Moore Timothy_Life Science_U8L9
March 16, 2007
Score:100 for this portion;
81% for overall assessment
(part of the assessment was online)

Name Date

Unit Assessment

Questions 1–14 are online.

(10 points)

15. According to scientific evidence, earth's earliest atmosphere lacked oxygen. Over time, oxygen was added to the atmosphere. Explain how this change occurred and how it affected life on earth.

Early organisms gave off oxygen through photosynthesis. The oxygen built up until the Earth was covered in oxygen. This made the ozone layer which blocked some of the sun's UV rays which then allowed organisms to move out into the open atmosphere.

Read the following passage. Fill in the blank with a term from the Word Bank. You will use terms from the Word Bank only once. The Word Bank has one more term than you will use, so when you finish you will have one term left in the Word Bank.

(10 points)

16.

Word Bank

natural selection	fossil record	speciation
species	adapt	interbreed

Imagine an island inhabited by a large population of a certain kind of creature—let's call them furberts. Let's call our group of furberts "Population A." Now, imagine that a powerful hurricane picks up about half of the furberts (remember, you're imagining this) and blows them to another island. Let's call this group "Population AB."

As everyone knows, furberts can't swim, so there's no way for the furberts in Population AB to get back to their old island. Because all the furberts in Population AB are isolated from the furberts in Population A, they cannot ___interbreed___

It turns out that the furberts in Population AB ended up on an island very different from their old island. As time passes, one generation following another, the offspring of the AB furberts begin to change to ___adapt___ to their new conditions, because ___natural selection___ acts to favor different traits best suited to the new environment. The AB furberts develop long snouts and short curled claws—very different from the pug noses and short, stubby claws of the A furberts back on the old island.

A lot more time passes, and little by little the AB furberts keep changing. One day, a giant hawk swoops down and grabs an AB furbert in its talons. As the hawk flies away, the terrified AB furbert squirms so much that it wriggles loose from the hawk's grip. Down it falls, right into a soft bed of ferns that just happens to be on the island of the A furberts. Along comes an A furbert. When it sees the AB furbert, the A furbert thinks, "What is that weird-looking thing? Whatever it is, I sure wouldn't want to mate with it."

In fact, the A furbert could not mate with the AB furbert even if it wanted to. Why? Because over the long passage of time, the AB furberts have changed so much from their A ancestors that they have become a new species .

The changes over a very long time that led to the development of AB furberts that cannot breed with A furberts is an example of the process that scientists call speciation .