Harris County Carver Middle School Study Guide- 4th 9 Weeks

UNIT: Science:
Evolution

Standards	Knowledge of (Recall Recognize)				Comprehension /Translation (Identify Describe Interpret)	Application (Use Illustrate Solve)	Analysis & Synthesis (Compare Infer Contrast)
	Terms	Facts	Rules & Principles	Processes & Procedures			
S7L5 Students will examine the evolution of living organisms through inherited characteristics that promote survival of organisms and the survival of successive generations of their offspring. a. Explain that physical characteristics of organisms have changed over successive generations (e.g. Darwin's finches and peppered moths of Manchester). b. Describe ways in which species on earth have evolved due to natural selection. c. Explain how the fossil record found in sedimentary rock provides evidence for the long history of changing life forms.	DNA Gene Variation Adaptation Aquired characteristic Extinct Endangered species Fossil Law of superposition Evolution Natural selection Gradualism Punctuated equilibrium Mutation Charles Darwin Darwin's finches	Fossils are evidence of previous life. Fossils come in different types such as imprints, casts, and mineralized or frozen specimens. Most fossils are found in sedimentary rock. Charles Darwin first put forth the idea of evolution in a book called *On the Origin of Species.* Geologic time is divided into periods that are defined by changes in the fossil record.	Law of Superposition: Fossils can be dated relative to other fossils by the order they appear in the layers of rock. Fossils on the bottom are the oldest. Principals of Natural Selection: 1. Organisms produce more offspring than can survive. 2. Variations of traits occur among individuals in the same species. 3. Helpful variations allow individuals to survive and reproduce better than other individuals. 4. Organisms, with helpful variations will survive and pass on those traits to their offspring.	All genetic variation exists because of mutations in the DNA. Evolution occurs most rapidly when a population is small, isolated, and under stress. Evolution can occur slowly over long periods of time according to the theory of gradualism. Evolution can occur rapidly in a process called punctuated equilibrium.	I can create a geologic time line with information provided. I can classify fossils according to their type. I can explain how DNA, mutations, and evolution are related. I can explain how an organism's environment affects its evolution. I can classify characteristics as genetic or acquired.	I can interpret a drill core to determine the oldest layer. I can make inferences about fossilized animal footprints. I can explain why characteristics acquired in one's lifetime cannot be passed on to the next generation.	I can compare drill cores to determine geologic eras. I can create a cartoon demonstrating the theory of natural selection of an elephant's trunk and explain how it differs from the idea of the inheritance of acquired characteristics.