The COMPOUND-COMPLEX SENTENCE is composed of at least three sets of subjects and verbs (clauses), at least two independent and one dependent. This more advanced structure allows the writer to show relationships between multiple ideas. You might think of this as a sort of verbal equation:

$$\text{(Subordinating Word + SV), SV/SV.}$$

When they observed fossils and rock strata, ancient humans puzzled about them, but no one understood their significance.*

The equation can be organized in other ways as well; the dependent clause may modify the second independent clause, and then it would come as close to that as possible, which would put it at the end of the equation:

$$\text{SV/SV (Subordinating Word + SV).}$$

Aristotle, Avicenna, and Leonardo da Vinci speculated about geology; however, fully-formed theories weren’t developed until the eighteenth century, when Abraham Werner and James Hutton devised theories at about the same time.

Or, it might modify the first independent clause and be most logically placed nearest that, or right in the middle:

$$\text{SV (Subordinating Word + SV) /SV.}$$

Werner’s theory hypothesizes that all Earth’s rocks were deposited in a global flood, so it is often referred to as the Neptunist theory.
Added to this flexibility is the fact that a compound-complex sentence might contain more than three clauses:

\[
\text{dependent} \quad \text{SV} \quad \text{Relative Pronoun} + V \quad \text{(Subordinating word + SV)} \quad \text{dependent} \\
/\quad \text{SV} \quad \text{(Subordinating Word + S(subordinating word +SV)V)} \quad \text{dependent} \\
/\text{independent} \quad \text{depende} \text{nt within dependent}
\]

Although some of Werner’s terminology is occasionally used by geologists today, the Neptunist theory has been supplanted by James Hutton’s Plutonist theory, which suggests that all rocks are being constantly reformed by heat in the Earth’s core; in fact, Hutton is often considered the father of modern geology, since most of the ideas that he formulated have proven to be correct.

Holy Cats! Whew! Let’s practice on something a little less convoluted. Here are three related sentences:

1) During the Cambrian Era, none of the continents existed as we know them today. (complex sentence)

2) Sea level was much higher. (simple sentence)

3) Very little water was tied up in ice. (simple sentence)

While it is acceptable to leave these three sentences separate, the reader has no hint of the relationships between them. The two main points seem to be about the continents and the sea level, so let’s connect them with a coordinating conjunction:

1) During the Cambrian Era, none of the continents existed as we know them today, and sea level was much higher.

2) Very little water was tied up in ice.

The final sentence helps explain why the sea level was much higher, so it makes sense to attach that to the compound sentence with a subordinating conjunction, like this:

1) During the Cambrian Era, none of the continents existed as we know them today, and sea level was much higher because very little water was tied up in ice.