Name _____ Date _____

How Plants and Animals Survive & Adapt to their Environment

To survive and reproduce, all living organisms must adjust to conditions imposed on them by their environments. An organism's environment includes everything impinging upon it, as well as everything that is affected by that organism. Conformity between an organism and its environment constitutes what biologists call adaptation.

Animal adaptations may be physical or behavioral, or a combination of the two. Physical adaptations to environment are noticeable in things like ear size or coat color in the arctic versus desert animals such as foxes or rabbits. Animals with useful traits that help them survive in their environment are the animals that survive to have offspring, to which they tend to pass down the successful trait. The offspring with the trait again will tend to be more successful than their siblings without it.

A trait must be used to be considered an adaptation. Leftover features from an earlier adaptation sometimes are seen and are considered "vestigial" traits. If they do not contribute to survival, such traits will disappear in the species over time, because they either don't matter or have become detrimental.

Another way in which animals adapt is behavioral adaptation, in which a changed behavior contributes to improved survival and is handed down to offspring of the survivors.

Example of Adaptations

Examples of physical adaptations are evident in the organs of animals; natural selection does not retain superfluous organs. For example, the lungs of mammals are specifically adapted for breathing on dry land, while fish have gills adapted for breathing in water; these two types of organs are not interchangeable. An example of behavioral adaptation is seen in domesticated animals (such as dogs, horses, or dairy cows) that allowed them to take advantage of beneficial associations with humans. Species also have adaptive reproductive traits: Subarctic bees, for example, produce offspring at a much faster rate than temperate zone bees, because bees in the subarctic zone do not live as long.

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How Plants and Animals Survive & Adapt Multiple Choice Questions

1. **Adaptations are _____**
    a) Physical
    b) Behavioral
    c) Both a and b option
    d) None of the above

2. **Leftover features from an earlier adaptation sometimes are seen and are considered _____**
    a) Traits
    b) Vestigial Traits
    c) Normal Traits
    d) None of the above

3. **The type of adaptation in which changed behavior contributes to improved survival is _____adaptation.**
    a) Behavioral
    b) Physical
    c) Normative
    d) None of the above

4. **Fish have gills adapted for**
    a) Breathing underwater
    b) Breathing on land
    c) Both a and b option

5. **To survive and reproduce, all living organisms must adjust to conditions imposed on them by their environments. Is this statement True or False?**
    a) True
    b) False

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How Plants and Animals Survive & Adapt

Answers

1. c
2. b
3. a
4. a
5. a

Explanation of Answers

1. Adaptations may be physical or behavioral, or a combination of these two.

2. Leftover features from an earlier adaptation sometimes are seen and are considered "vestigial" traits.

3. Behavioral adaptation is the one in which a changed behavior contributes to improved survival and is handed down to offspring of the survivors.

4. Breathing underwater.

5. True statement

Name _____ Date _____

How Plants and Animals Survive & Adapt Writing Activity

1. **Write two examples of animals adapting to the environments for their survival.**

2. **Do you think adaptation to their environment is important for animals?**

3. **Which one is more important physical or behavioral adaptation? Explain why.**

4. **What happens if an animal fails to adapt to its environment?**