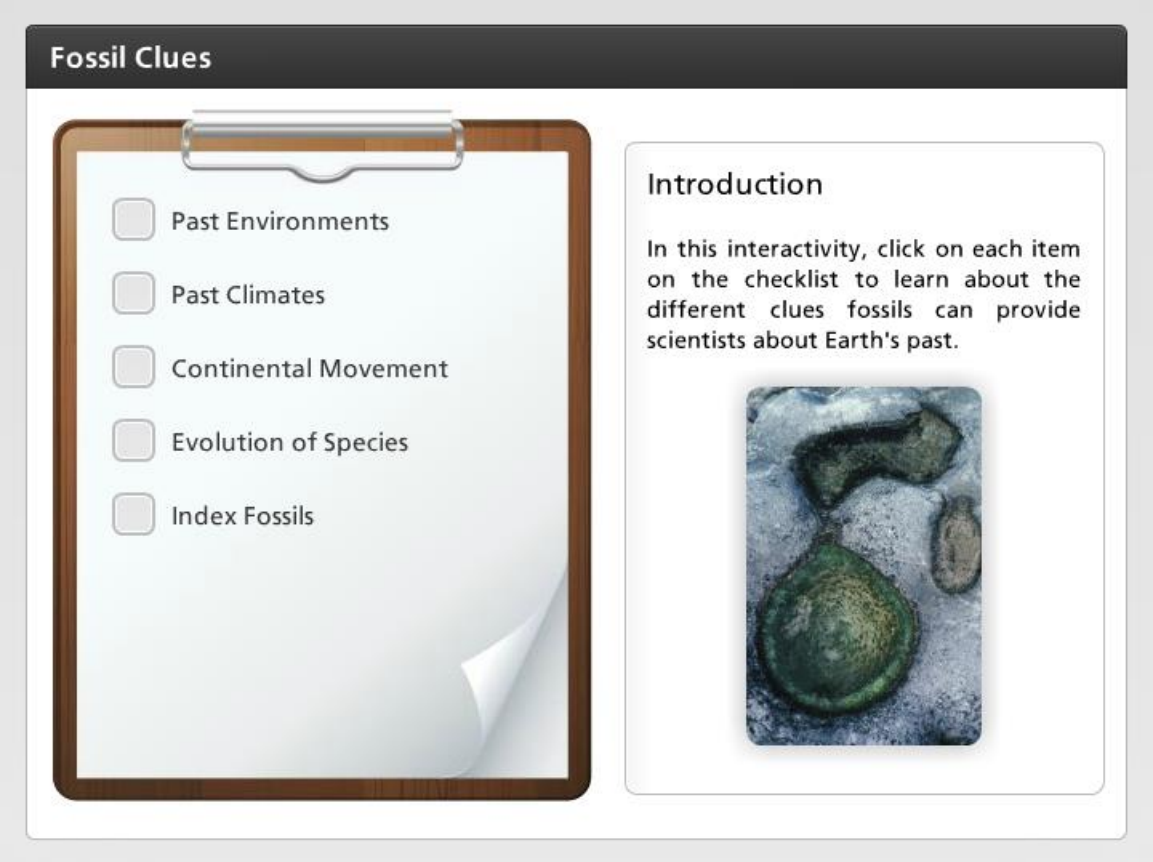
Module 8: Evolution and Natural Selection
Topic 1 Content: Fossil Clues Notes

Introduction



In this interactivity, click on each item on the checklist to learn about the different clues fossils can provide scientists about Earth's past.

