

Appendix 1: Implementing Teaching Standards

8.L.4.2: Explain the relationship between genetic variation and an organism's ability to adapt to its environment.

I use the similar concepts and vocabulary of Artificial Intelligence to create an analogy to compare to the Theory of Evolution. Vocabulary such as natural selection, adaptation, random, mutations, variation, and fitness can be applied to both AI and evolution to help scaffold the student in the understanding and comparison of both topics.

Unpacking: What does this standard mean a student will know and be able to do?

8.L.4.1: Students know that biological adaptations include changes in structures, behaviors, or physiology that enhance survival and reproductive success in a particular environment. Students know that most species that have lived on the earth are now extinct. Extinction of species occurs when the environment changes and the individual organisms of that species do not have the traits necessary to survive and reproduce in the changed environment.

8.L.4.2: Students know that individual organisms with certain traits are more likely than others to survive and have offspring. Students know that changes in environmental conditions can affect the survival of individual organisms and entire species. Students know that living organisms have morphological, biochemical, and behavioral features that make them well adapted for life in the environments in which they are usually found.