

AP Biology 054 – Population Variation

Video Review Sheet

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1. How is the “Devil Facial Tumor Disease” spread?
2. Why doesn’t that type of transmittance occur with cancer in us?
3. Genetic Diversity and Extinction:
 - a. Why did the Black Footed ferret appear extinct? (What didn’t they have anymore)
 - b. Their population was so small a few _____ could wipe them out.
 - c. They went through a huge _____-neck
4. Genetic Diversity and Response:
 - a. AIDS – in some areas, Sweden, up to ___% are immune to getting the virus
 - b. What role do the CCR5 proteins play in this immunity?
 - c. What diseases in the past could have put selection pressure that would increase the prevalence of this gene?
 - d. It is hypothesized that if we came back 1000 years from now, what might we see in the allele frequencies? – What role does variability play in all this?
5. Genetic Diversity and Hardy-Weinberg Equilibrium: Using his example as a review, how many people might be “carriers” for the gene for resistance to HIV in the mid-range areas, at .09 for delta32 variation? Show values for the following:
 - a. $q =$
 - b. $p =$
 - c. carriers =
6. Variation is _____, when we decrease variation we are more susceptible to: