

For the following three questions use the numbered statements listed and circle the number which most closely corresponds to what you understand.

1. The statement on the left is the only correct statement
2. The statement on the left is more correct
3. Both statements are equally correct
4. The statement on the right is more correct
5. The statement on the right is the only correct statement

Polar bears are white bears. They live in very snowy places and being white allows them to sneak up on their prey more easily. Biologists believe that polar bears evolved from brown bears. |

1. While polar bears were evolving white fur:

With each generation most polar bears were as white as their parents	1	2	3	4	5	With each generation most polar bears had a tiny bit more white in their fur than their parents
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2. The trait of white fur in polar bears:

Appeared in the ancestors of polar bears because they lived in a snowy place and needed to sneak up on prey	1	2	3	4	5	Appeared in the ancestors of polar bears because of a chance mutation
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3. The population of polar bears evolved white fur because:

The more successful polar bears adapted to their snowy environment	1	2	3	4	5	The less successful polar bears died without offspring
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4. A number of bacteria populations today are resistant to antibiotics (chemicals that kill bacteria), even though those populations were not resistant to antibiotics when antibiotics were first introduced. Biologists believe that antibiotic resistance evolved in bacteria because: (circle the best answer)

- a. Bacteria learned to adapt to their environment.
- b. A few bacteria were probably resistant to antibiotics before they were ever used.
- c. Bacteria needed to be resistant to antibiotics in order to survive.
- d. Individual bacteria built up immunity to antibiotics after being exposed to them.

5. Giraffes with long necks are able to reach food (leaves) at the tops of trees. How would a biologist explain how long necks evolved in giraffes, assuming their ancestors had short necks?