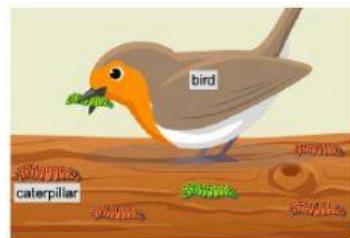


## The Theory of Natural Selection

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1. Which statement is correct about the image?



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2. These two ducks belong to the same species. The difference in their appearance is an example of:

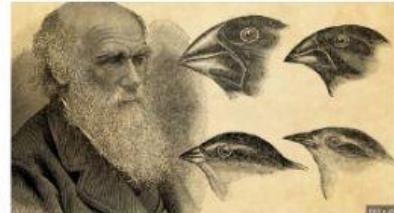
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3. Which process leads to a variety in genes?



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4. Which Scientist came up with the theory of Evolution?



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5. The fur color of the cat is an observable trait.

This is known as the:



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6. Which of the following equations is correct in describing the Hardy-Weinberg equation.

$p^2 + 2pq + q^2 = 1$

$p + q = 1$

$p^2 + 2pq + q^2 = 1$

$p^2 + q^2 = 1$

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7. A group of bears moved to a cold area. The thin-furred and the average-furred bears died. The thick-furred bears were able to survive.

What type of natural selection is this?



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8. Mutations and Natural selection are processes that cause evolution.

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9. Genetic drift has the same effect on different sized populations.

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10. A specific phenotype may help individuals of a population survive and reproduce.

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11. Natural selection results in individuals who are perfectly suited to their environment.

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12. The passage of a trait from one generation to the next:

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13: How well an organism can survive and reproduce compared to other individuals in the population:

14. All the alleles in individuals of a population:

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15. A trait that helps an organism to survive and reproduce:

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16. The genetic make-up of an organism:

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17. When natural Selection favors both extreme phenotypes:

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18. Having two different alleles of a particular gene or genes:

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19. When alleles move from one population to another:

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20. Humans are able to cause organisms to change over time through:

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21. Consider the picture illustrating a Mice gene pool.

$B$  = Brown and  $b$  = black

Answer each of the following questions:

a) Which phenotype is dominant:



b) Which phenotype is recessive:

c) How many total alleles are there in the mice gene pool:

d) What is the total number of dominant alleles in the mice gene pool:

e) What is the total number of recessive alleles in the mice gene pool?