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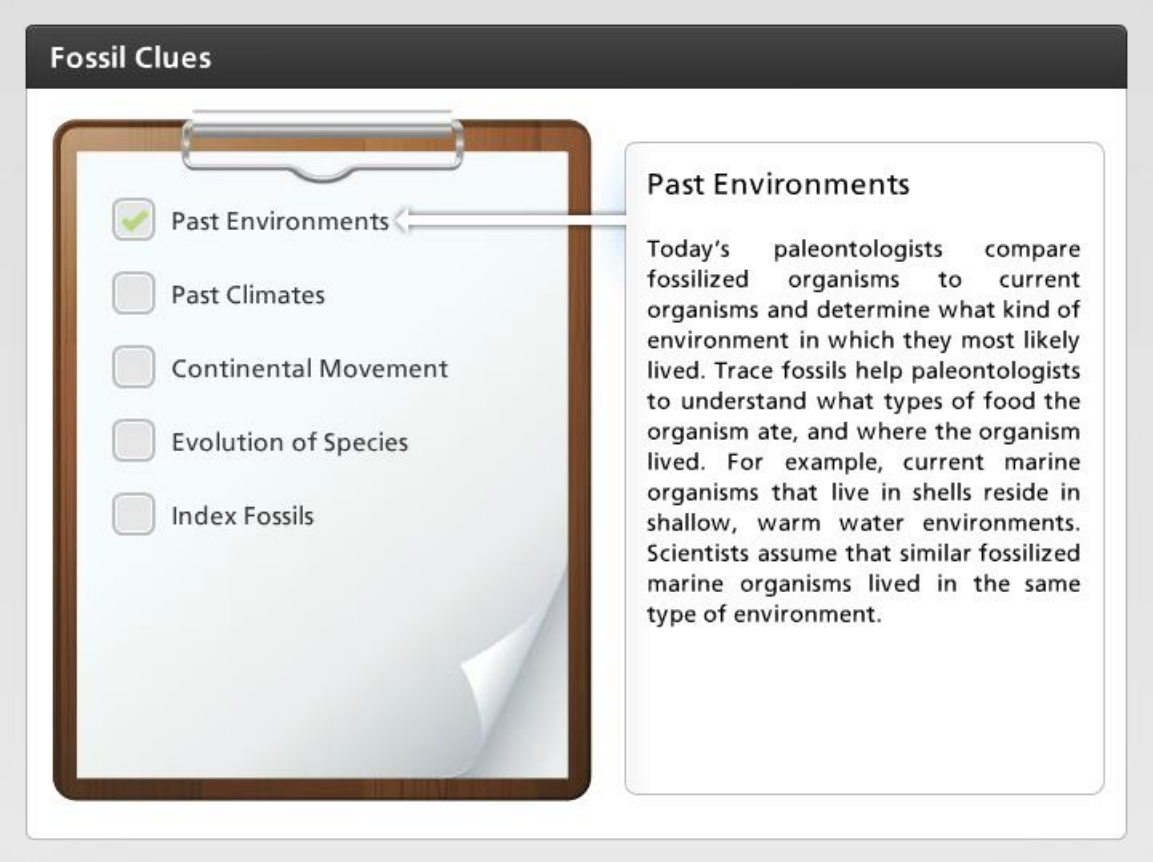
Past Environments



Today's paleontologists compare fossilized organisms to current organisms and determine what kind of environment in which they most likely lived. Trace fossils help paleontologists to understand what types of food the organism ate, and where the organism lived. For example, current marine organisms that live in shells reside in shallow, warm water environments. Scientists assume that similar fossilized marine organisms lived in the same type of environment.

