

# STAAR EOC Biology - Study Resources and Practice Questions

## *Natural Selection and Adaptation*

### TEKS

- B.7.E - Analyze and evaluate the relationship of natural selection to adaptation and to the development of diversity in and among species.
- B.7.C - Analyze and evaluate how natural selection produces change in populations, not individuals.
- B.7.D - Analyze and evaluate how the elements of natural selection, including inherited variation, the potential of a population to produce more offspring than can survive, and a finite supply of environmental resources, result in differential reproductive success.
- B.7.F - Analyze and evaluate the effects of other evolutionary mechanisms, including genetic drift, gene flow, mutation, and recombination.

### Textbook Chapters

- Chapter 11

### Videos

- Video: The Making of the Fittest: Natural Selection and Adaptation
  - <http://www.hhmi.org/biointeractive/making-fittest-natural-selection-and-adaptation>

### Other Resources

- Website: Wikipedia
  - Natural Selection
    - [https://en.wikipedia.org/wiki/Natural\\_selection](https://en.wikipedia.org/wiki/Natural_selection)
- Website: Berkely.edu
  - Hooked on Natural Selection
    - [http://evolution.berkeley.edu/evolibrary/article/bergstrom\\_02](http://evolution.berkeley.edu/evolibrary/article/bergstrom_02)

**15** The concept of gene flow is demonstrated when a cow is driven off from its herd, joins another herd, and reproduces. When the cow contributes to the gene pool of the new herd, which of these most likely increases?

- A** Natural selection
- B** Genetic variation
- C** Environmental fitness
- D** Reproductive mutations

**34** Plants have developed many methods of seed dispersal. The table below shows seeds of two different plants.

Plant	Mass of Seed (g)	Seed Shape
Milkweed	0.00588	
Dandelion	0.0026	

How has the seed dispersal method developed by these plants given them a reproductive advantage?

- F** The method ensures that offspring will be dispersed and reduces competition for resources.
  - G** The method reduces the chance that herbivores will consume the seeds.
  - H** The method lengthens the life cycle of each of these plants.
  - J** The method reduces the plants' need for water and other nutrients.
- 50** Which condition is essential for natural selection to result in a new species?
- F** Unlimited resources
  - G** An inherited variation
  - H** A static environment
  - J** A long life span