Section 4.1

1. What can rock fossils and original remains show about earths past?
2. Why do rock fossils forum in sedimentary rock and not in igneous rock?
3. How do tree rings and ice cores help scientists understand how earth has changed over time?
4. If you uncovered fossils of tropical fish and palm trees, what could you say about the environment when the fossils were formed?
5. Why might ancient lake beds and sea beds be rich source of fossils?
6. Which evidence/ a fossil, tree ring, ice core/ would be most helpful to a historian studying how pilgrims grew food at Plymouth colony in 1620? Explain your reasoning?

Section 4.2

1. What can you tell from undisturbed rock layers? Discus the concept of relative age in your answer?
2. How can index fossils help scientists determine the ages of rock layers?
3. What property of radioactive elements makes them useful for determining absolute age?
4. What are some things in your life that you only know their relative ages?
5. In your daily life are there index events (like index fossils) that tell you approximate times even when you can’t see a clock? What are they?
6. A rock contains radioactive elements with a half-life of 100 million years. Test show that this rock has gone through three half-lives. How old is this rock?

Section 4.3

1. Describe the concept of uniformitarianism.
2. What does the geologic time scale measure?
3. What was earth like on earth for most of its history?
4. What period, era, and eon do you live in?
5. Some cartoons have shown humans keeping dinosaurs as pets. From what you know about earth’s history, is this possible? Why or why not?
6. How might the geologic time scale be different if the event that caused the mass extinction 65 million years ago had never occurred?