

Outdoor Science! Week 1

Day 5: Investigating Natural Selection

Teacher/Parent Background:

- In this activity, students will match physical or behavioral traits to how the trait provides a survival advantage. Then, students will use a PhET Simulation to observe the effect of adaptations on a bunny population.

Related Standards:

- Develop and use a model to explain how natural selection may lead to increases and decreases of specific traits in populations over time.

Key Terms:

Fitness

Mutation

Generation

Materials List:

- Computer
- Paper
- Pen/Pencil

Activity Description:

Use prior knowledge to practice matching how a trait can provide a survival advantage.

- First, go outside and identify traits in plants or animals you see that help the organism survive and list 6 traits with matching survival advantages.
- Choose one of the six traits you listed above and it's corresponding survival advantage to complete the chart below:

<ul style="list-style-type: none"> Choose a trait from your list 	Write the trait here:
<ul style="list-style-type: none"> Find the corresponding survival advantage 	Write the survival advantage here:
<ul style="list-style-type: none"> Think of one specific example organism that has that trait 	Write the organism name here:
<ul style="list-style-type: none"> Describe how your example relied on that trait to help it survive. 	Write details here:

In our next activity students will understand how adaptations help organisms survive by interpreting line graphs of the population of a species over time.

- Have students access the [Natural Selection PhET simulation](#) and then simply explore the simulation.
- Students will complete the [worksheet](#) that gives them instructions on how to run the PhET simulation.

Closure:

Ask the students the following questions:

-If you were a scientist, when would a computer simulation be useful? *Answers will vary. To predict trends that can help people make decisions. To see predicted results of processes that would normally take a long time to occur.*

-Why do you think scientists study adaptations/natural selection/mutations? *Answers will vary. To develop new, innovative products inspired by adaptations found in nature. To better understand evolutionary changes that develop over millions of years and how new species come into existence.*

Extension:

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Watch & Play- [Crash Course for Kids: Living Things Change](#)

Read- [Natural Selection](#)

Explore- [Canine Similarities and Differences](#)