Unit F: **Diversity and Evolution of Living Things**

How is the scientific theory of evolution supported and explained? **STANDARDS:**
SC.7.L.15.1 Recognize that fossil evidence is consistent with the theory that living things evolved from earlier species.
SC.7.L.15.2 Recognize and explain ways in which genetic variation and environmental factors contribute to evolution by natural selection and diversity of organism
SC.7.L.15.3 Relate how the inability of a species to adapt within a changing environment may contribute to the extinction of that species.
The scientific theory of evolution is supported by fossil evidence. Natural selection, along with genetic variation, are primary mechanisms leading to change over time in organisms. These adaptations determine the survival or extinction of the species.

KNOW	**DO**
Fossil evidence supports the scientific theory of evolution that organisms evolved from earlier species. Genetic variations and environmental factors contribute to evolution by natural selection and diversity of organisms. Inability of a species to adapt within an environment can contribute to the extinction of that species.	Make observations of fossil samples in varying layers of earth. Compare and contrast various species from around the world and explain their diversity. Create a timeline that reflects the appropriate adaptations for a given species in its environment over time.

CONCEPT: Theory of Evolution	**Driving Question**
SC.7.L.15.1. *Recognize that fossil evidence is consistent with the theory that living things evolved from earlier species.* Examine various rocks with fossils in them. Determine the type of rock it is (e.g., sedimentary, metamorphic, or igneous) and the process by which it was formed. Then determine the type of organism it is. From this information research similar organisms today. Describe changes of an organism over time. **VOCAB:** fossils, evolution (scientific theory of evolution), genetic variation, species	How do fossils provide evidence of the theory of evolution?

CONCEPT: Diversity of Organisms & Natural Selection	Driving Question
SC.7.L.15.2 *Recognize and explain ways in which genetic variation and environmental factors contribute to evolution by natural selection and diversity of organisms.* **VOCAB***:* natural selection, diversity	How does natural selection and environmental factors affect the diversity of living things?

CONCEPT: Species Adaptation	Driving Question
SC.7.L.15.3. *Relate how the inability of a species to adapt within a changing environment may contribute to the extinction of that species.* Explain the cause and effect relationship of the extinction of a species and environmental changes **VOCAB:** adaptation, extinction	What is the result of the ability or inability of a species to adapt to a changing environment?

4	**In addition to displaying a 3.0 performance, the student must demonstrate in-depth inferences and applications that go beyond what was taught within these standards. Examples:** Discuss the clues scientists use to learn about Earth's history. Answer the following questions in your discussion: What are original remains? What are three ways in which original remains may be preserved?
3	Explain the types of fossils and the processes by which they are formed. Use fossil evidence to make inferences about changes on Earth and in its environment. Recognize or recall accurate statements about the types of fossils and the processes by which they are formed.
2	Recognize or recall examples of fossils specific to periods of change in the Earth and the environment. Identify examples of changes of an organism over time. Identify the cause and effect relationship of the extinction of a species and environmental changes
1	With help, partial success at 2.0 content but not at score 3.0 content