



## INVESTIGATING FOSSILS

### Part C: Figuring out the Fossil Record

1. Your teacher will give each group a special notebook. Think of the notebook as a sequence of sedimentary rock layers. Geologists call this a stratigraphic section. You might see such a section in a highway cut, a river bank, or a sea cliff. Each page stands for a single layer in the sequence.



Each notebook comes from some place around the world. Each one is different. The number of layers is not the same from notebook to notebook, and the layers themselves are different.

Some of the layers contain fossils. Some do not. The names of the different fossils are shown by capital letters on the pages. These letters have nothing to do with the age of the fossils.

You need to keep three important things in mind.

- Sedimentary rock layers are originally deposited one on top of another in horizontal layers. The oldest layer is at the bottom of the stack, and the youngest is at the top.

The first part of this statement (that sedimentary rock layers are deposited one on top of another) is called the “Law of Superposition.”

The second part of the statement (about originally being in horizontal layers) is called the “Law of Original Horizontality.”

Combined, these two ideas are very important, because they provide a means to tell which rock layers (and fossils in those rock layers) are older than others.

- Different kinds of plants and animals are called species. A species appears at a certain time and most become extinct at a later time. Once a species becomes extinct, it never appears again.



### Inquiry

#### Laws in Science

*In science and nature, the word “law” is given a very special status. A scientific law or a law of nature is generally accepted to be true and universal. Laws are accepted at face value because they have been so strongly tested, and yet have always been observed to be true. A law can begin as a hypothesis, but only after years and even decades of testing can a hypothesis become a law. It can become a law only if it has been shown to be true over and over again, without exception. A law can sometimes be expressed in terms of a single mathematical equation, but laws don’t always need to have complex mathematical proofs.*