian Tower:** Abundant reefs during this time allowed corals, gastropods, and trilobites to thrive. Discover fossils found with oily residue and visit *More Holes Than Swiss Cheese* to view fossils preserved in Silurian dolomite.
- > **Devonian Tower:** View fossils from this period also known as “The Age of Fishes.” In addition, touch Devonian limestone and New Albany Shale to recognize differences between the two samples, and then determine which is used in makeup and which is used in oil.
- > **Mississippian Tower:** Determine whether the crinoid was a plant or an animal in this “Age of Crinoids” time period. Look for all 31 species of fossils located in this section.
- > **Pennsylvanian Tower:** Giant dragonflies, sharks, ferns, and coal deposits mark this time period.
- > **Make a Match:** Match fossils from each geological time period to pictures of species to see what it looked like alive.
- > **Exploration Drawers:** Each tower contains a drawer packed with special specimens to examine close up through a built in magnifying glass.
- > **Changing the Face of the Earth:** Spin the dial to watch the earth change over 300 million years.
- > **The Missing Record:** 300 million years of information on Indiana’s environment and its inhabitants is missing. Find out here if dinosaurs lived in Indiana.

- > **“Filling in the Pages: Pipe Creek Junior Quarry”**: This video and tells the story of unique fossils found in Northeast Indiana, helping to put together an Ice Age puzzle.

Key People, Events or Terms:

- > Cambrian
- > Ordovician Period
- > Silurian Period
- > Devonian Period
- > Mississippian Period
- > Pennsylvanian Period
- > Paleozoic era
- > Tidal rhythmites
- > Gravitational pull
- > Eras
- > Limestone
- > Fossil
- > Crinoid
- > Invertebrate
- > Vertebrate

Workshops, Lesson Plans, and Special Events:

- > Indiana Fossils lesson plan
- > Fossils family backpack
- > Fishin’ Frenzy gallery search
- > Fossils workshop
- > Geofest Festival

Discussion Questions:

- > After discovering different organisms that lived in each geological period of time, have the students name two organisms that were plants and two that were animals. Ask the students if their animals were predators of that period of time.
- > Discuss what a fossil is, fossils that might be found in Indiana, and what those fossils can tell us about the environment in Indiana. What conditions would those organisms have needed to survive? What might have caused their deaths? Why is their importance as fossils so valuable to Indiana’s economy?
- > Why is *The Missing Record* so important to Indiana’s history? What discoveries were made in the Pipe Creek Junior Quarry site that indicated what life was like in Indiana?