

DNA Mutation Practice

Create your own 18 base pair long sequence of DNA (just one side):

Write out the mRNA sequence from your DNA sequence (if you end up with a stop or start in the middle of you code, then change the original DNA and correct the mRNA):

1 2 3 4 5 6

Find the amino acid sequence from the mRNA above: (use the chart on p.307 in the textbook)

1 2 3 4

5 6

1. Change the **10th letter** in your original DNA sequence to another base. Write out the changed DNA strand, change to the mRNA and the change to the amino acid.

New DNA strand _____

New mRNA 4th codon _____

Original amino acid _____ New amino acid _____

2. Change the **6th letter** in your original DNA sequence to another base. Write out the changed DNA strand, change in the mRNA and the change to the amino acid.

New DNA strand _____

New mRNA 2nd codon _____

Original amino acid _____ New amino acid _____

3. **Add 1 base after the 6th letter** in your original DNA sequence. Write out the changed DNA strand, change in the mRNA and the change to the amino acid sequence.

New DNA strand _____

New mRNA codons _____

New amino acid sequence (you will not be able to find the last amino acid)

4. What type of mutation results from a change in one nucleotide? _____
5. What type of mutation does question 1 and 2 represent? _____
6. What type of mutation does question 3 represent? _____