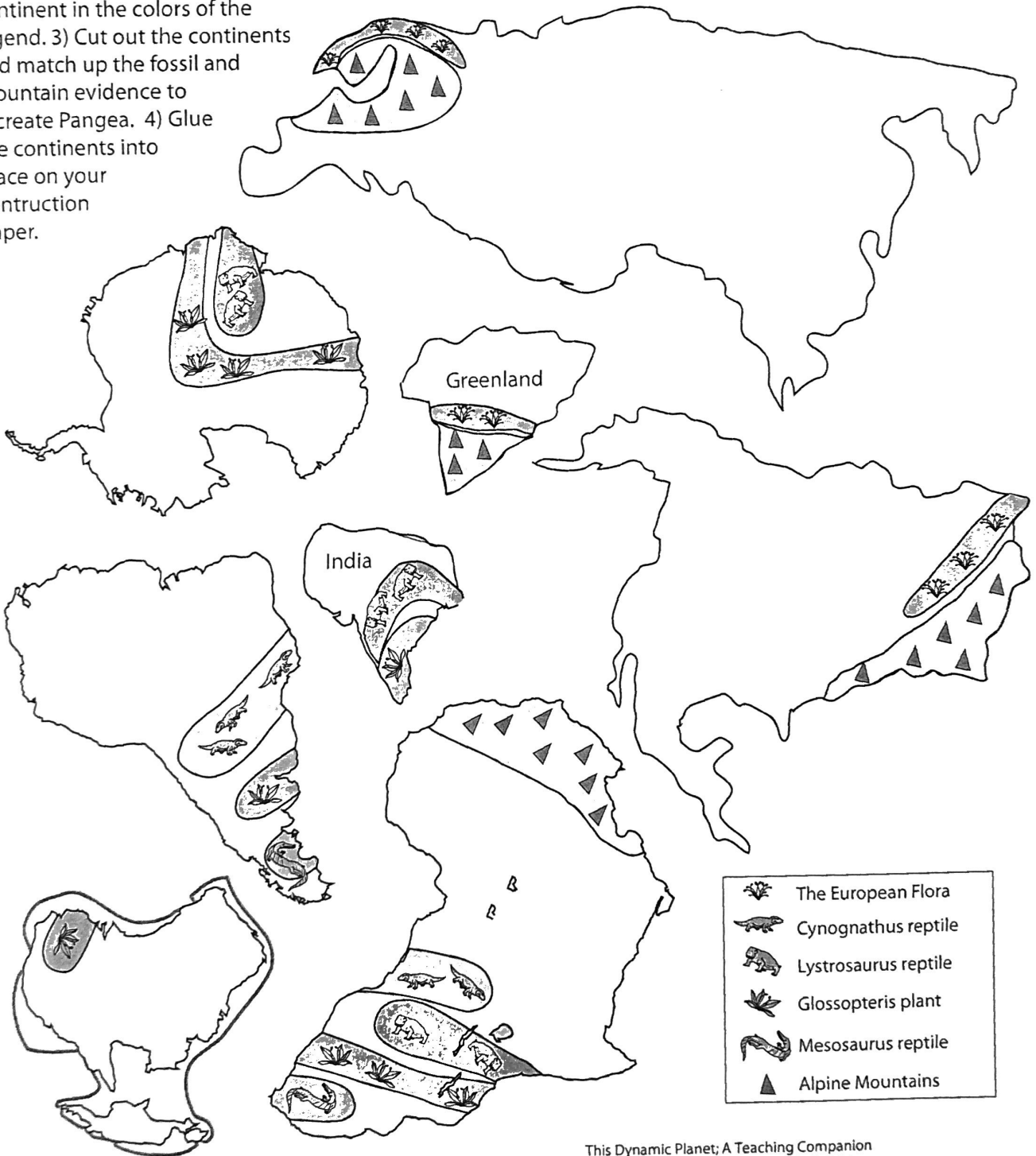


Analyzing Evidence: Continental Drift

Is it evidence?		Statements	Does it support the idea that the continents have moved?	
Yes	No		Yes	No
		1. 1858: Geologist Eduard Seuss points out that fossils of the <i>Glossopteris</i> plant are found in southern Africa, South America, Australia, Antarctica, and India.		
		2. Wegener examines the location of tiny rocks and the direction of grooves formed by large glaciers scraping across southern areas of Africa, South America, Australia, Antarctica, and India. He concludes that if all these places were fitted together, they would form a continuous ice sheet expanding outward in all directions.		
		3. Frankfurt News, January 6, 1912: Announcement that German scientist Alfred Wegener will speak at the Geological Association meeting.		
		4. Popular Geology magazine, March 12, 1912: "Continents are so large they must always have been where they are."		
		5. Wegener observes that a South American mountain range in Argentina lines up with an ancient African mountain range in South Africa when the two continents are placed together. He writes: "It is just as if we were to refit the torn pieces of a newspaper by matching their edges and then check whether the lines of print ran smoothly across. If they do, there is no thing left but to conclude that the pieces were in fact joined in this way."		
		6. 1927: Geologist Alexander du Toit observes rock layers on the western coast of Africa in the following sequence: basalt rock, shale containing fossil reptiles, coal layers containing <i>Glossopteris</i> fossils, rocks containing <i>Mesosaurus</i> fossils, and shale. He discovers an almost identical sequence of rock layers on the eastern coast of South America.		
		7. 1944: Geologist Baily Willis calls Wegener's theory a fairy tale. He argues that the theory should be ignored.		
		8. 1965: Geologist Edward Bullard uses computers to match coasts of South America and Africa. They match extremely well at an ocean depth of 1,000 meters.		
		9. 1980s: Satellites and lasers are used to measure the movement of continents. They continue to move at an average of about 2 cm (0.8 in) per year.		
		10. Fossils of <i>Megascolecina</i> earthworms are found in South America, Africa, India, and Australia, as well as the islands of Madagascar and New Guinea.		

USGS Fossil and Mountain Chain Evidence

DIRECTIONS: 1) Label each continent with its name.
 2) Color the fossils or mountains in the legend and color the symbols on each continent in the colors of the legend. 3) Cut out the continents and match up the fossil and mountain evidence to recreate Pangea. 4) Glue the continents into place on your construction paper.



Modified From:
 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>>