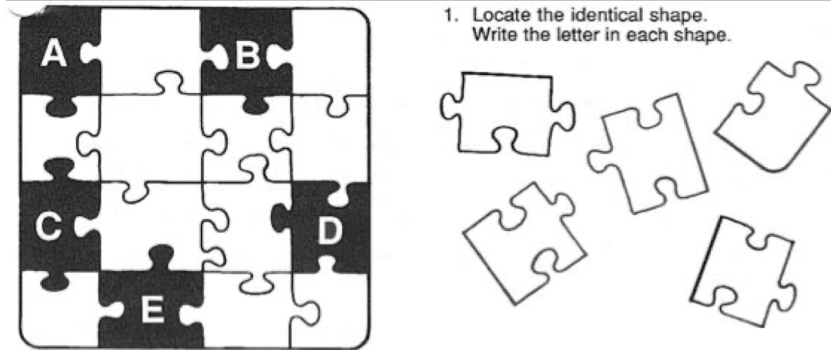


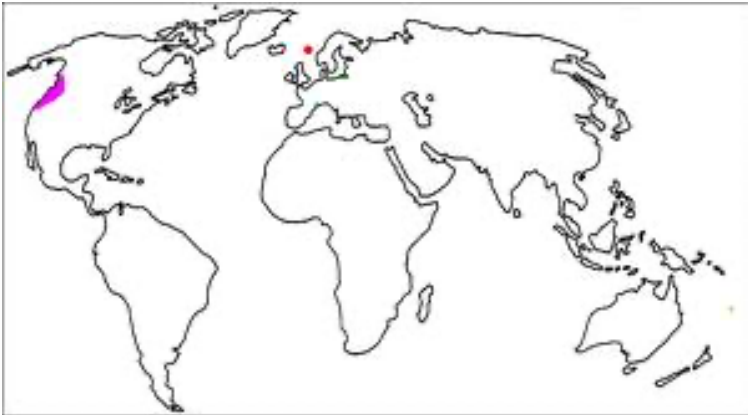
# What Fossils Tell Us

## Engage

### What To Do:



2. Look at the map of the continents below.
3. Think about how they might fit together like the jigsaw puzzle above.
4. Write your ideas below.



5. Share your ideas with your partners about how these continents might fit together in a large puzzle.

## Explore

**Materials:** Colored pencils, scissors, glue, World Map, Fossil Evidence sheet, Continent Outline sheet

### What To Do:

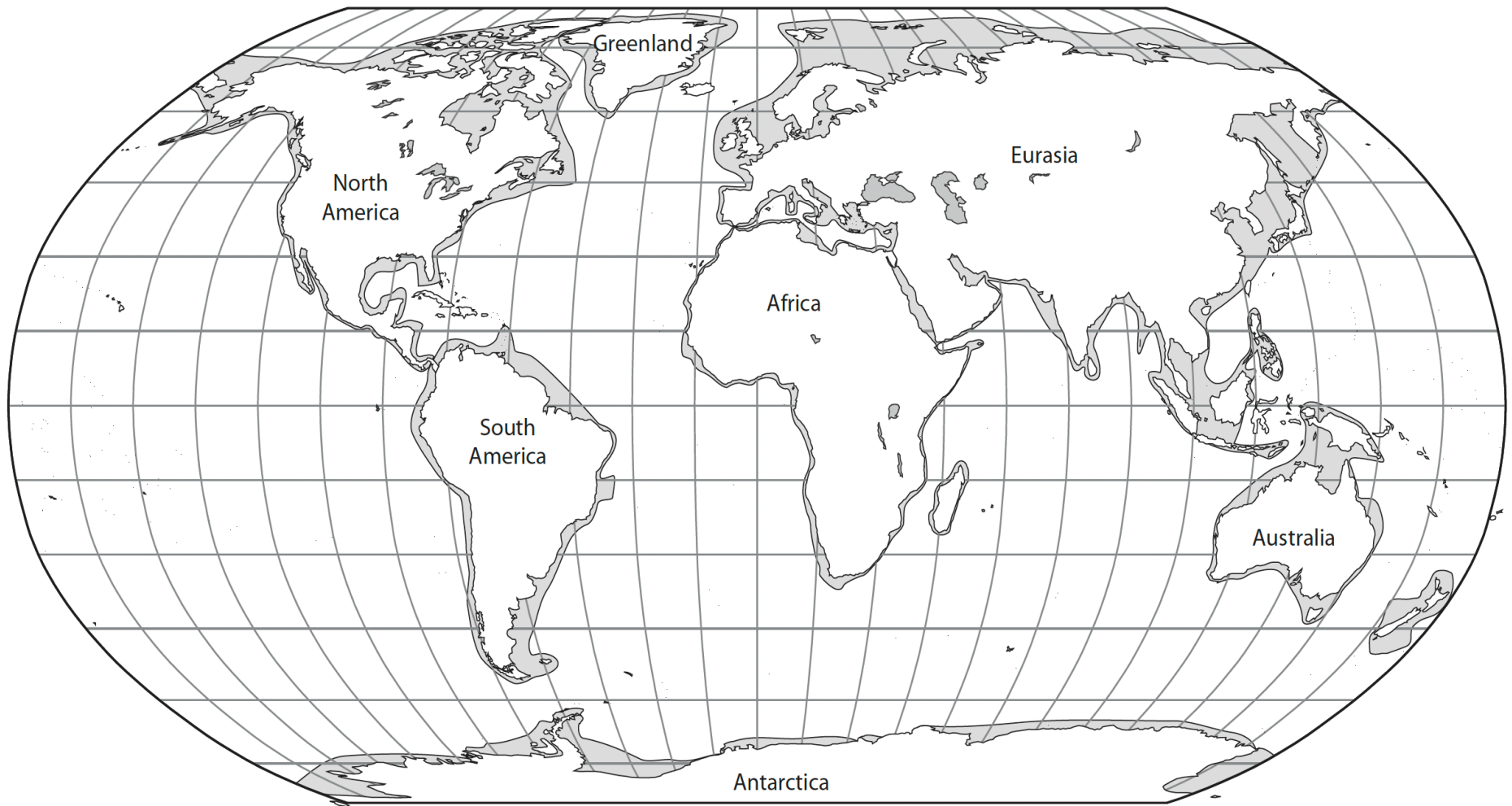
1. Look at the World Map and the Continents Sheet
2. Label the continents on the Fossil Evidence Sheet with their current names.
3. Color the fossils areas to match the legend below.
4. Cut out each of the continents along the edge of the continental shelf (the outermost dark line).
5. Try to logically piece the continents together so that they form a giant supercontinent.
6. When you think you have a good fit let your teacher check your work.
7. Your teacher will then give you the Continent Outline Sheet and you can see if your solution matches what the scientists have discovered.
8. Glue your continents onto the outline sheet and cut out the outline. Glue this on the next page of your notebook.

