

## Genes and Mutations

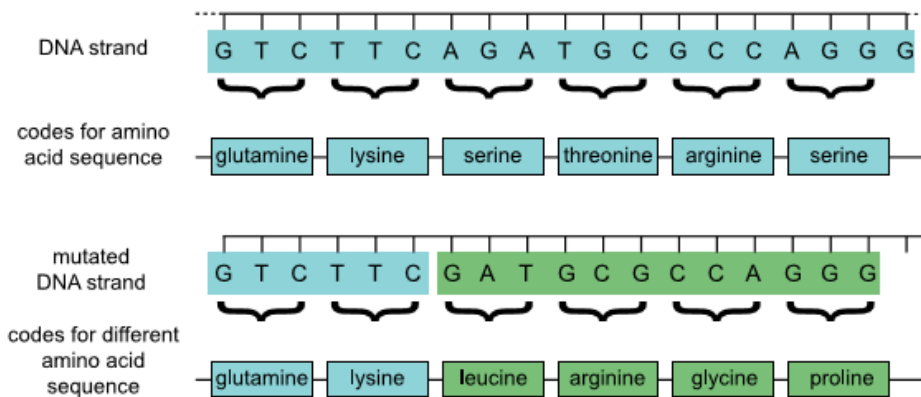
Complete the glossary words and two questions in advance of the online session on 29<sup>th</sup> November 2017.

Key Area 5: Structure of the genome	
Genome	
Genes	

Key Area 6: Mutations	
Deletion (Nucleotide)	
Deletion (Genes)	
Duplication	
Insertion	
Mutations	
Polyploidy	
Splice-site mutation	
Substitution	
Translocation	

Key Area 8: Genomic Sequencing	
Bioinformatics	
Fossil Evidence	
Molecular clocks	
Personalised medicine	
Phylogenetics	
Sequence data	

Q1. This is a deletion mutation. The first 'A' nucleotide in the original DNA strand has been removed (or deleted). Answer the following questions:



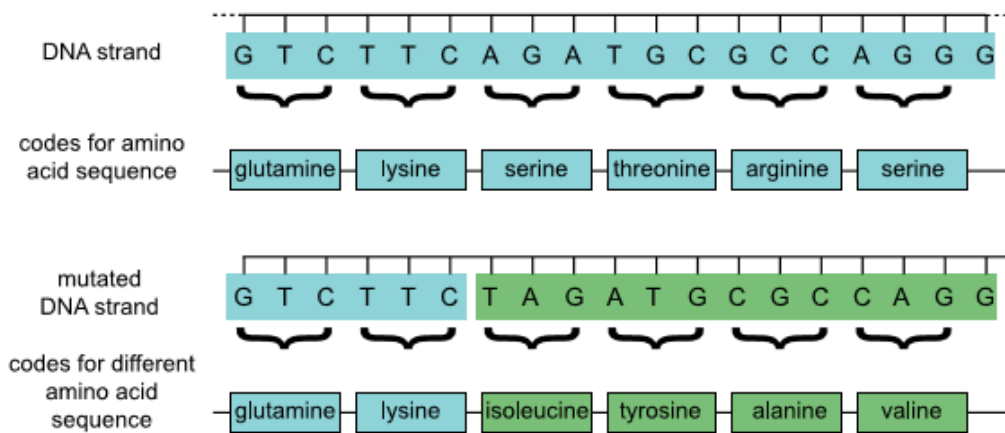
a) How many amino acids in this sequence have been changed?

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b) Is a deletion mutation a point or a frameshift mutation?

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Q2. This is an insertion mutation. The 'T' nucleotide has been inserted between the 'C' and 'A' nucleotides in the original DNA strand. Answer the following questions:



a) How many amino acids in this sequence have been changed?

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b) Is an insertion mutation a point or a frameshift mutation?

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