

Student Comprehension Worksheet

Directions: Read the online *Science News* article "[How the Earth-shaking theory of plate tectonics was born](#)," which recounts how plate tectonics became a unifying theory in earth science, and answer the following questions. A version of the story, "Shaking up Earth," can be found in the January 16, 2021 issue of *Science News*. Please note that the questions do not cover the "Crucible of life" sidebar. For more on the story of plate tectonics, and to explore other big science advances over the last 100 years, visit *Science News*' Century of Science site at www.sciencenews.org/century.

- 1. What is the theory of plate tectonics? Explain it.**
- 2. Why does the article compare the theory of plate tectonics to Albert Einstein's general theory of relativity?**
- 3. What early idea set the stage for plate tectonics? When was this idea proposed and what did it attempt to explain?**
- 4. How did continental drift challenge accepted views of Earth? How was the idea initially viewed by other scientists?**
- 5. What were critics' main arguments against continental drift?**
- 6. What explanation did English geologist Arthur Holmes come up with for how the continents might move? How did the geology community react to this explanation?**
- 7. What scientific advances helped revive the idea of continental drift beginning in the 1950s? What historical event contributed to these advances?**

8. What is “seafloor spreading” and how does it connect to continental drift?

9. What sets the unified theory of plate tectonics apart from the idea of continental drift?

10. How have people benefited from the understanding of plate tectonics?

11. What questions do scientists still have about plate tectonics?