Name: _____ Date: _____ Period:_____

Patterns of Evolution Practice

Convergent evolution: Pressures cause a similarity in structure or function, but not from a common ancestor.
Divergent evolution: Evolution rising out of differences in organisms which had a common ancestor.
Coevolution: Evolution in which one organism causes another to change since they live in close association.

Directions: Read the following descriptions and determine which pattern of evolution is being described.

Description	Pattern of Evolution
In the ocean around Antarctica, there are fish that survive the cold water by using a molecule that keeps their blood from freezing. Worms living in the Arctic Ocean also make antifreeze proteins that help them live in icy water.	
Ants are the correct size and weight needed to open the flowers for the peony plant. The peony plant provides food for the ant and the ant fertilizes the peony's flowers.	
Hummingbirds have a beak just the right length to reach the nectar in a cardinal flower and as they feed their foreheads bump into the flower's pollen structure. Cardinal flowers' pollen structure is just the right length for the hummingbird to pick up pollen as it feeds.	
Galloti atlantica and the *Galloti galloti* lizards evolved through natural selection from a common ancestor into a wide variety of different looking lizards.	
Whales, sharks, and penguins all have streamlined bodies and fins/flippers for moving in water even though they belong in different classes of animals (mammals, fish, birds).	
This kind of evolution is proven by DNA analysis and results in organisms with different ancestors becoming more alike as they adapt to similar environments.	
Ostriches (birds) and giraffes (mammals) are both native to the savannas of Africa. They share the same characteristic of a very long neck.	
The beaver in North America and the capybara in South America share a common ancestor, but have evolved over time to look different.	
Ostriches are native to the savannas of Africa, while penguins live in the polar regions. Although ostriches and penguins are closely related, they look very different.	
Bees cannot see red, but they do see yellow, blue, and ultraviolet light. Because of this, bee-pollinated flowers are typically yellow or blue with UV nectar guides (landing patterns) to guide the bee. The flowers usually have a small, narrow floral tube to fit the tongue length of the bees that pollinate them.	
Chipmunks and squirrels are very closely related. However, due to different selective pressures they have evolved differences that allow chipmunks to adapt better to ground habitats while squirrels are better adapted to living in trees.	
Crabs feed on snails in the ocean. To avoid being eaten, snails have developed thicker shells with spines that discourage crabs. In response, crabs have evolved stronger, longer claws to be able to crack the thicker, spinier snail shells.	
All domesticated dogs have wolves as a common ancestor but, due to artificial selection, we have about 200 different AKC-recognized breeds of dogs today.	