**Unit 1: Evolution**

**Big Idea:**

1. The process of evolution drives the diversity and unity of life.

**Enduring Understanding 1.A:** Change in the genetic makeup of a population over time is evolution.

Essential Knowledge 1.A

1: Natural Selection is a major mechanism of evolution.

2: Natural Selection acts on phenotypic variations in populations.

3: Evolutionary change is also driven by random processes.

4: Biological evolution is supported by scientific evidence from many disciplines, including mathematics.

**Enduring Understanding 1.B:** Organisms are linked by lines of descent from common ancestry.

Essential Knowledge 1.B

1: Organisms share many conserved core processes and features that evolved and are widely distributed among organisms today.

2: Phylogenetic trees and cladograms are graphical representations (models) or evolutionary history that can be tested.

**Enduring Understanding 1.C:** Life continues to evolve within a changing environment.

Essential Knowledge 1.C

1: Speciation and extinction have occurred throughout Earth’s history.

2: Speciation may occur when two populations become reproductively isolated from each other.

3: Populations of organisms continue to evolve.

**Enduring Understanding 1.D:** The origin of living systems is explained by natural processes.

Essential Knowledge 1.D

1: There are several hypotheses about the natural origin of life on Earth, each with supporting scientific evidence.

2: Scientific evidence from many different disciplines supports models of the origin of life.