

# Geiger's geologic time scale



**ASSIGN  
BUSTER**

## Author

Beth Geiger is a Freelance writer who is based in Seattle, Washington. She was a geologist and after some time as an environmental and geological consultant she began to freelance writer in the late 1990's and has contributed 100's of articles and a couple significant ones are to Wall Street Journal, Canoe and Kayak magazine, and Earth magazine. She has had multiple recognitions for her work including " In 2006 I was honored with the American Association for the Advancement of Science annual Children's Journalism award, and in 2017 I was selected as the Science Communication Fellow for the Geological Society of America," Beth Geiger.

## Summary

Envision the almost inconceivable: 4. 6 billion years. That is how old the Earth is a lengthy amount of time Also, to quantify it, researchers utilize special terms, the greater part of which spotlight on the planet's changing geology. This is known as geologic time. Nearly as astounding is the way geologists made sense of this all. It's almost as mind-boggling as geologists worked and figured out the time span of the earth. Like sections in a very, very dense novel, pieces of rock record the past of Earth. Combined, the rock records the Earth's lengthy saga of life. It demonstrates how species also developed and when. It also signals when they thrived — and when, over millions of years, most of them were gone.

For instance, the remnants of long-gone oceans that might have been remnants of limestone or shale. These stones include life signs that have occurred over millions and or billions of years in the oceans. The fossils

<https://assignbuster.com/geigers-geologic-time-scale/>

caught in the rock layers represent these changes as the species develop or become obsolete. Geologists have developed a geological timetable with amazing detective abilities. It is called the Geologic Time Scale. Earth is divided into four main time phases over 4.6 billion years. Precambrian is the eldest, and by far the longer. It is split into Hadean, Archean and Proterozoic eons. The Paleozoic Era and the Mesozoic Era follow. The Cenozoic era, the one in which we reside, is the last of them. Around 65 million years old, the Cenozoic began. In turn, each of these eras is split into ever-more narrower branches called periods, epochs and ages.

### Critique

The author's main purpose of this article is to explain and understand geologic time. The article goes into detail about the different time spans the earth has gone through and uses evidence of different rocks and minerals. The article also explains the process of radiometric Age dating and how it plays a major part in finding the age of minerals by basing it on the parent and daughter isotopes and how much of the [parent isotope is left and compare it to the daughter element that is the element that exists in it now. This comparison tells how much time has passed since they formed.

The article started out with explaining the date of the earth and how they measure that number. The writer gave a great description of how old the earth is and it's a very good comparison. The author explains the time span by trying to fit earth's entire history into one calendar year.

" If Earth was formed on January 1, the earliest primitive life (think algae) wouldn't appear until March. Fish first swam onto the scene in late

<https://assignbuster.com/geigers-geologic-time-scale/>

November. Dinosaurs stomped around from December 16 until December 26. The first modern humans — *Homo sapiens* — were really late-comers. They didn't show up until just 12 minutes before midnight on New Year's Eve." Beth Geiger. The mind boggling this about her explanation is how long the time period would be means that it would be hundreds of millions of years before any life forms such as algae or fish came into earth's time scale. The beginning of the article gives you a sense of when the earth formed and how long ago it did. The author uses multiple examples such as limestone and shale, she explains that limestone can be the remains of long-gone oceans and that the rocks contain traces of life that might have existed in the ocean over time. She also explains that sandstone might have been an ancient desert.

The author goes into detail of the geologic time scale, she includes all the periods in time from the Precambrian, Paleozoic, Mesozoic and even the Cenozoic. The author includes that " Unlike months in a year, geologic time periods aren't equally long. That's because Earth's timeline of natural change is episodic. That means changes happen in spurts, rather than at a slow and steady pace." Beth Geiger.

The author who wrote this article, seemed to have a grasp on geologic time. Beth's background is in geology where she earned both undergraduate (Hampshire College) and graduate (University of Montana) degrees in geology. She seemed very knowledgeable in her writing, she includes facts that are backed with dates, she includes pictures for representation. The article in general I think doesn't need any more work done, It is very well organized where the author isn't jumping around a bunch. The author is very

distant with her facts and with her layout of the article, as I read the article it was easy to follow and very enjoyable with facts and some insight from the author.

How does the topic of the article affect the Earth as a whole?

The topic of Geologic time that is discussed in the article I read is very important to earth. The time scale displays and explains the history of the earth. The importance of understanding geologic time is very crucial to science and all other sciences. Most of the world uses the minerals and the byproducts of billions of years of evolution and earth's changes.

Understanding the earth is extremely hard but using scales and discoveries made helped advance our knowledge of the earth and its existence.

How does this article relate to my life?

In fact, this article I would say only relates to me because of this class. I mean in the sense that I had to find an article to use as a current event essay, but in fact I believe everything this article covers from the geologic time scale to how they use radiometric age dating to discover the age of a mineral. I believe that this article covers a very large topic in a very summarized way. It went over many aspects and information of the earth, but the earth's history is something that everybody benefits from. One change in that timeline could've made all of us non-existent. The earth provides many resources we use every day and understanding where the minerals and resources came from is a very important thing everybody should know. We are the product of 4 Billion years of Evolution.

<https://assignbuster.com/geigers-geologic-time-scale/>

## References

Geiger, B. (2019, June 13). Explainer: Understanding geologic time. Retrieved from <https://www.sciencenewsforstudents.org/article/explainer-understanding-geologic-time>

Geiger, B. C. (2016). Beth C. Geiger. Retrieved from <http://bethcgeiger.com/>