

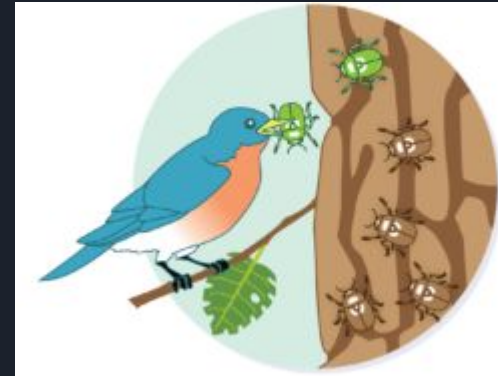


# Natural Selection

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# Introduction: What is Natural Selection

A process in which some living things **survive better** in their environment and are **able to reproduce and pass on their genes**.



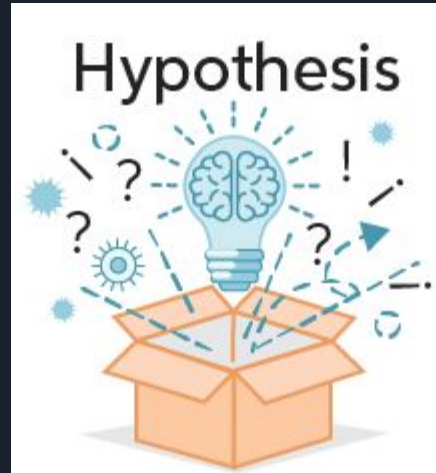
# Introduction Con't

Background: This lab was carried out in a **warm environment**. The subject of the lab being **bunnies**. The survival skills of bunnies with white and brown fur were observed. The **dominant** fur gene was the **brown fur genetics**. The chosen environmental factor that was introduced after the second generation of the population, were the predators, wolves. The duration of the lab was for **twelves generation**.



# Hypothesis

Which led us to develop the hypothesis that population of the **brown fur will be better suited to survive** in a warm dusty environment because they can blend better with their environment compared to the white fur bunnies in the same environment.



# Methods & Materials

In this experiment we used bunnies and wolves in a warm and dry environment, thus creating our control variables. Brown bunnies were the dominant gene while the white bunnies were the recessive genes. Then we observed over time how the bunnies' population changed when they were introduced with wolves. There was a direct relationship between the brown furred genes and time.

As time went by, the population of the brown furred bunnies also increased. Whereas as there was an indirect relationship between the white furred genes and time. Meaning as time went by, the population of the white furred bunnies eventually decreased. This observation lasted for 11 generations and with same control variables of environment and chosen predator.



# Results

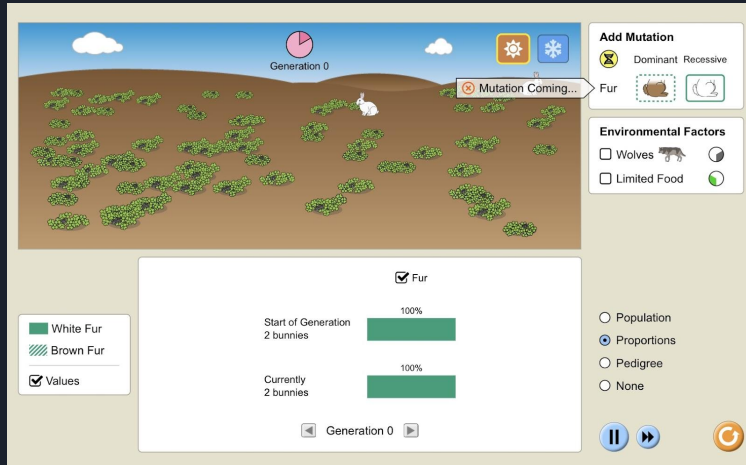


Figure 1. Bunnies proportions at the start of the experiment

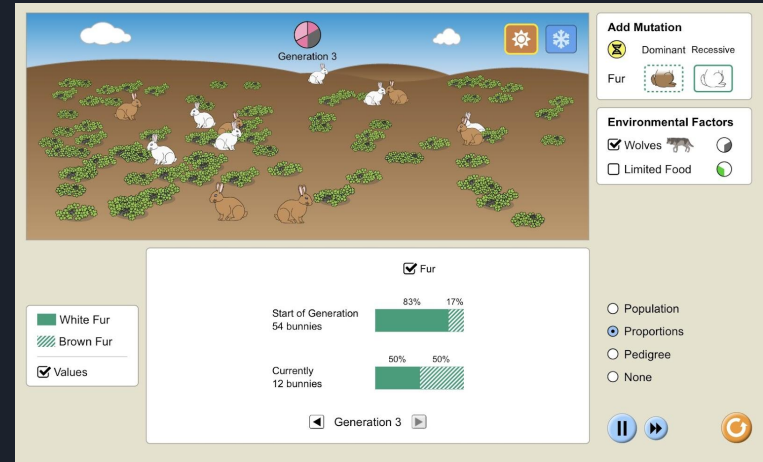


Figure 2. Bunnies proportions when wolves were introduced to the environment.