### Fossil Legend

	Fossils of these plants are found in Europe and other areas. Color the areas with these fossils yellow.
	Fossils of the fern <i>Glossopteris</i> have been found in these locations. Color the areas with these fossils green.
	Fossils of a half meter long freshwater reptile that lived in coastal bays have been found in these locations. Color the areas with these fossils blue.
	Fossil remains of <i>Cynognathus</i> , a land reptile approximately 3 meters long lived in these areas. Color the areas with these fossils orange.
	Fossils of a land-dwelling reptile named <i>Lystrosaurus</i> were found in these areas. Color them brown.

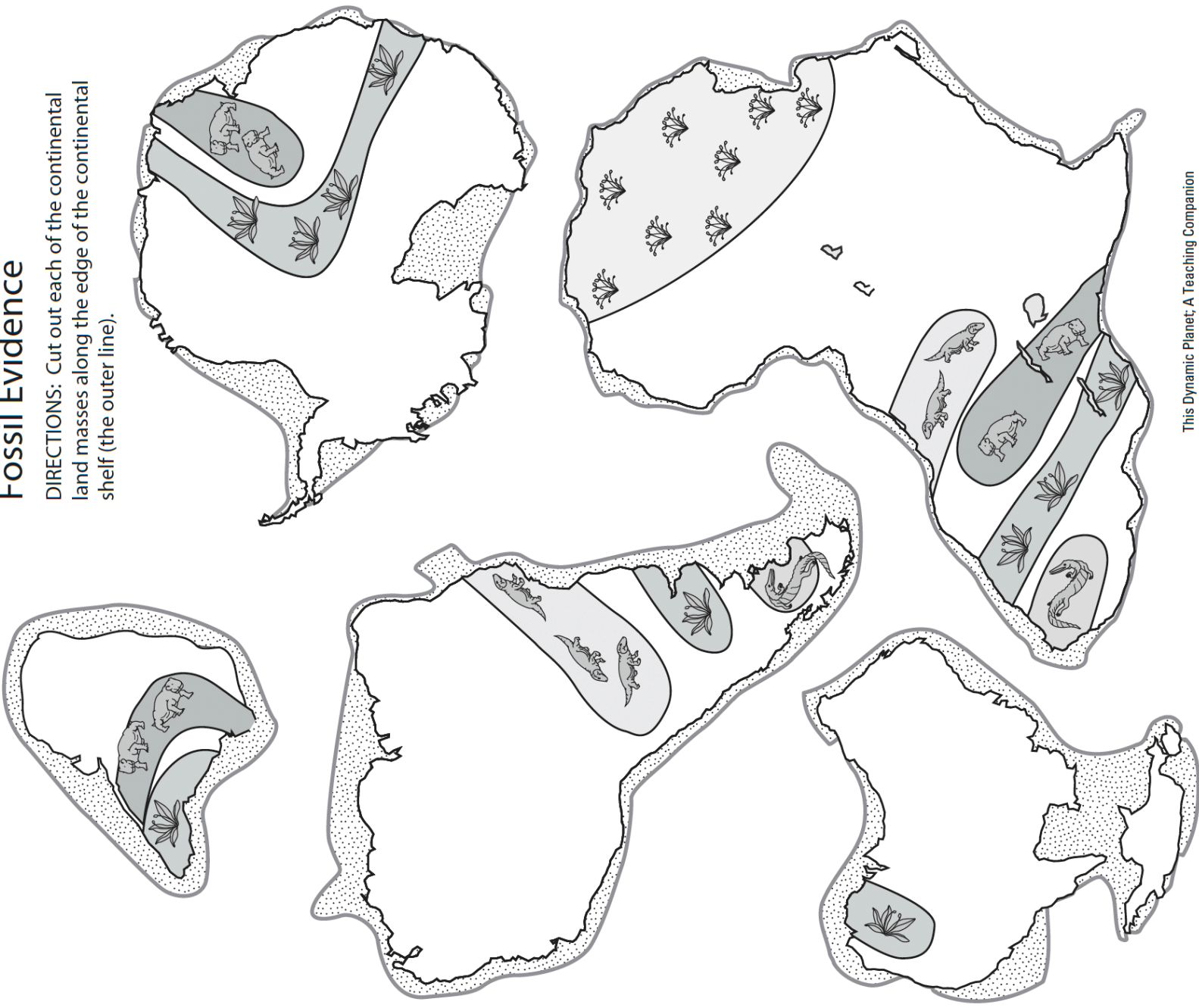
## World Map

This map shows the continents as they appear today. Most of the continental land masses lie above sea level, but the true edges of the continents are not at the shoreline. The gray areas on this map show the relatively shallow water that covers the fringes of the continents. These sea-covered borders are known as **CONTINENTAL SHELVES** (gray areas).



# Fossil Evidence

DIRECTIONS: Cut out each of the continental land masses along the edge of the continental shelf (the outer line).



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>>

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

# Continent Outline



The finished puzzle will fit within this outline. Some of the pieces may overlap slightly.



# EVIDENCE FOR EARTH'S CHANGE OVER TIME

*Explain*

FOSSILS

ALFRED WEGENER

CONTINENTAL DRIFT

*Elaborate*

**Materials:** paper plate, small shell or other hard object, ball of clay, bottle of white glue

**What To Do:**

1. Roll, soften, and flatten the ball of clay.
2. Make sure it is thick enough that you can press your shell into it.
3. Place the clay on the paper plate and press the shell into it. DON'T make it too deep or cover the shell with the clay.
4. Gently remove the shell from the clay without stretching it.
5. Draw the mold of the fossil below.

6. Fill the fossil mold you made above with white glue. Make sure it doesn't come over the edges.
7. Place the plate with the clay and white glue in the place your teacher designates.
8. Check to see if the glue has hardened about 24 hours. If not, leave it along for another day.
9. After the glue has hardened, gently pull the clay from around the hardened glue.
10. Draw the cast of the glue fossil looks like below.



