Genetics

Brainpop—Genetic Mutations

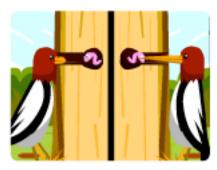
Name:

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Watch the Brainpop on genetic mutations, then answer the questions below. You can also check Chapter 7, Section 2 of your textbook if you are getting stuck.

- 1. In the movie, Tim says that genetic mutations are permanent changes to DNA or RNA. What does this mean?
 - a. The changes are minor
 - b. The changes can't be undone
 - c. The changes are major
 - d. The changes can be undone
- 2. Which of the following traits is encoded in your DNA?
 - a. Your personality
- c. Your intelligence
- b. Your likes and dislikes d. Your eye color
- 3. What types of living organisms have no genetic material at all?
 - a. insects
- b. bacteria c. plants
- d. all living organisms have genetic material
- 4. Why do most changes to DNA have no effect at all?
 - a. Because they're too minor to have any effect
 - b. Because the changes are offset by RNA, which cannot change
 - c. Because the changes are quickly repaired
 - d. Because the changes only occur in a few cells
- 5. Which word describes the majority of permanent genetic mutations?
 - a. helpful b. minor c. injurious d. beneficial

- 6. What usually happens to a cell whose DNA has been damaged?
 - a. It has trouble manufacturing certain proteins
 - b. Its genetic material leaves the nucleus
 - c. It is able to produce twice as many proteins as a normal cell
 - d. It shrinks to half its normal size
- 7. How are cancerous cells different from normal cells?
 - a. they are shaped differently than normal cells
 - b. they divide more frequently than normal cells
 - c. they contain chemicals not found in normal cells
 - d. they need more oxygen than normal cells
- 8. Which of the following is an example of a beneficial mutation?
- a. When an organism's lifespan becomes shorter
- b. When an organism becomes unable to reproduce
- c. When an organism's body becomes deformed
- d. When an organism develops immunity to a disease
- 9. When a beneficial mutation spreads through an entire population of organisms, that population...
 - a. is beneficial
- c. goes extinct
- b. has evolved
- d. keeps mutating
- 10. When do random or spontaneous mutations happen?
 - a. during cell division
 - b. when cells are exposed to hazardous chemicals
 - c. when cells are exposed to certain viruses
 - d. when cells are exposed to radiation



Look at the cartoon of the birds from the video. What does this have to do with genetic mutations?