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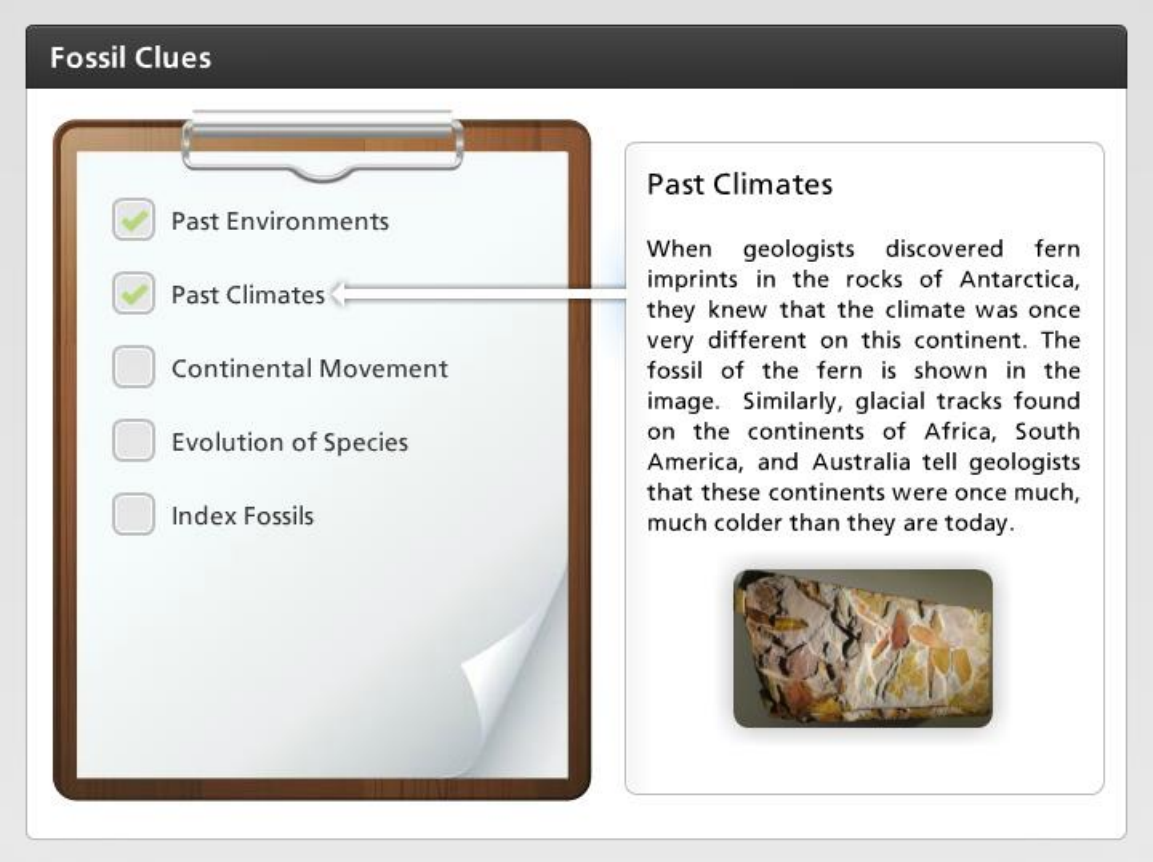
Past Climates



When geologists discovered fern imprints in the rocks of Antarctica, they knew that the climate was once very different on this continent. The fossil of the fern is shown in the image. Similarly, glacial tracks found on the continents of Africa, South America, and Australia tell geologists that these continents were once much, much colder than they are today.

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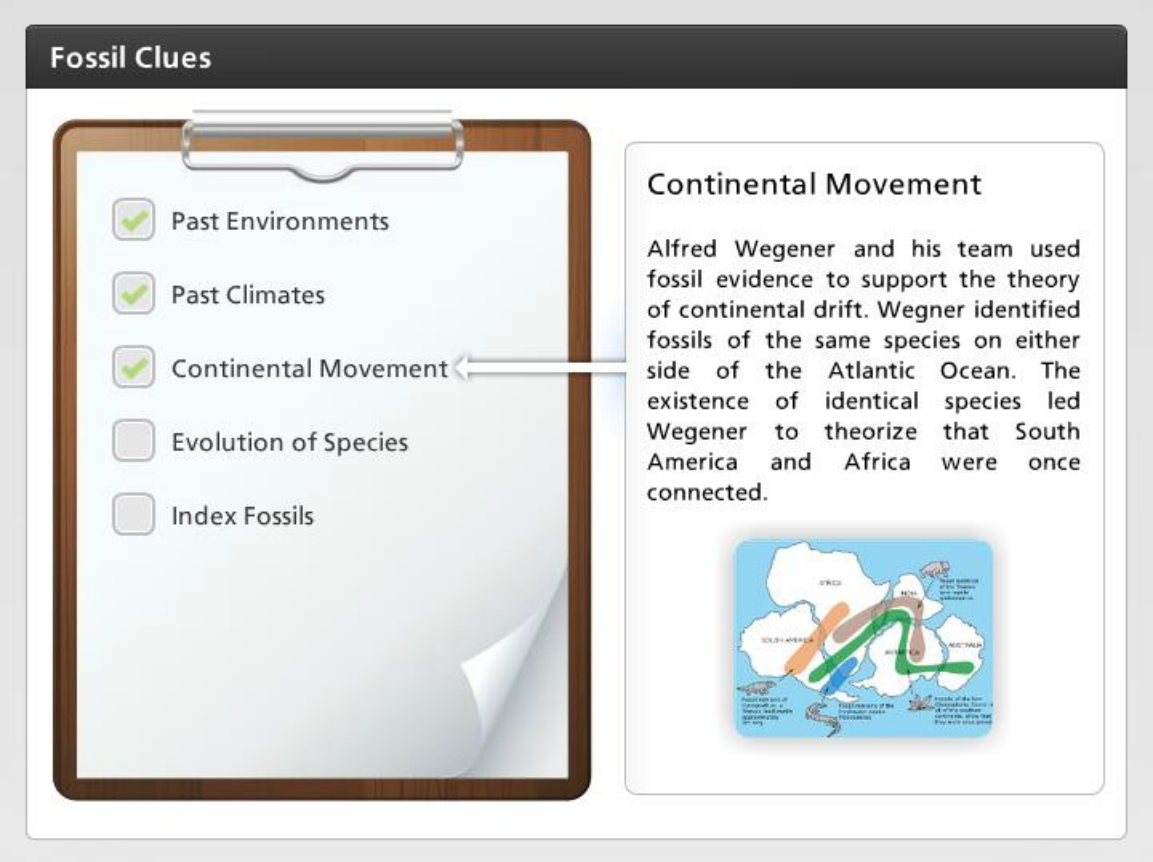
Continental Movement



