

Name _____ Date _____ Period _____

Video Worksheet: Mutations-Science of Survival

B I O L O G Y

Directions: *Answer the following questions while watching the video.*

1. What is an “altered or damaged” part of the DNA called?
2. How can mutations be harmful? Give at least 2 examples.
3. What could happen if there is a mutation in a sperm or egg cell? Name at least 2 results.
4. What causes an animal to be Albino [colored white (or lighter than the ‘normal’ color)]? Explain...
(*bonus: what pattern of inheritance is being described here?)
5. How can mutations be helpful? Give at least 2 examples.
6. Since lactose-tolerance is the result of a mutation, explain why there would be so many people with this mutation in cultures where lots of milk is consumed.
7. Why are island populations good to study in terms of natural selection and mutations?

8. What is selective breeding? Give at least 2 examples of organisms that humans have selectively bred for particular characteristics.

9. How did mutations play a role in creating the many breeds of dogs from their ancestor, the wolf? (*bonus: what type of symbiotic relationship is this?)

10. How are mutations responsible for the development of cancer?

11. Besides UV light, what are other mutagens that we may be exposed to in our environment that may cause mutations?

12. Describe two ways that mutations specifically alter our DNA.

13. Why have fruit flies been so useful to genetics research over the past 100 years?

14. In comparison with fruit flies, what is advantageous of using mice to study human disease? Describe one discovery that has been made.

15. How are scientists studying ovarian cancer with mice as their research model? Describe their experimental procedure.