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### Lesson One

#### Uncovering Florida's Fossil Past: Determining Fossil Ages

##### Key Questions:

- How can you use the scientific methods you have been learning to determine the age of your newly discovered fossil?
- Using these methods, how old is your fossil?
- How does the dating of fossils help us learn about our past?

##### Science Subject:

Geology, Paleontology, Life Science, Chemistry

##### Science Concepts:

Relative/Absolute Fossil Dating, Stratigraphy, Radioactive Chemistry, Isotopes

##### Grade Level: 7-10

##### Overall Time Estimate: 50 minutes

##### Learning Styles:

Visual, Kinesthetic: Spatial, Logical-Mathematical, Linguistic, Interpersonal

##### Vocabulary:

Relative Dating

Absolute Dating

Law of Superposition

Stratigraphy

Sedimentary Rocks

Radioactive Isotopes

##### Lesson Summary:

The lesson will allow students to collaboratively engage in inquiry-based methods to determine the age of a fossil. Through logical clues and collaborative reflection on scientific methods previously introduced, students will begin to construct a stratigraphic sequence of fossils and volcanic ash that will enable them to determine the potential age range of their fossil.

**Student Learning Objectives:** The following standards are covered in varying depths. (Bold=greater emphasis)

##### Florida's Sunshine State Standards:

- **SC.D.1.3.1.** The student knows that mechanical and chemical activities shape and reshape the Earth's land surface by eroding rock and soil in some areas and depositing them in other areas, sometimes in seasonal layers.
- **SC.D.1.3.2.** The student knows that over the whole Earth, organisms are growing, dying, decaying, and new organisms are being produced.
- **SC.D.1.3.5.** The student understands concepts of time and size relating to the interaction of Earth's processes.