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Topic: Acclimation vs. Adaptation Worksheet

Summary: Students will be able to analyze examples to determine if it's an adaptation or an acclimation.

NGSS Standards:

HS-LS4-4. Construct an explanation based on evidence for how natural selection leads to adaptation of populations.

Time Length: 15 minutes

Prerequisite Knowledge: heredity (genes)

Materials:

Class notes or textbook or online textbook

- <https://flexbooks.ck12.org/cbook/ck-12-biology-flexbook-2.0/section/5.14/primary/lesson/theory-of-evolution-by-natural-selection-bio/>

Procedures:

1. Tell the students which section they are to use in the textbook or their associated lecture notes. Students are then going to read the section and answer the questions on the worksheet.

Accommodations: Give students with a modification IEP fewer problems to complete but they need to at least fill in the diagram. Students with an IEP can take the handout home if they need extra time.

Editable DOCX File and Answer Key:

Available at www.ngsslifescience.com

Acclimation vs. Adaptation Worksheet

Adaptation is an inherited trait (genetic) that increases an organism's chance of survival. Adaptations can be anatomical, physiological, or behavioral (instinctual) and will happen over many successive generations. An acclimation is a short-term response to an environmental change that is not genetic.

Circle whether each sentence is an example of an adaptation or acclimation.

1. Dolphins perform tricks to entertain humans at a show. *adaptation or acclimation*
2. Leopard seals have a huge amount of body fat so that they can withstand the cold ocean water.
adaptation or acclimation
3. Salmon from the ocean can swim in freshwater streams. *adaptation or acclimation*
4. Chameleons change their skin color to hide in their surroundings. *adaptation or acclimation*
5. A lizard hides under a building to escape the sun. *adaptation or acclimation*
6. Brown bears gain weight during the summer months so that they can hibernate during the winter.
adaptation or acclimation
7. Racoons knock over trashcans in order to get to the food inside. *adaptation or acclimation*
8. You put on a rain coat because you notice rain clouds overhead. *adaptation or acclimation*
9. A dog ignores a bee hive because it learned it will get stung. *adaptation or acclimation*
10. Mosquitos fly away if you try to hit it with you hand. *adaptation or acclimation*
11. A stronger baby finch takes food from a smaller sibling. *adaptation or acclimation*
12. Ladybugs have a hard-outer body called an exoskeleton. *adaptation or acclimation*
13. Hermit crabs can change shells when it grows. *adaptation or acclimation*
14. Plants have vascular tissues that is used to transport minerals. *adaptation or acclimation*
15. A raccoon lost its hair in a fire and now is camouflaged. *adaptation or acclimation*
16. Camels have 3 eyelids so that they can prevent sand from entering during a sand storm. *adaptation or acclimation*
17. A rat's hair was burned off and now the rat can avoid predators because it has a different scent.
adaptation or acclimation
18. A cat hunts a bird in your backyard. *adaptation or acclimation*
19. Write another example of an acclimation _____

20. Write another example of an adaptation _____