1. Watch the video “Piecing Together the puzzle of continental Drift” from Encyclopedia Britannica found at <https://www.britannica.com/video/discussion-some-evidence-Earth-continental-drift/-182285>

2. Use the Word Bank to help you fill in the blanks as you watch the video.

### WORD BANK

animals      map      supercontinent      similarities  
continental drift      Pangea      plate tectonics  
melted      puzzle      convection      five

1. Looking at a \_\_\_\_\_ of the world, it appears that the eastern edge of South America and the western edge of Africa could fit together like interlocking \_\_\_\_\_ pieces.
2. In 1912 a German meteorologist named Alfred Wegener introduced the first detailed theory of \_\_\_\_\_.
3. He argued that the continents had once formed a singular \_\_\_\_\_ that he called Pangea.
4. Over millions of years \_\_\_\_\_ broke into several fragments which began slowly drifting.
5. Wegener supported his theory by demonstrating the biological and geological \_\_\_\_\_ between continents.
6. South America and Africa contain fossils of \_\_\_\_\_ found only on those two continents.
7. The theory of \_\_\_\_\_ argues that Earth's outer layer “the crust” is composed of large platelike sections of solid rock.
8. These plates float on partially \_\_\_\_\_ rock in the mantle.
9. Scientists believe that \_\_\_\_\_ circulation helps continents to move.
10. The plates are still moving today at an average rate of less than \_\_\_\_\_ inches per year.

Evaluate

Name \_\_\_\_\_ period \_\_\_\_\_



## EXIT TICKET

What do Fossils Tell Us?

1. Who proposed the theory of Continental Drift?
  - A. Leonardo Da Vinci
  - B. Alfred Wegener
  - C. Isaac Newton
  - D. Galileo
2. Which of the following was NOT evidence that is used to propose the theory of Continental Drift?
  - A. Similar fossils in Brazil and Africa
  - B. Similar rock layers in Brazil and Africa
  - C. Tropical fossils found at the North Pole
  - D. Icebergs found in Africa
3. What is the name for the supercontinent?
  - A. Pangaea
  - B. Southern Africa
  - C. Northern China
  - D. Eurasia
4. What type of organisms can be turned into fossils?
  - A. Only plants
  - B. Only animals
  - C. Both plants and animals
  - D. Neither plants nor animals
5. What theory, that we use today, did the evidence of Continental Drift lead to?
  - A. The Theory of Evolution
  - B. The Atomic Theory
  - C. The Big Bang Theory
  - D. The Theory of Plate Tectonics