Name: _____ Date: _____ Period: ____

Weekly Reading HW HW Wk ___

Directions: Read and annotate the passage below. Then answer the questions.

Climate Change Proves a Survival Experiment for Wildlife

For biologists, climate change is like a massive, unplanned experiment, one that may be too fast for some species to survive it. As Arctic ice melts, polar bears are ransacking seabird nests to sustain themselves and geese are exploring new and valuable habitats. But whether these adaptations will succeed remains a big question. As temperatures rise, entirely new environments are forming, changing how species interact with each other and their surroundings in unexpected ways.

One of the most swiftly changing environments is the polar north, where habitats are heating up faster than other parts of the Earth. As sea ice steadily declines in the Arctic, polar bears are less able to walk out onto the frozen ocean and prey on seals, their favorite food source. Now, polar bears that once spent most of their lives on ice are now confined to land, seeking out new food sources. A recent study found bears have increasingly turned to bird eggs in a last-ditch effort to fatten up. Since the 1980s, bear raids on bird colonies have increased sevenfold. Unlike foxes, the birds' usual predators, polar bears swim to islands that host large colonies of nesting birds and proceed to eat massive quantities of eggs. Scientists doubt this will lead to extinction, but they do foresee significant population declines.

But there are some winners as the climate shifts – at least for now. Thawing land near the ocean shore has formed salt marshes – a habitat that happens to be perfect for black brant geese. Black brant geese migrate into this region in mid-July to molt (shed old feathers), a period when they are unable to fly for about three weeks. In the 1970s, only about 30 percent of the geese spent this time near the coast. But today, the numbers have switched: About 70 percent of the black brants now molt along the coast, having discovered the recent expansion of a new, rich food source.

Because climate change is spurring such quick yet complex shifts, it is essential that scientists try to understand the mechanisms by which climate change is acting upon species, communities, and ecosystems. At best, scientists can say that the way species react to climate change will be nuanced. For millions of years, species have been subjected to weather extremes and shifts in climate, but the rapid onset of global warming today is a novelty – and, likely, a huge challenge.

1. (RST.9-10.2) The main idea of the passage is that:
   a. Global warming is most harmful to animals that live in the Arctic.
   b. Scientists are conducting an experiment to see how animals adapt.
   c. Polar bears are now turning to bird eggs for new sources of food.
   d. Climate change is causing animals to find new ways to survive.

2. (RST.9-10.1) Why are polar bears turning to seabird eggs as a food source?
   a. The seal population has declined in recent years, causing bears to find other sources of food.
   b. There is less ice on the ocean for polar bears to use while hunting for seals.
   c. Seabird eggs are a better source of food to help polar bears to fatten up.
   d. Seabird eggs are more plentiful and easier to find than seals.

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3. (RST.9-10.2) What is the main idea of the fourth paragraph?
   a. Some species are actually benefiting from global warming, like the black brant geese.
   b. Scientists should study global warming so that they can learn how to reverse it.
   c. It is essential that scientists work on getting species to go back to their original habitats.
   d. It is imperative that scientists understand how species are responding to climate change.

4. (RST.9-10.4) As it is used in the passage, the word *nuanced* means:
   a. Respected
   b. Subtle
   c. Stable
   d. Well-balanced

5. (RST.9-10.1) Explain how foxes and seabirds have been affected by the polar bears' change in diet.

   _____
   _____
   _____
   _____

6. (RST.9-10.1) How has global warming affected the black brant geese?

   _____
   _____
   _____
   _____

Adapted from the article, "Climate Change Proves a Survival Experiment for Wildlife" by Elizabeth Harball for Scientific American*, on February 7, 2014.*