

Name _____

ARTIFICIAL SELECTION

Directions: Read the information below.

What Is Artificial Selection?

You may have learned about natural selection. This is the process by which living organisms change and adapt over time, increasing the probability of desirable and advantageous traits. The biologist Charles Darwin famously discovered natural selection on his 1835 journey to the Galápagos Islands. Some of his observations included differences in bird beaks that were explained by the different uses of the beaks due to their diets. He also saw the tortoises had variations in their shell shapes based on how they needed to move. These changes from natural selection occur slowly over time.

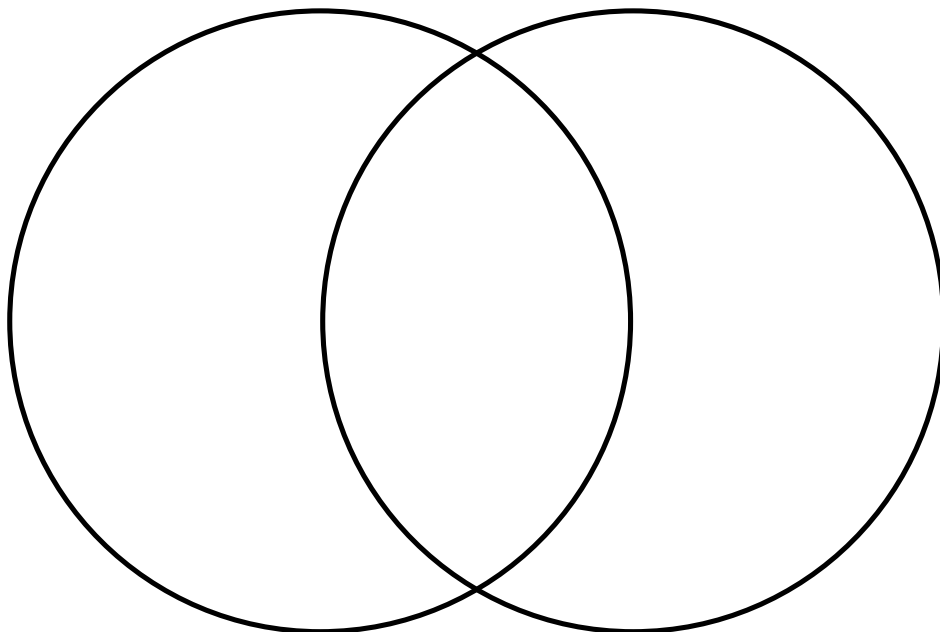
Recently, scientists have been able to use artificial selection. This is the process by which humans select animals or plants with desirable traits and allow them to mate and continue on. Instead of allowing nature to select the traits and work slowly over time, artificial selection is influenced entirely by humans to create changes more rapidly. Why might scientists want to have control over which traits are reproduced and which ones are not? Let's look at some examples of how artificial selection is used and how it can be beneficial.

Farmers can use artificial selection to create crops that yield better outcomes. Corn is a crop that has seen modification over time. Corn cobs have become larger, and farmers have been able to produce multiple varieties of corn. Vegetables like broccoli and cauliflower have emerged because of artificial selection. We are able to increase the diversity of our plant life as well as improve its quality using artificial selection.

Animals like cats and dogs have been domesticated through artificial selection. Using the traits most desirable to breeders, they reproduced animals until we finally got the dogs and cats we know as pets today. Although there are some similarities between dogs and their wolf ancestors, our pets are in many ways very different from the species they used to be.

Directions: Answer the questions below.

1. Use the Venn diagram below to explain the differences between natural and artificial selection.



2. Brainstorm a list of some possible disadvantages or concerns about artificial selection.

Directions: After watching the video on hidden hunger and malnutrition, work with your team to consider how artificial selection might be used to alleviate hunger for people. As you work, narrow down your list until you come up with a top idea.

All Our Ideas	Our Top 5 Ideas	Our #1 Idea

List the Advantages of your plan:

List the Challenges of your plan: