

**Mutations Worksheet**

Name \_\_\_\_\_ Per. \_\_\_\_\_

There are three main types of mutations: point missense mutations, point nonsense mutations, and frameshift mutations. In each of the following DNA sequences, you will use the mRNA and amino acid sequences to identify the mutation that occurred and the effects of each on, if any. Look and analyze carefully!

**Original DNA Sequence:** T A C A C C T T G G C G A C G A C T

**mRNA Sequence:** \_\_\_\_\_

**Amino Acid Sequence:** \_\_\_\_\_

Mutated DNA Sequence #1: T A C A T C T T G G C G A C G A C T

What's the mRNA sequence? (Circle the change) \_\_\_\_\_

What will be the amino acid sequence? \_\_\_\_\_

Will there likely be effects? \_\_\_\_\_

What kind of mutation is this? \_\_\_\_\_

Mutated DNA Sequence #2: T A C G A C C T T G G C G A C G A C T

What's the mRNA sequence? (Circle the change) \_\_\_\_\_

What will be the amino acid sequence? \_\_\_\_\_

Will there likely be effects? \_\_\_\_\_

What kind of mutation is this? \_\_\_\_\_

Mutated DNA Sequence #3: T A C A C C T T A G C G A C G A C T

What's the mRNA sequence? (Circle the change) \_\_\_\_\_

What will be the amino acid sequence? \_\_\_\_\_

Will there likely be effects? \_\_\_\_\_

What kind of mutation is this? \_\_\_\_\_

Mutated DNA Sequence #4: T A C A C C T T G G C G A C T A C T

What's the mRNA sequence? (Circle the change) \_\_\_\_\_

What will be the amino acid sequence? \_\_\_\_\_

Will there likely be effects? \_\_\_\_\_

What kind of mutation is this? \_\_\_\_\_

Mutated DNA Sequence #1: T A C A C C T T G G G A C G A C T

What will be the corresponding mRNA sequence? \_\_\_\_\_

What will be the amino acid sequence? \_\_\_\_\_

Will there likely be effects? \_\_\_\_\_

What kind of mutation is this? \_\_\_\_\_