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[Gene Mutation Worksheet Answer](#)

Gene Mutation Worksheet

Name: Key Per: _____

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• Use the following DNA sense strand to answer the questions. You will need a mRNA codon chart which can be found in your book.

TAC AGG CGT TAG GAT TTT CCC ACA AAA TCA TAA ACT

1. Write the mRNA strand that would result from "transcribing" this piece of sense DNA:
 AUG UCC GCC AUC CUA AAA GGG UGG AUU GGU AAU UGA

2. Now, write the amino acids that would result from the "translation" of the above piece of mRNA:
 Met Ser Ala Ile Leu Arg Gly Gln Phe Ser Ile STOP

3. Now, let's mutate the piece of DNA with a "point" mutation called a "pair" mutation where a base is substituted for another. This usually happens during replication. The resultant mRNA molecule will be different. Substitute a "C" for the 9th nucleotide of the sense DNA and write what the resultant mRNA strand will be:
 AUG UCC GCG AUC CUA AAA GGG UGG AUU ACU AAU UGA

4. Now, write the amino acids that are translated from that mRNA:
 Met Ser Ala Ile Leu Lys Gly Gln Phe Ser Ile STOP

5. Is the amino acid chain different? Yes, this is a Silent mutation.

6. This time, substitute the 12th nucleotide with a "T". Write the resultant mRNA and amino acids below. Is the amino acid chain different? Yes. If so, then this is a missense mutation.
 AUG UCC GCG AUG CUA AAA GGG UGG AUU AAU AAU UGA
 Met Ser Ala Met Leu Lys Gly Gln Phe Ser Ile STOP

7. Now, let's try a "frameshift" mutation where a nucleotide is inserted or deleted, thereby shifting the mRNA to the left or right. Insert an "A" nucleotide after the 5th codon. Write the new mRNA chain and resultant amino acid chain below. Does this cause a major mutation? Yes.
 AUG UCC GCG AAU CUA AAA GGG UGG AUU AAU AAU UGA A
 Met Ser Arg Ser Pro Lys Arg Val Phe Ser Tyr Leu -

8. Now, delete nucleotide # 11, write mRNA, protein sequence below:
 AUG UCC GCG AUC CUA AAA GGG UGG AUU AAU UGA
 Met Ser Ala Ile Leu Lys Gln Val Leu Val Phe

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As you know from lecture, there are several types of mutation: ... that a particular mutation had no effect on the protein coded for by the gene. What do you think? Students know that mutations in the DNA sequence of a gene may or may not affect the expression of ... Gene Mutations Worksheet Key. There are two types of ... Mutations Worksheet Name Per. There are four ... Identify and define the 6 different types of gene mutations (NORMAL is not one of them). What gene mutations do you think would have the greatest effect, explain your answer. What causes ... Gene Mutations Worksheet for Review or Assessment ...

Keywords: science, life science, biology, genetics, DNA, gene, mutations, substitution, ... Answer Key. Directions: To help you learn about genetic mutations, complete the following ... or search "Amoeba Sisters Mutations: The Potential Power of a Small Change".. use the mRNA and amino acid sequences to identify the mutation that occurred and the ...

WS.doc+genetic+mutationworksheet&hl=en&gl=us&pid=bl&srcid=A.. Genetic Mutation Worksheet - Techzulla Library Inspiration, Genetics, Dna, ... Dna Mutations Practice Worksheet Answer New Dna Mutations Practice Gene and Chromosome Mutation Worksheet. (reference pgs. 239-240-in Modern Biology textbook). Name. Date. Per. Look at the diagrams, then answer the BLM 4-5 Answers: Gene Mutations and Proteins. Copyright ... Objective: To demonstrate how gene mutations affect the production of proteins. Procedure. 1.. Look at the diagrams, then answer the questions. Gene Mutations affect a single gene by changing its base sequence, resulting in an incorrect, or nonfunctional, A genetic mutation causes white coats in some tigers. copyright. Copyright © 2009 ... Post-Lesson Worksheet Answer Key (docx) · Post-Lesson Name _____ Per _____. Genetic Mutation Worksheet. 1.What are the types of gene mutations? 2. An error during what The answer is simple—by a single ... Messenger RNA molecules that are complementary to specific gene sequences in DNA are made in the nucleus by a ... Transcribe the DNA on the DNA Mutation Consequences Worksheet into mRNA. 2.. Dna Mutations Practice Worksheet Answer New Dna Mutations Practice Worksheets ... Genetic Mutation Worksheet Answer Key Lovely Gene and Chromosome Gene Action/Mutations. Student Worksheets. Note: Your grade on this activity will be based on the degree of completion of your answers, and added illustrations Mutations Practice Worksheet. 1. Define the following words: Mutation. Gene. 2. The basic 3 ... The normal DNA sequence represents a normal gene. Remember Page 1. Page 2. Page 3. Page 4.. Deletion & insertion may cause what's called a FRAMESHIFT mutation, ... Sickle cell anemia is the result of a type of mutation in the gene that codes for part of gene mutation in which there is a change in one nucleotide. This can be a point ... Procedures: 1. Using the DNA strand on the "Mutation Consequences Worksheet" transcribe the DNA into mRNA. 2. ... new mutation. 12. Answer the questions.. Fill Mutations Worksheet Answer Key Biology, Edit online. Sign, fax and printable from ... Search. Comments and Help with gene mutation worksheet answer key. a504e12e07