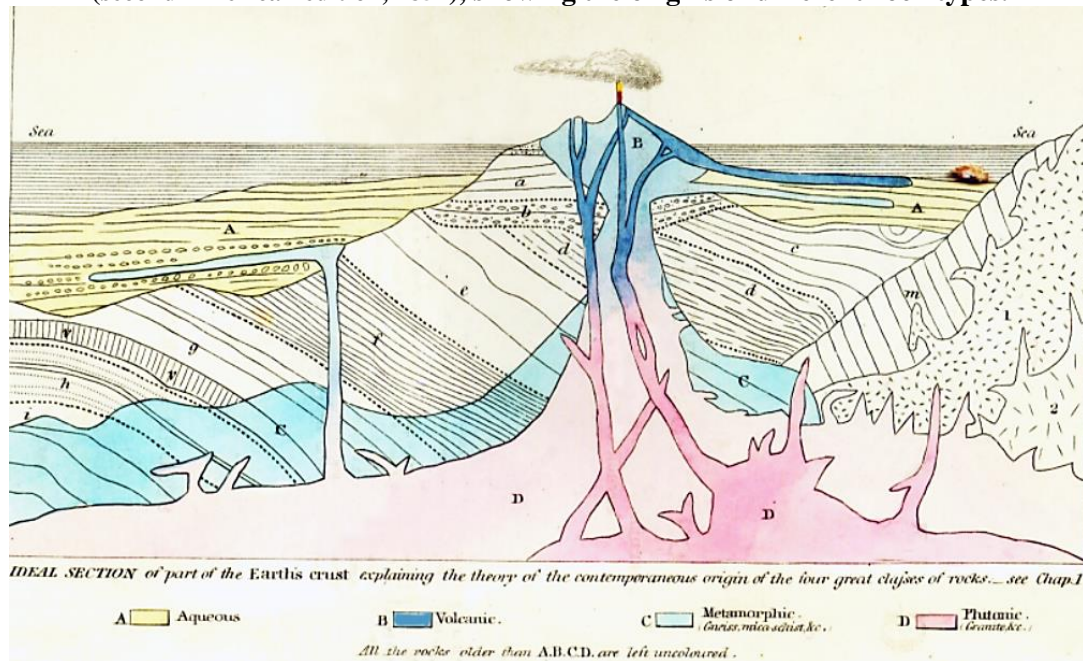




Principles of Geology

Did the popular geology book of Charles Lyell help or interfere with people's understanding of the history of geology? Use your knowledge and the help of the documents to expose the principles used in stratigraphy.

**Document 1:** The frontispiece from Charles Lyell's *Principles of Geology* (second American edition, 1857), showing the origins of different rock types.



**Document 2:**

**Sir Charles Lyell**, (14 November 1797 – 22 February 1875) was a Scottish geologist who demonstrated the power of known natural causes in explaining Earth's history. He is best known as the author of *Principles of Geology* (1830–33), which presented to a wide public audience the idea that Earth was shaped by the same natural processes still in operation today, operating at similar intensities. The central argument in *Principles* was that *the present is the key to the past*. He was a close friend of Charles Darwin, and contributed significantly to Darwin's thinking on the processes involved in evolution.

Many individuals believed in catastrophism to allow room for religious beliefs. For example, the Genesis flood narrative could be described as a real geological event as catastrophism describes the changing of the Earth surface as one-time, violent events. Lyell challenged the believers of the catastrophic theory by studying Mount Etna in Sicily and describing the changes from one stratum to another and the fossil records within the rocks to posture<sup>1</sup> that slow, gradual changes were the cause of the ever-changing Earth's surface. Lyell used geological observation to interpret that the Earth was older than 6,000 years, as otherwise contested.

Source: [https://en.wikipedia.org/wiki/Charles\\_Lyell](https://en.wikipedia.org/wiki/Charles_Lyell)

<sup>1</sup> to posture that = to support the idea that