UNIVERSITY OF NEBRASKA
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Tectonic Fossil Evidence Puzzle

Puzzle Activity

For hundreds of years, map makers had suggested that distant continents were previously adjacent based on coastlines. Alfred Wegener, a researcher in the early 20th century, compiled geological and fossil evidence and proposed the idea of continental drift. His ideas were rejected by the scientific community, as he did not have an explanation for how the continents moved, and at that time, everyone thought the Earth was completely solid and brittle. With more research and new technologies, scientists now realize that the Earth is solid, but not brittle. They built on Wegener's ideas about the movement of continents and proposed the now widely accepted theory of plate tectonics.

Geologists and paleontologists looked at evidence from rocks and fossils to see areas of the Earth's continents that could have been connected to each other in the past. Try to use fossil evidence to solve a continental puzzle!

Unlike a typical jigsaw puzzle, the pieces of your fossil puzzle will not line up exactly. If you had puzzle pieces that were separated for millions of years and were subjected to water and wind erosion, earthquakes, and other natural processes, the pieces might not fit neatly anymore. Using fossil evidence, see if you can assemble the puzzle pieces to form the ancient land mass of Gondwana.

CUT

What you need:

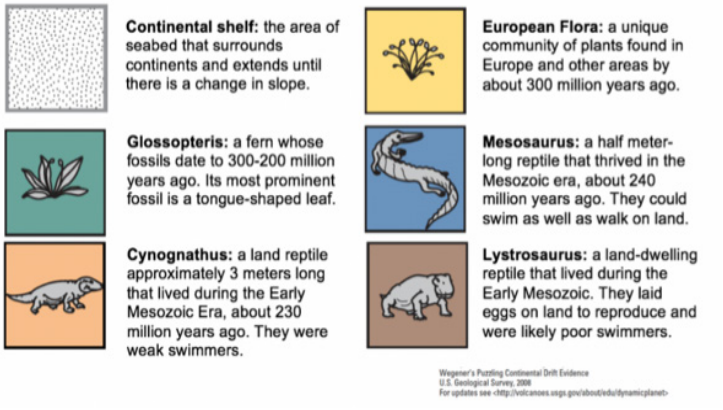
- USGS Fossil Evidence Sheet
- World map
- Crayons or markers
- Scissors

What you'll do:

1. Using a map of the world, have children identify and label Africa, Antarctica, Australia, India, and South America on their Fossil Evidence Sheet.
2. Children can color the images on the sheet to match up with the colors seen in the Key to Wegener's Fossil Evidence (below).
3. Help children cut out their puzzle pieces using the outermost gray line as a guide.
4. Ask them to use clues from the fossil evidence to create one supercontinent with the puzzle pieces.
5. Once all the pieces have been used, ask children to explain their reasoning and discuss the fossil evidence they used to arrange the puzzle.

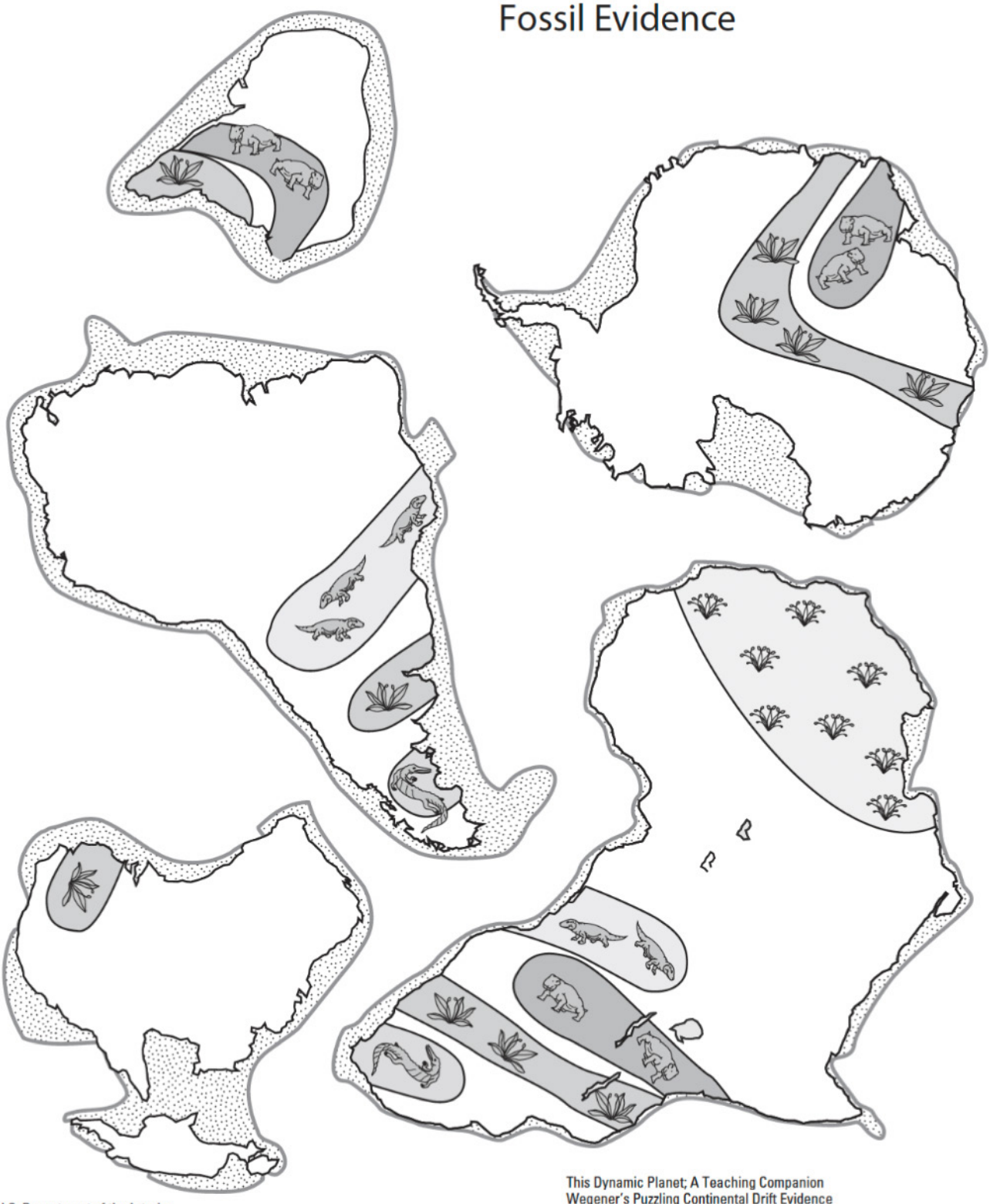
FIND

Key to Wegener's Fossil Evidence



USGS

Fossil Evidence



U.S. Department of the Interior
U.S. Geological Survey

This Dynamic Planet; A Teaching Companion
Wegener's Puzzling Continental Drift Evidence
U.S. Geological Survey, 2008
For updates see <http://volcanoes.usgs.gov/about/edu/dynamicplanet>

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Puzzle Answer Key