

Pre-Workshop Reading Questions for *In Suspect Terrain* by John McPhee

1. *In Suspect Terrain* follows Anita Harris as she travels westward along Interstate 80 through the Appalachian Mountains. At various points she stops to examine rock outcroppings and describes the rocks in terms of their formation. On page 19, for example, rocks are described as being “books” in that scientists can “read” them. How is she using the evidence she finds to support claims about the formation of the Appalachians?
2. Starting on page 20, this section of the book focuses on Anita Harris’s childhood in Brooklyn. As she travels through her childhood neighborhood, she references many structures made by humans in geologic terms, such as explaining buildings in terms of the types of rocks used in their construction. How could the geologic past of your geographic region be useful in connecting earth science to the everyday life of your students? Consider, for example, land use patterns, common rocks and fossils, or other local resources.
3. Uniformitarianism is described on page 37 as “the present is the key to the past”. How can this description be used in your classroom teaching of mountains and how they were formed?
4. On page 42, John McPhee compares geologic time (time scales of millions and billions of years) to human time (time scales of years and decades) by condensing geologic time into human time and describing some key events in a compressed manner. In what ways can you use the information presented in this book to help students understand that Earth’s surface features and events are the result of millions to billions of years of activity?
5. On pages 118-119, John McPhee presents data that led to development of the theory of plate tectonics in the 1960s. Earthquake data, for example, suggested the outlines of lithospheric plates. How could you use these data to develop activities that would assist students in making claims similar to those scientists made when the theory was proposed? In other words, can you think of ways to use data and have students make claims that are supported by evidence to construct an explanation similar to plate tectonics?
6. The book was written in 1982 when plate tectonics was a fairly new scientific theory. Anita Harris seems resistant to fully accept plate tectonics as being able to describe Earth’s events and features. What does her reluctance, and her own approach to understanding the paradigm, tell us about claims, evidence and reasoning as they apply to how science functions as a discipline? How can you use this example to help your students understand the framework of claims, evidence and reasoning in relation to plate tectonics?
7. In contrast to music, or mathematics, geology is a field in which there are no child prodigies. Major discoveries require integration of evidence from large geographic regions and use many different lines of scientific reasoning. Explain how these factors are manifest in Anita Harris’s decades of work on conodont fossils.