**Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period: \_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_**

**TYPES OF EVOLUTION**

### Read each description below and check the type of evolution that is being described.

**Convergent**: Ecological pressures cause a similarity in structure or function, but **not** from a common ancestor. **Divergent**: Evolution arising out of differences in organisms which had a **common ancestor.**

**Coevolution**: Evolution in which both organisms cause the other to change (affecting each other’s evolution).

**Punctuated equilibrium**: Evolution is stable for a time and suddenly jumps to new forms.

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| --- | --- | --- | --- | --- | --- |
|  | Description | Convergent Evolution | Divergent Evolution | Coevolution | Punctuated Equilibrium |
| 1 | In the ocean surrounding Antarctica, there are fish that survive the cold water by using a molecule made of glycoproteins that circulates the blood and keeps it from freezing. Certain kinds of worms that live in the Arctic ocean also make antifreeze proteins that help them live in icy water. |  |  |  |  |
| 2 | 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. |  |  |  |  |
| 3 | Horse evolution shows long stable periods of little evolution interrupted by brief periods of rapid change. |  |  |  |  |
| 4 | A kit fox lives in the desert and has large ears with greater surface area that keep the fox from getting overheated. The red fox lives in the forest and has a red coat that keeps it camouflaged. |  |  |  |  |
| 5 | 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 pollen structure. Cardinal flowers are red which hummingbirds can see but bees can't. Cardinal flower's pollen structure is just the right length for the hummingbird to pick up pollen as it feeds. |  |  |  |  |
| 6 | The *Galloti atlantica* and *Galloti galloti* lizards evolved through natural selection from a common ancestor into a wide variety of different looking lizards. |  |  |  |  |
| 7 | 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, and birds). |  |  |  |  |
| 8 | The Galapagos tortoises share a common ancestor, but have necks of different lengths to best reach the food they need in their environment. |  |  |  |  |
| 9 | 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. |  |  |  |  |
| 10 | Adaptive radiation is also known as |  |  |  |  |
| 11 | Abrupt appearance of new species in the fossil records. |  |  |  |  |
| 12 | The Galapagos finches evolved through natural selection from a common ancestor into a wide variety of different looking species. |  |  |  |  |
| 13 | Ostriches (birds) and giraffes (mammals) are both native to the savannahs of Africa. They share the same characteristic of a very long neck. |  |  |  |  |
| 14 | The beaver in North America and the capybara in South America share a common ancestor, but have evolved over time to look different. |  |  |  |  |
| 15 | Ostriches are native to the savannahs of Africa, while penguins live in the polar regions. Although ostriches and penguins are closely-related, they look very different. |  |  |  |  |
| 16 | Bees don't see red, but do see yellow, blue, and ultra-violet light. Thus, bee- pollinated flowers are mostly yellow or blue with UV nectar guides (landing patterns) to guide the bee. They usually have a small, narrow floral tube to fit the tongue- length of that species of bee. |  |  |  |  |

Answer Key

1. Convergent evolution
2. coevolution
3. Punctuated equilibrium
4. Divergent evolution
5. Coevolution
6. Divergent evolution
7. Convergent evolution
8. Divergent evolution
9. Convergent evolution
10. Divergent evolution
11. Punctuated equilibrium
12. Divergent evolution
13. Convergent evolution
14. Divergent evolution
15. Divergent evolution
16. Coevolution