

Topics 7 and 8 Notes

Mutations

Mutations:

Primary source of _____

Changes can be large scale or small scale

Large scale:

Small scale:

Small Scale Mutations

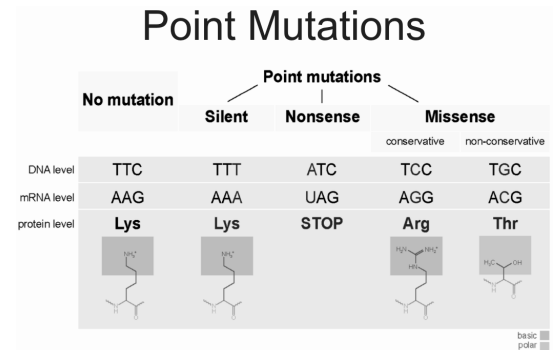
Point mutations:

Substitution:

Silent:

Missense:

Nonsense:



Small Scale Mutations



Frameshift mutation:

Disastrous effects to resulting proteins

Large Scale Mutations

Mutations that affect _____

Nondisjunction:

Translocation:

Inversions:

Duplications:

Deletions:

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- Questions?
 - Textbook chapters/pages to review

Natural Selection

Any time _____ occur, they are subject to natural selection.

Genetic changes can sometimes _____ the survival and reproduction of an organism.

Increasing Genetic Variation

Prokaryotes can exchange genetic material through:

If there is a mutation that is beneficial to the _____ and _____ of that prokaryote, then it can also be transferred.

Transformation:

Transduction:

Conjugation:

Transposition:

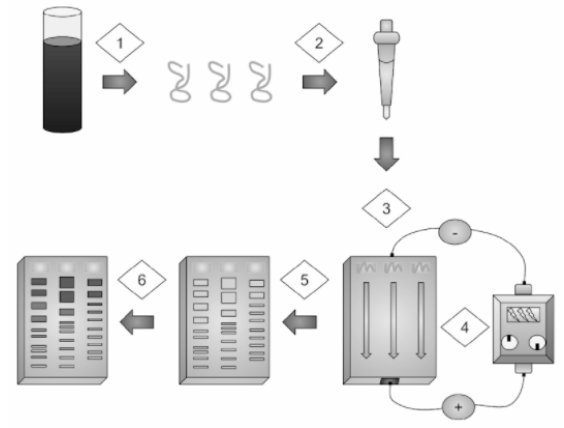
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- Questions?
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Biotechnology

Both DNA and RNA can be manipulated through _____

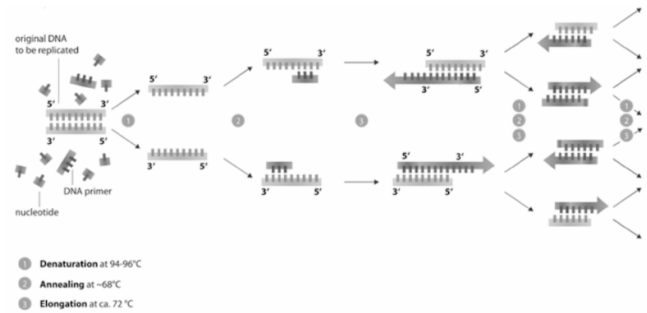
Gel Electrophoresis

Gel electrophoresis:



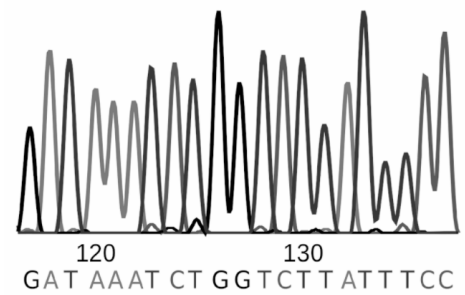
PCR

Polymerase chain reaction (PCR):



DNA Sequencing

DNA sequencing:



- Questions?
- Textbook chapters/pages to review