

# MUTATIONS

There are 2 types of mutations:  
gene mutations &  
chromosomal  
mutations

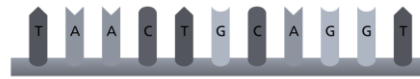
## Other Info:

## Definition

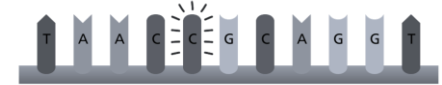
## Point Mutation

- (aka: \_\_\_\_\_)
  - A mutation in which one nucleotide is put in place of the correct nucleotide
  - Usually, a mistake like this is caught and fixed by \_\_\_\_\_.
  - If not, the substitution \_\_\_\_\_ permanently change an organism's DNA.
  - Ex. *Sickle Cell Anemia*

Original sequence



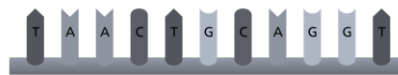
Point mutation



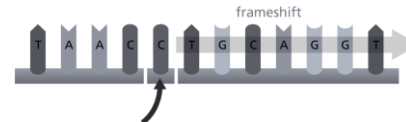
## Frameshift Mutation

- Involves the \_\_\_\_\_ or \_\_\_\_\_ of a nucleotide in a DNA sequence.
- This \_\_\_\_\_ the entire sequence by one or more nucleotides (tends to have a bigger impact)
- Ex. *Cystic Fibrosis*

Original sequence



Insertion



Original sequence



Deletion

