

TxCETP Course Component: Natural Selection

This material is based on work supported by the National Science Foundation under Grant No. DUE 9987332.

III. Assessment & Evaluation

Formative Assessment:

1. Prior to beginning the lesson, ask students to define the following terms:

Adaptation
Natural Selection
Evolution

After completing the lesson, have them repeat the exercise and compare their answers.

2. Prior to beginning the lesson, ask students to answer the following questions. Repeat the exercise after completing the lesson
 1. How confident are you that you can accurately explain how a population adapts to a change in environment?
 - A. TOTALLY CONFIDENT
 - B. VERY CONFIDENT
 - C. FAIRLY CONFIDENT
 - D. ONLY A LITTLE CONFIDENT
 - E. NOT AT ALL CONFIDENT

Use the following information to answer the next 2 questions.

A population of butterflies is blown to an island by a storm. It is too far for them to fly back to the mainland without help from another storm. The island they are stranded on only has a few flowering plants for the butterflies to feed on and all of them produce toxins that some butterflies are affected by but others are not.

2. Which of the following concerning the next generation of butterflies would you correctly predict to be TRUE?
 - A. the next generation will be exactly like this generation in number of individuals affected by the toxin
 - B. butterflies unaffected by the toxins will be less prevalent in the next generation
 - C. butterflies unaffected by the toxins will be more prevalent in the next generation
3. Which of the following concerning the butterflies would you correctly predict to be TRUE?
 - A. all of the butterflies are equally likely to survive on the island
 - B. butterflies unaffected by the toxins will survive and reproduce better than those affected
 - C. butterflies affected by the toxins will become unaffected and pass the adaptation on to their offspring
 - D. all of the above are accurate predictions
 - E. only A and C are accurate predictions