

Name: _____

Date: _____ Hour: _____

1. Describe an **insertion** mutation and give an example: _____

Original sequence: _____

Mutated sequence: _____

2. Describe what cell mutations are and how they are possibly caused: _____

3. Describe a **deletion** mutation and give an example: _____

Original sequence: _____

Mutated sequence: _____

4. Describe a **substitution** mutation and give an example: _____

Original sequence: _____

Mutated sequence: _____

5. What might occur if a mutation affects a gene that controls cell division or growth? _____

6. What kind of mutations are passed on to offspring and present in every cell of the offspring?

7. This type of mutation can occur during DNA replication: _____

8. These types of mutations only affect that cell and its daughter cells. They cannot be passed to offspring:

Use the following sequence of mRNA to answer the following questions:

Original sequence: AUG CCA UAC GGA UUA

a) List which amino acids are coded for in the original sequence:

b) Perform an insertion mutation. Insert an A before the third A. Write the new mutated sequence:

c) List which amino acids are coded for in the insertion mutation sequence:

d) What type of mutation was caused by the insertion? _____

e) Perform a missense mutation. Change the second C to a G. Write the new mutated sequence:

f) List which amino acids are coded for in the missense mutation sequence:
