Name: _____ **Date:** _____

1. What determines the traits of offspring?

A. food sources that have been genetically engineered

B. literary metaphors and exciting connotations

C. the pool of entries in the state lotto jackpot

D. genes received from the offspring's parents

2. Mutation in the genes of an organism is a cause. What is a possible effect?

A. The organism is less likely to be studied by scientists.

B. The organism is more likely to find a sexual partner identical to it.

C. The organism is more likely to resemble its parents.

D. The organism is more likely to survive and procreate.

3. Reproduction is "a sort of complex lottery in which the third organism-the offspring of the first two-inherits a combination of the parent organisms' genetic material."

What evidence from the passage supports this statement?

A. "The likeliest candidate to be coded for red hair is offspring with two red-headed parents."

B. "It would be very, very unlikely for two parents with identically coded chromosomes to sexually reproduce."

C. "*Mutant* and *mutation* have exciting, exotic connotations to us, but actually, mutation is simply a necessary part of a species' evolution."

D. "Human interference in genetic coding is a pretty common practice these days."

4. What is a difference between physical traits and personality traits?

A. Physical traits are mainly determined by a person's environment; personality traits are determined by both a person's genes and environment.

B. Physical traits are mainly determined by a person's genes; personality traits are determined by both a person's genes and environment.

C. Physical traits are mainly determined by a person's genes and environment; personality traits not determined by either a person's genes or environment.

D. Physical traits are mainly determined by a person's genes; personality traits are determined by genetically engineered food that a person eats.

5. What is this passage mostly about?

A. genes
B. ecosystems
C. the lottery
D. personality traits

6. Read these sentences: "Red hair happens to be a kind of gene called incomplete dominant, which means it will blend with other genes, rather than **dominate** or be dominated. Since this is the case, the likeliest candidate to be coded for red hair is offspring with two red-headed parents."

What does the word **"dominate**" mean?

A. protect or defend something from attack
B. consume or eat a large amount
C. overpower or be in control
D. give up or be in the control of another

7. Choose the answer that best completes the sentence below.

A mutation may be passed down from one generation to the next, _____when the mutation is advantageous.

A. before
B. never
C. particularly
D. on the contrary

8. Define "mutation."

9. What can people create by engineering mutations in food crops?

10. Why might genetically engineered "superfoods" be a threat to naturally grown food? Support your answer with information from the passage.

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8. Define "mutation."

Answers may vary in wording. A mutation is an unpredictable genetic change in an organism that cannot be traced to the organism's parents.

9. What can people create by engineering mutations in food crops?

People can create larger, more resilient food sources.

10. Why might genetically engineered "superfoods" be a threat to naturally grown food? Support your answer with information from the passage.

Answers may vary, as long as they are supported by the passage. For instance, students may respond that engineering food crops to be more resilient makes those crops likelier to survive and produce offspring. Crops without this advantage are less likely to survive and produce offspring. They face the threat of eventually going extinct because they are at a competitive disadvantage against "superfoods."