

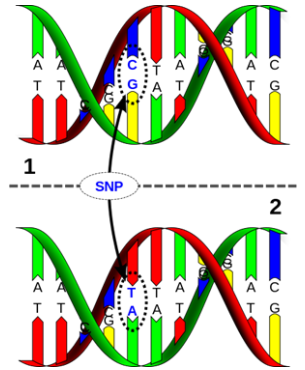
Name: _____

Natural Selection at Work! Option 3

You may access this video on www.biologybynapier.com, Evolution Unit page, scroll to the link “Lactose Intolerant Evolution”

Section E: Coevolution of Genes and Culture

<http://www.hhmi.org/biointeractive/making-fittest-got-lactase-co-evolution-genes-and-culture>



1. What is the main sugar in milk?
2. What is lactase and what does it do?
3. What does “lactose intolerant” mean?
4. Why should adult animals not drink milk?
5. What does it mean to be lactase persistent and is this more common or less common?
6. How does your ancestry play a role in whether or not you are lactose intolerant or not?
7. What causes lactase persistence to occur?
8. Which discovery supports the hypothesis that the evolution of lactase persistence may have been driven by a dependence on drinking milk for survival?
 - a. The lactase gene is present both in humans and in domesticated animals.
 - b. Ancient pots that were used to hold milk are nearly the same age as the lactase-persistence mutation.
 - c. Most human cultures today drink milk and most people worldwide are lactase persistent.
 - d. Scientists have identified different mutations that cause lactase persistence.



9. List two possible explanations for why drinking milk could have provided strong favorable selection for lactase persistence. _____