# Result Continuation

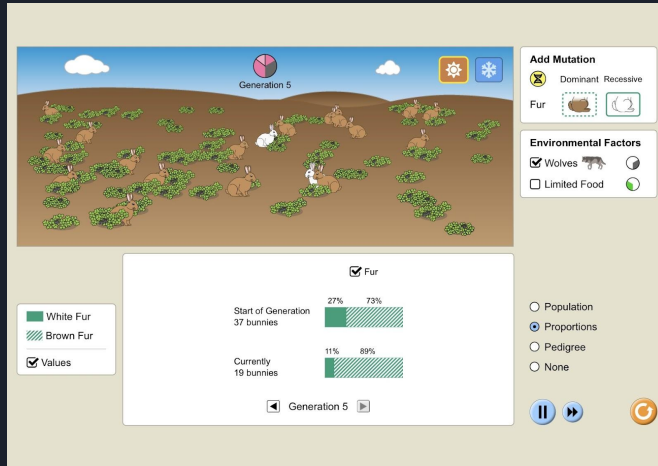


Figure 3. Bunnies proportions two generations after the wolves' introduction.

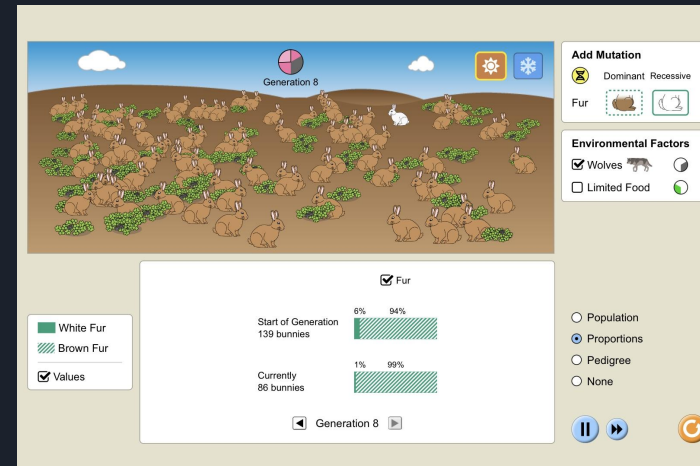


Figure 4. Bunnies proportions five generations after the wolves' introduction.

# Final Results

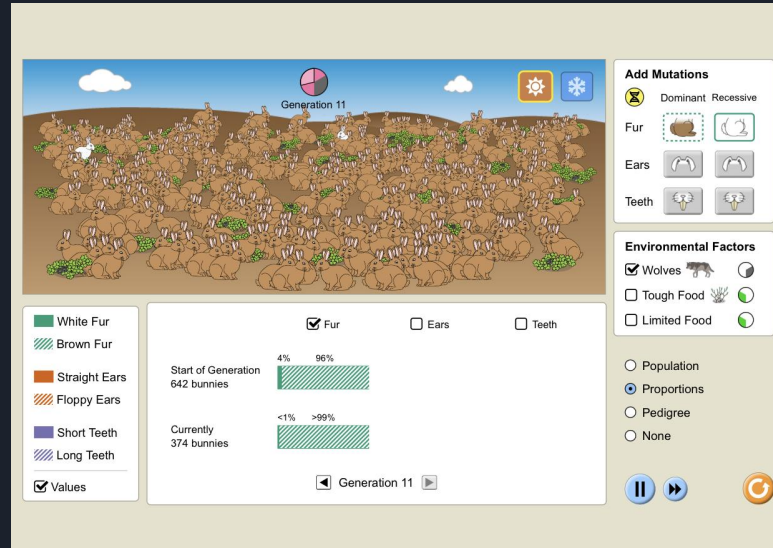


Figure 5. Bunnies proportions at the end of the lab.



# Discussion

Natural selection was **best shown in brown fur bunnies**.

The brown fur bunnies population was increasing through every generation and their dominant brown fur traits were successfully passed down to offspring.

The white fur trait seems to be recessive while the white fur bunnies population is decreasing after a few generations due to environmental factors.



# Discussion Con't

The result proves that **our hypothesis is correct** since brown fur traits are strong enough to pass down through many generations and the bunnies which carried these traits were better at surviving while interacting with wolves.

In this lab we **only used one factor** which is the wolf and one factor is not enough to closely simulate real-life conditions. There are many other factors that could impact the bunnies' population and generations.

In future experiments, we could test different varieties of environmental factors that could impact bunnies' natural selection.



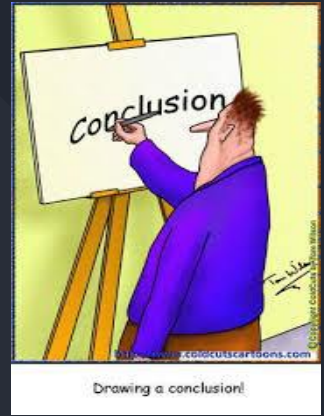


# Conclusion

We concluded that the brown bunnies were indeed the dominant species over white bunnies after going through eleven generations of natural selection. This was because the brown bunnies used the earthy environment to be able to blend in away from wolves while the white bunnies were helpless against the wolves since they were easily out in the open.



With our findings, we can better understand the importance of looks (genetics) in survival with bunnies and humans. The brown fur being the dominant gene set a norm in terms of what was the right way to look in order to survive. And as mentioned in the discussion, different factors such as environmental setting create the scene of what is normal and the advantages of such in the grand scheme of survival.





# Sources/References used

- <https://www.generationgenius.com/videolessons/natural-selection-video-for-kids/#:~:text=Natural%20selection%20is%20a%20process.and%20pass%20on%20their%20genes>
- <https://education.nationalgeographic.org/resource/natural-selection/>
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- <https://www.amnh.org/exhibitions/darwin/evolution-today/natural-selection-vista#:~:text=Natural%20selection%20is%20a%20simple.%2C%20Selection%2C%20Time%20and%20Adaptation>

Thank You

