

Name: _____ Period: _____ Date: _____

Speciation MCAS Questions

1. Until recently, the myrtle warbler and the Audubon's warbler were thought to be separate species of birds because the males have very different appearances. Which of the following observations **most likely** led to the reclassification of these warblers as one species?
 - A. The myrtle warbler and the Audubon's warbler have the same diet.
 - B. The myrtle warbler and the Audubon's warbler lay the same number of eggs.
 - C. The myrtle warbler and the Audubon's warbler have overlapping geographical ranges.
 - D. The myrtle warbler and the Audubon's warbler interbreed and produce fertile offspring

2. A population is separated into two groups by a geographic barrier. Over time, enough differences develop between the two groups that they do not interbreed when reunited. Which of the following terms **best** describes the process that has occurred?
 - A. extinction
 - B. hybridization
 - C. immigration
 - D. speciation

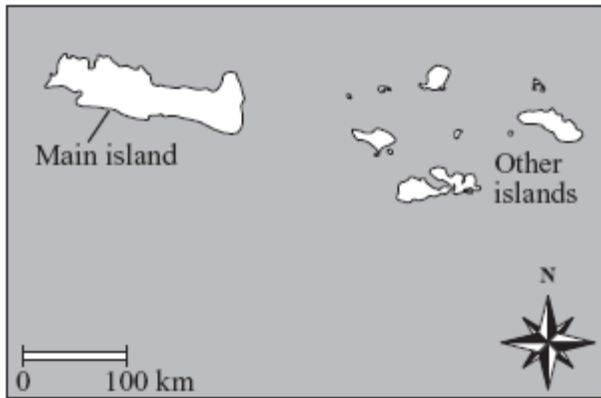
3. Which of the following statements **best** explains why geographic isolation can lead to speciation?
 - A. Physical separation of populations reduces competition for each group.
 - B. Physical separation of populations prevents interbreeding and mixing of gene pools.
 - C. Physical separation of populations provides more space for each group's size to increase.
 - D. Physical separation of populations stresses the organisms and causes mutations in their genetic code.

4. Which of the following statements gives the **most likely** explanation for the presence of two very similar species of squirrels living on opposite sides of the Grand Canyon?
 - A. One squirrel traveled across the canyon and started a new population on the other side.
 - B. One squirrel traveled across the canyon and interbred with a different population on the other side.
 - C. Members of a single squirrel species were geographically separated by the formation of the canyon.
 - D. Members of two different squirrel species migrated from two different places to opposite sides of the canyon.

5. The rock pipit and the water pipit are two types of birds found in the United Kingdom and other areas of Europe. The rock pipit and the water pipit have similar appearances and their habitat ranges overlap.

Which of the following observations most likely caused scientists to classify the birds as separate species?

- A. The rock pipit is not able to produce fertile offspring with the water pipit.
 - B. The rock pipit population in the United Kingdom is larger than the water pipit population.
 - C. The rock pipit eats insects, fish, and seeds, but the water pipit eats only insects and larvae.
 - D. The rock pipit remains in the United Kingdom year-round, but the water pipit only overwinters there.
6. On island chains like the one shown below, animal populations that spread from the main island to the other islands can evolve into separate species.



Which of the following **best** explains what favors speciation in these situations?

- A. Predators on the main island can easily migrate to follow the populations to the other islands.
- B. Lack of disease on the other islands enables the populations to grow and change without limit.
- C. The physical separation of the islands limits gene flow and interbreeding between the populations.
- D. The climatic conditions of the islands allow the populations to breed all year and produce several generations.