

# Key Concept Synthesis

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**Directions:** Use the following graphic organizer to identify the five most important concepts (in the form of single words or phrases) from the reading. Think about identifying the five most important concepts in this way: If you had to explain to someone who had not read the text, what are the five most important concepts you would want them to understand? *(Use a highlighter and marginal notes to identify important concepts as you read and **then** complete the graphic organizer once you have completed the reading.*

**Article:** \_\_\_\_\_ *The Story of Earth* \_\_\_\_\_

Five Key Concepts	Put the Concept in Your Own Words	Explain Why the Concept is Important AND Make Connections to Other Concepts
<p>1.</p> <p>Plate Tectonics</p>	<p>There are plates under the continents that are moving all the time. The continents ride on top of the floating plates. The plates have rearranged the surface of the earth over time.</p>	<p>This can help scientists understand why they find fossils in certain areas—millions of years ago there might have been ocean where there was once land.</p> <p>Understanding plate tectonics might help scientists plan for natural disasters or other continental shifts in the future.</p>
<p>2.</p> <p>History of the continents</p>	<p>700 million years ago, there was one supercontinent—Rodinia. That broken into pieces. 250 million years ago there was another supercontinent—Pangea. That broke into two pieces, which became Laurasia and Gondwana Today there are 6 continents.</p>	<p>Knowing this can help us understand why certain animals and plants are on the continents that they are now. This could also be connected to the history of evolution.</p>

<p><b>3.</b></p> <p>Geologic Record</p>	<p>The very oldest rocks we have found in the continents formed 4 billion years ago. Any land that existed may have been small islands.</p>	<p>Knowing how old the rocks on Earth are can help scientists date the actual age of the planet, and possibly help in understanding how other planets were formed.</p>
<p><b>4.</b></p> <p>Crustal Flotsam and Jostam</p>	<p>These are seafloor volcanoes and chains of volcanic islands that "wash ashore" on the edges of continents, expanding them even further. Today, this sort of thing may still be adding to the continents.</p>	<p>Knowing that the continents can continue to grow and erode can help builders and developers plan, especially when building along coastlines.</p>
<p><b>5.</b></p> <p>Greenhouse Effect</p>	<p>When the Earth gets hotter, it rains more, especially in mountainous regions. This causes more chemical weathering of silica-rich rocks. This process pulls out carbon dioxide, which is a "greenhouse gas". And that's what keeps the earth warm.</p>	<p>Since global warming is an important issue, understanding greenhouse gases is important for maintaining the Earth's climate.</p>