Alfred Wegener and his team used fossil evidence to support the theory of continental drift. Wegner identified fossils of the same species on either side of the Atlantic Ocean. The existence of identical species led Wegener to theorize that South America and Africa were once connected.

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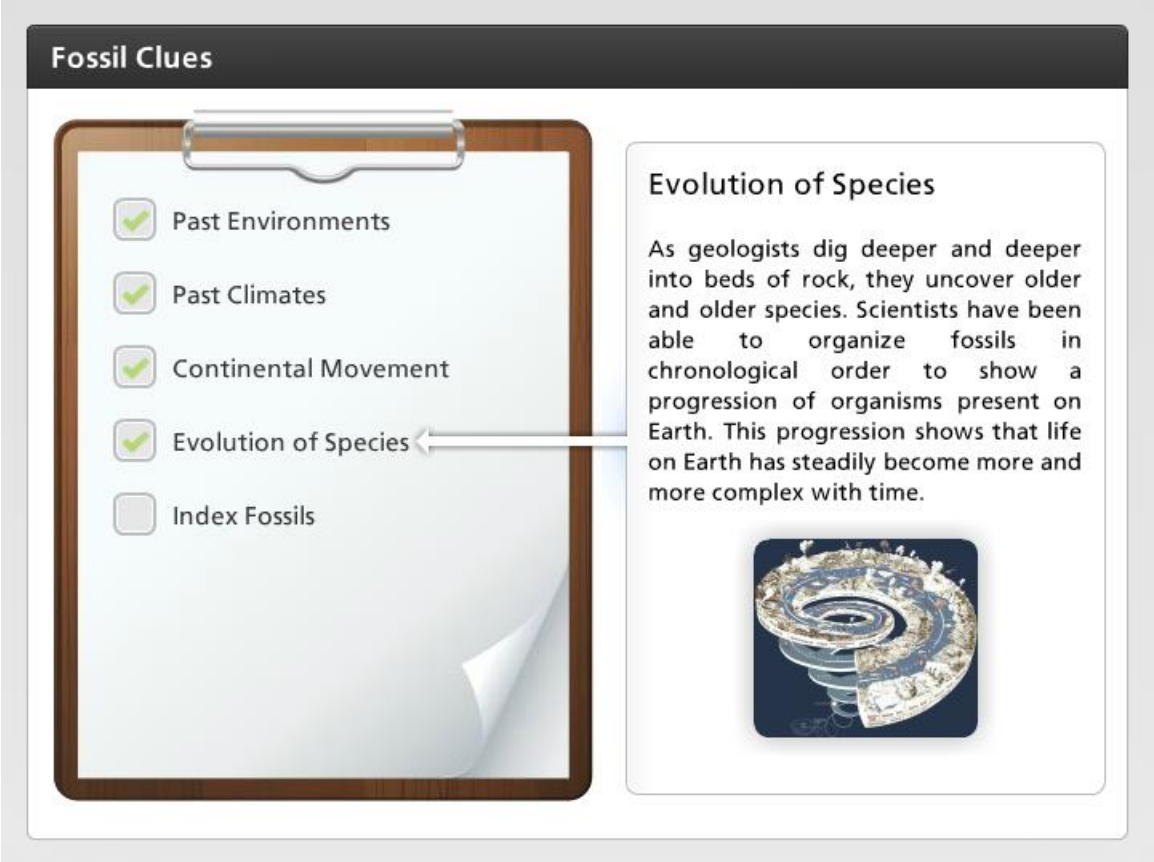
Evolution of Species



