Live Worksheet: Natural Selection, Adaptations, and Survival of the Fittest

THE THEORY OF EVOLUTION is the gradual change of a species over time.

NATURAL SELECTION is when nature (the environment) selects which individuals will die off, and which individuals will survive and reproduce. Individuals are selected to live or die because of their adaptations.

ADAPTATIONS are inherited traits that are passed from parents to offspring. Adaptations (traits) that offer an advantage for survival will be passed onto future generations of offspring, and those individuals have a better chance of surviving! Adaptations (traits) that offer a disadvantage for survival will likely end in the species being eliminated over time because the trait will die off with the organisms.

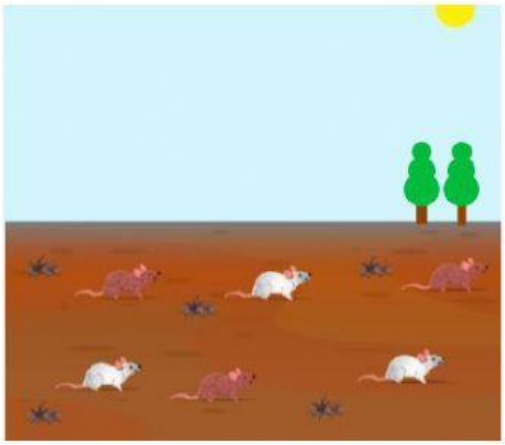
SURVIVAL OF THE FITTEST is how well an organism fits into its environment so that it can survive, reproduce, and carry on the species. It does NOT have anything to do with the modern definition of being "fit" and "in shape". This is because there can be times when the biggest, strongest, and fastest will NOT survive.

Match the words to the definitions.

Adaptation	How well an organism is suited for its environment so it can survive, reproduce and carry on the species.
Evolution	the differences in DNA within individuals of a population that lead to many forms of a trait. Ex: fur color
Natural Selection	The gradual change of species over time.
Survival of the Fittest	An adaptation of a species where it can disguise itself or blend into its environment
Camouflage	When nature selects which species live and reproduce and which will die off.
Variation	Traits organisms inherit that either help or hinder its survival

LIVEWORKSHEETS

Use the pictures on the right to answer the questions.



1. Over time, what will happen to the population of brown mice that live in the snowy environment compared to the white mice living in the same environment?

2. Which color mouse is more likely to survive and reproduce in the snowy environment?



3. Suppose a few brown mice had a mutation that caused their fur to turn white in colder temperatures. Would these be more or less likely to survive in the colder environment?

4. What is the term for traits an organism has that help it to survive and reproduce?

5. Suppose that this population of mice has stabilized so that both white and brown fur appear - white mice survive better in the winter and brown mice survive better in the warmer months. If a group of these mice migrated to an area that did not get snow covered in the winter, what would be the long term effect on the color of these mice?

_____ 1. Differences between members of the same species are called _____.

_____ 2. A trait that helps an organism survive and reproduce is called a(n) _____.

_____ 3. Darwin concluded that organisms on the Galapagos Islands had _____.

_____ 4. Green beetles blend into the grass better than black beetles. As a result, more green beetles survive and reproduce. Which will happen to the population of black beetles?

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