



Topic: Natural Selection and Adaptation Worksheet

Summary: Students are introduced to natural selection and adaptation vocabulary terms, and they use those terms to answer questions.

Goals & Objectives: Students will be able to define keywords for natural selection and evidence of evolution.

NGSS Standards:

HS-LS4-2. Construct an explanation based on evidence that the process of evolution primarily results from four factors: (1) the potential for a species to increase in number, (2) the heritable genetic variation of individuals in a species due to mutation and sexual reproduction, (3) competition for limited resources, and (4) the proliferation of those organisms that are better able to survive and reproduce in the environment.

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

Time Length: 15 minutes

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. Students are then going to read the section and answer the questions on the worksheet.

Accommodations:

Give students with a modification IEP two free answers per section. 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

Natural Selection & Adaptation Worksheet

Natural Selection: Write the letter of the correct definition in the blank space on the left.

- 1. _____ adaptation a) inherited characteristic that increases chances of survival
- 2. _____ competition b) organisms with traits well suited to their environment survive and reproduce at a greater rate than less well-adapted organisms in the same environment.
- 3. _____ natural selection c) a growing population causes a scarcity of resources
- 4. _____ fitness d) changes in the DNA sequences
- 5. _____ variation e) ability to survive and reproduce in a specific environment.

Adaptation Sequence (1,2,3,4): Determine the order of events on how adaptation occurs.

- 6. _____ The environment chooses if this new trait is advantageous for survival or reproduction.
- 7. _____ There is a change in how the physical trait operates; caused by a protein
- 8. _____ There is a change in the DNA sequence of a gene.
- 9. _____ There is a change in the amino acid sequence, causing the protein's shape to be different.

Fill in the blank using the vocabulary terms in the box.

variation biodiversity genotype	natural selection common ancestor phenotype	adaptation isolated interbreed
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Natural selection could not occur without (11) _____ and acts on a(n) (12) _____. A trait that makes a species better suited to survive in its environment is called a(n) (13) _____. A species is an organism that has different features or niches and cannot (14) _____ with other organisms. All the evolutionary evidence including fossils point to organisms having a(n) (15) _____. Having a lot of different species living in a habitat is called (16) _____. In order for a population of organisms to become its own species, that population need to be reproductively (17) _____ from other populations.

What are the four principles of natural selection?

