

## Post-Lesson Worksheet **Answer Key**

The tiger below is colored differently than the one seen at the beginning of class. The white tiger's coat color was due to a mutation.



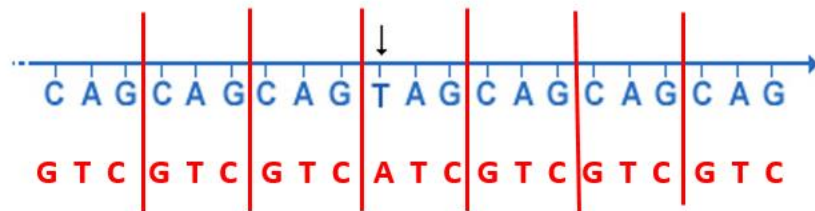
2009 Tony Hisgett, Wikimedia Commons  
[http://commons.wikimedia.org/wiki/File:White\\_Tiger\\_6\\_\(3865790598\).jpg](http://commons.wikimedia.org/wiki/File:White_Tiger_6_(3865790598).jpg)

1. Explain what a mutation is.  
**A random change in the DNA of an organism**
2. Explain how this mutation caused this tiger to have a white coat instead of an orange coat.  
**A mutation to the gene encoding for coat color caused the color to be white instead of orange.**
3. Which of these would *most* likely cause this mutation?
  - A. the placement of ribosomes on the endoplasmic reticulum
  - B. the insertion of a nucleotide into DNA**
  - C. the movement of transfer RNA out of the nucleus
  - D. the release of messenger RNA from DNA
4. The DNA sequence for the orange tiger and the mutated DNA sequence of the white tiger are shown below. What would the mRNA codons be for the mutated tiger?

**Original DNA code**



**Mutated DNA code**



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**Mutated RNA, separated into codons**