Worksheet 1

Natural Selection Worksheet

Name _____ Date _____

1. Read the following situations below and identify the key concepts of Darwin's natural selection.

There are 3 types of polar bears: ones with thick coats, ones with thin coats and ones with medium coats. 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. Many of the bears have had ~2 cubs each but due to the extreme temperatures, many mothers only have one cub left.
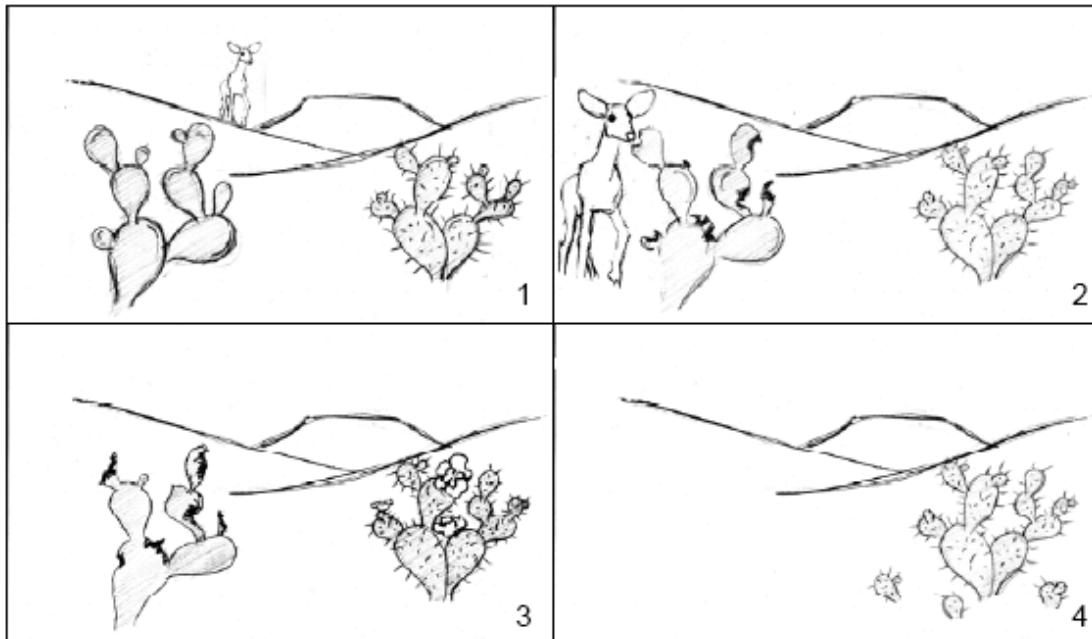
Which polar bear will not benefit from natural selection?

Identify the type of variation in the polar population.

Who is the most fit in her environment?

Predict how the gene pool will change over time.

2. Below is a series of pictures representing changes in a population of cacti over many generations.

Why would a deer be more likely to eat the left cactus than the right cactus?

In figure 3, the right cactus has flowers, but the cactus that has been eaten by the deer is too damaged to make flowers. Figure 4 shows the situation several months later. What has happened?

Do you think that evolution by natural selection is occurring in this cactus population? Explain why or why not.

What adaptation seems to increase the fitness of the cacti on the right? How do you think this adaptation increases the ability of cacti on the right to survive and reproduce?