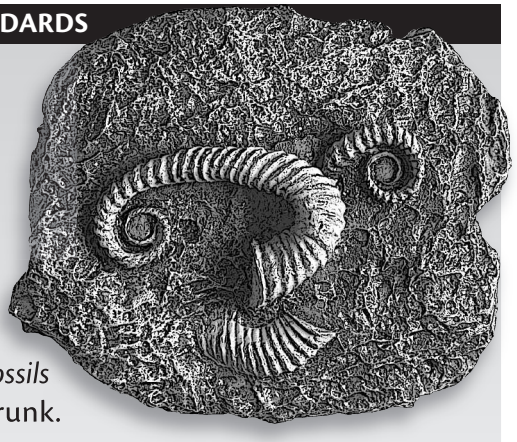


Fossils

4-ESS1-1. Identify evidence from patterns in rock formations and fossils in rock layers to support an explanation for changes in a landscape over time

BACKGROUND: See the Background Information provided in the *Illinois Fossils* activity book and other publications within the *Illinois Fossils* resources trunk.

OBJECTIVE: Students will use posters, field guides and books to gather and analyze data.

MATERIALS: *Illinois Fossils* resources trunk contents

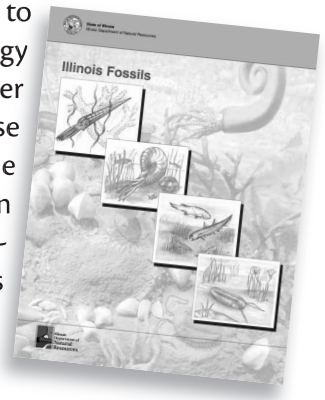
Suggested Activities

Activity 1

- Tell students to use the *Fossils of Illinois* and *Illinois Fossils* posters, *Illinois Fossils* activity book and other resources in the *Illinois Fossils* trunk to gather data about the different types of fossils found in Illinois, where they are found, when the organisms lived and the types of environments in which they lived. Have them discuss the types of habitats that were home to these organisms and the types of habitats that we have in Illinois today. Do the organisms represented by fossils found in Illinois still live here today? What has changed about the land that is now Illinois since the time when these species lived here? What caused these changes? How can the geology of an area explain the changes?

Activity 2

- Photocopy the *Illinois Fossils* activity book or download it for use from the "Activity Books" section at http://dnr.state.il.us/teachkids. Assign the activities in the book to the students. Using the time lines as reference, discuss the changes in the types of organisms over time. How do they relate to the changes in Illinois' geology over time? Predict the order that the fossils from these species would be found in the rock layers in the state from top to bottom. Have the students explain their choices and use reference materials to check their predictions.



STEM Connections: Evaluations

Science: All of the activities shown above are science-based and can be used for evaluations.

Technology: Have students use the Illinois State Geological Survey's Ask an Expert feature to communicate with an Illinois scientist who studies fossils.
http://isgs.illinois.edu/?q=ask-expert

Engineering: Have students design a tool or device that would make the study of fossils in the state easier for scientists. Each student should make a presentation about this tool or device and explain how it would be useful.

Mathematics: Have the students graph the size range for the species featured in the *Illinois Fossils* activity book starting with the oldest and finishing with the youngest fossils. Is there any correlation between the age of the fossils and the size of the fossils? Are there any correlations between the size of the fossils and the habitats that supported them?

Training

Additional training about Illinois fossils and on implementing this topic to support performance expectation 4-ESS1-1 can be obtained through ENTICE (Environment and Nature Training Institute for Conservation Education) workshops from the IDNR. *Illinois Fossils* is a related workshop. See the "Resources" page for more information. The IDNR Division of Education also provides training sessions at teacher conferences throughout the state.

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