**Natural Selection at Play**

(phet.colorado.edu/en/simulation/natural-selection)

Scenario 1

**Setting:** There are white bunnies hopping around in a hot environment (near the equator) on a brown background.

**Situation:** When wolves are introduced to the environment, what will happen?

**Prediction: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

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**Outcome: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

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Scenario 2

**Setting:** There are white bunnies hopping around on a brown background. Wolves are present as predators.

**Situation**: When there is a mutation for bunnies to have brown fur, what will happen as time goes on?

**Prediction: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

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**Outcome: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

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Scenario 3

**Setting:** There are brown bunnies hopping around on a brown background. Wolves are present as predators.

**Situation:** When the environment switches to the artic with a white background, what will happen?

**Prediction: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

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**Outcome: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

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Scenario 4

**Setting:** There are white bunnies hopping around on a white background. Wolves are no longer present as predators.

**Situation**: The only food now available is very tough to bite with small teeth. Currently all bunnies have small teeth. What will happen?

**Prediction: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

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**Outcome: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

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Scenario 5

Setting: There are white bunnies on a white background with small teeth with very tough food.

Situation: There is a new mutation where bunnies have long, hard teeth. What will happen?

**Prediction: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

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**Outcome: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

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**Homework: Bunny Graphing**

**Choose TWO of the 5 scenarios we watched in class today. Draw a line graph to roughly illustrate the numbers of bunnies BEFORE and AFTER the new situation occurred. Scenario 1 is graphed below as an example.**

**ON THE BACK OF THIS PAPER- Explain what is happening in each graph you make.**

**BEFORE AFTER**

**# of Bunnies**

**# of Bunnies**

**Time**

**Time**

Scenario # \_\_\_\_\_\_\_\_\_\_\_\_ Scenario # \_\_\_\_\_\_\_\_\_\_\_\_

**BEFORE**  **AFTER**

Explain back

**# of Bunnies**

**# of Bunnies**

On back

On back

Explain

**# of Bunnies**

**# of Bunnies**

**Time**

**Time**

**BEFORE**

**BEFORE**

Scenario # \_\_\_\_\_\_\_\_\_\_\_\_

**Time**

**Time**

Scenario # \_\_\_\_\_\_\_\_\_\_\_\_