

THE ETERNAL ARMS RACE: Writing Assignment 1A

Write an essay – a page or two - with standard margins and fonts (typed!!) summarizing one example of how predators and prey have influenced each other's evolutionary changes and explain why you found it interesting. Explain how BOTH the predator and prey have developed according to Darwin's theory of natural selection.

In separate paragraphs, explain how your example illustrates each of 5 parts of Darwin's theory:

1. There is variation within a population (and explain in general -what may cause this variation to occur?)
2. Some variations favor the survival of an organism.
3. Overpopulation leads to competition.
4. Those who survive will reproduce (and pass down their favorable traits).
5. Long periods of time allow for small changes to accumulate and adaptation to occur.

You should support your discussion with accurate examples of survival adaptations (either structural, functional, or behavioral) utilized by these organisms.

Key to Adaptation Types:

Structural: Modification of a body part or feature - describes only how the structure or form has changed

Example: The front feet of a Spiny Anteater have long, sharp claws.

Functional: Modification of the USE of a particular body part or feature - describes only how a structure is USED.

Example: The long, sharp claws of a Spiny Anteater are used to tear apart the hard mud of termite mounds.

Behavioral: Modification of the inborn, or instinctive behavior (as apposed to a learned response).

Example: The young of the Spiny Anteater know how to nurse from the mother at birth. (instinctive).

NOT an example: The young are taught by their mother to open the mounds at the base. (learned behavior.)

Possible scenarios may include: tadpole/dragonfly nymph, octopus/ mimic octopus/cuttlefish/various prey, Portia spider/Argiope spider, moths/bats/birds, Tiracha newt/Garter snake, Hognosed snake/Bobcat & Rat predators, Noctiluca/Shrimp/Cuttlefish, Lampsilis mussel/Largemouth Bass.

THE ETERNAL ARMS RACE: Rubric Name: _____ Period: _____

Scenario Chosen: tadpole/dragonfly nymph, Octopus /mimic octopus/cuttlefish/various prey
Portia spider/Argiope spider, moths/bats/birds, Tiracha newt/Garter snake,
(EXAMPLES) Hognosed snake/Bobcat/Rat, Noctiluca/Shrimp/Cuttlefish, Lampsilis mussel/Largemouth Bass.

Student has explained how the example illustrates each of 5 parts of Darwin's theory: MASTERY RATING:

1. There is variation within a population _____/3
(and explained in general -what may cause this variation to occur?) *Total:* _____
2. Some variations favor the survival of an organism. _____/3 *General Comments:*
3. Overpopulation leads to competition. _____/3
4. Those who survive will reproduce
(and pass down their favorable traits). _____/3
5. Long periods of time allow for small changes
to accumulate and adaptation to occur. _____/3

Note: When appropriate - Discussion is supported with accurate examples of survival adaptations (either structural, functional, or behavioral).