

Name: _____ Date: _____ Period: _____

Examples of Natural Selection

Directions: For each of the examples, read the information and/or analyze the diagrams to complete each table.

Example 1: Nocturnal and Diurnal Worms

Darwin's 4 Conditions for Natural Selection	Application to Worms
Variation in a population.	
Variation must affect survival.	
Variation must be heritable.	
More offspring are produced than can survive.	

Example 2: Coats of Polar Bears

Darwin's 4 Conditions for Natural Selection	Application to Polar Bears
Variation in a population.	
Variation must affect survival.	
Variation must be heritable.	
More offspring are produced than can survive.	

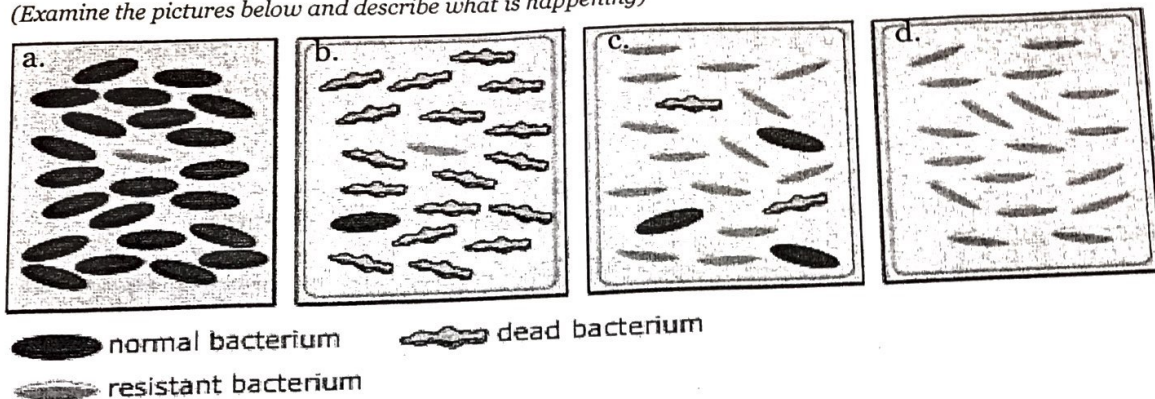
Example 3: Speed of Ostriches

Darwin's 4 Conditions for Natural Selection	Application to Ostriches
Variation in a population.	
Variation must affect survival.	
Variation must be heritable.	
More offspring are produced than can survive.	

Name: _____ Date: _____ Period: _____

Example 4: Anti-biotic Resistant Bacteria

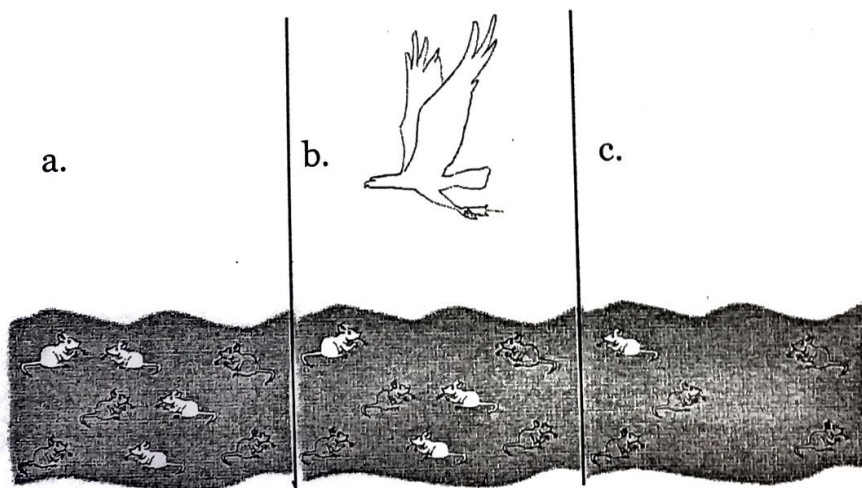
(Examine the pictures below and describe what is happening)



- There is a population of bacteria with the following variations: _____
- When exposed to anti-biotic, such as Penicillin, _____
- The bacteria that did not die from the anti-biotic _____
- Over time, the population of bacteria changed so that _____

Example 5: Mice

(Examine the pictures below and describe what is happening. Use Example 4 as a template for your answer.)



- _____
- _____
- _____

PRINT THESE ON COLORED PAPER AND CUT INTO INDIVIDUAL CARDS

Example 1: Nocturnal and Diurnal Worms

There are 2 types of worms: nocturnal and diurnal. Nocturnal worms sleep during the day and eat at night. Diurnal worms sleep at night and eat during the day. The eating patterns of worms are inherited from their parents. Birds prey on worms. A scientist observed birds eating during the day and only finding the diurnal worms. The nocturnal worms were hidden in the soil during this time. Each spring when the worms reproduce, they have about 500 babies but only 100 of these ever become old enough to reproduce.

Example 2: Polar Bears

There are 3 types of polar bears: ones with thick coats, ones with thin coats and ones with medium coats. The type of coat each polar bear has is an inherited trait from their parents. It is fall, soon to be winter. The temperatures are dropping rapidly and the bears must be kept warm, or they will freeze to death. Polar bears with thicker coats have more protection from the freezing temperature, thus a higher chance of survival. Most of the mother bears have 2 cubs at a time, but due to the extreme temperatures, often times, only one of them will survive.

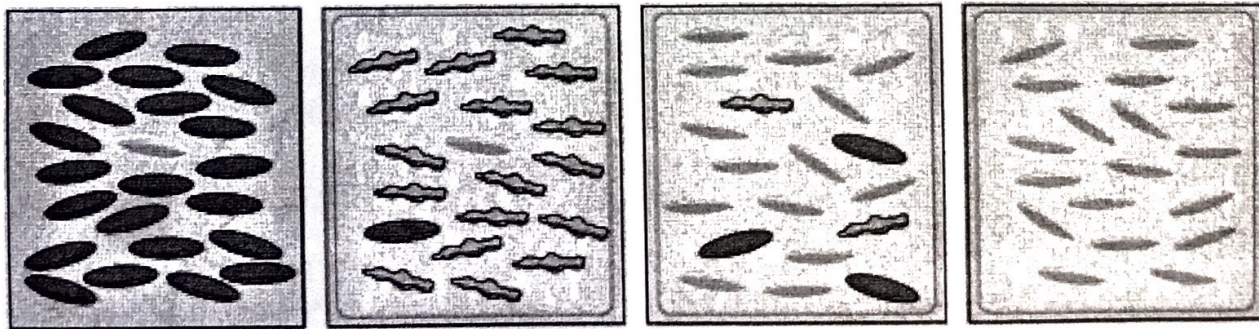
Example 3: Ostriches

In ostriches, there are 2 types: ones that run fast and those that run slowly. The fast birds can reach up to 40 miles an hour. The slow birds can reach up to 30 miles an hour. The speed of birds is an inherited trait from their parents. Jackals love to eat ostrich, and they can reach speeds of up to 35 miles per hour. A flock (group of females) of ostriches will lay approximately 10 eggs, but many rodents break into the eggs and eat them before they hatch.

Example 4: Mice (this does not have an reading. Instead, students will analyze the picture that is on their paper.)

(CB EXTENSION: Lets have one more example ready for any student that is up for the challenge. It is similar to the mice format, where they need to analyze the picture, instead of just reading. They can make their table on looseleaf, and attach to the other page.)

Example 5: Anti-biotic Resistant Bacteria



● normal bacterium ● dead bacterium
● resistant bacterium