As geologists dig deeper and deeper into beds of rock, they uncover older and older species. Scientists have been able to organize fossils in chronological order to show a progression of organisms present on Earth. This progression shows that life on Earth has steadily become more and more complex with time.

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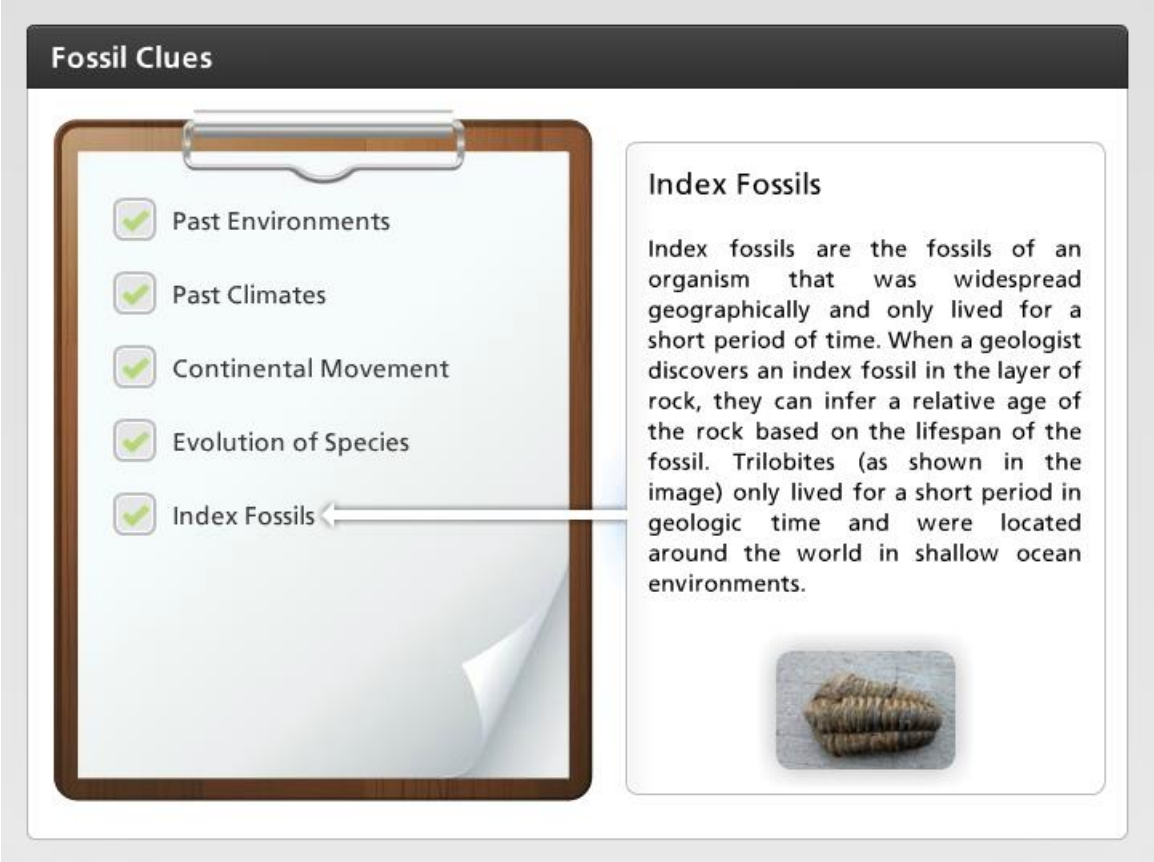
Index Fossils



Index fossils are the fossils of an organism that was widespread geographically and only lived for a short period of time. When a geologist discovers an index fossil in the layer of rock, they can infer a relative age of the rock based on the lifespan of the fossil. Trilobites (as shown in the image) only lived for a short period in geologic time and were located around the world in shallow ocean environments.