Ch. 13 RNA, Proteins, Mutations

RNA

* Sugar is – stranded – contains a base called instead of
* 1) Messenger RNA🡪
* 2) Ribosomal RNA 🡪
* 3) Transfer RNA 🡪

RNA Synthesis

* During , segments of DNA serve as a
* Those transcribed RNA the bases of DNA
* During the process, RNA needs more
  + Similar to a book before it is sent to publishing

RNA editing

* Pieces of the RNA can be cut ( ) and the remaining pieces are spiced back together ( )
* After the RNA synthesis, a enzyme conducts the

Genetic Code

* Using the “ ” of the DNA/RNA, a genetic
* Reads letters as a time creating an
  + Each 3 letter code in the RNA is called the
* Look at the ring on page 367, it reads from the middle out ward
  + UCG – AUG -
  + CCG – GUU -

Translation

* Ribosomes use the in the to assemble the
* 1) mRNA is transcribed and enters the cytoplasm
* 2)
* 3)
* 4)

Role of RNA

* mRNA –
* tRNA –
* rRNA -

Molecular Basis of Heredity

* The whole idea that genetic information from is the central
* The ultimate goal of all of this is to create which gives the cells its

Mutations

* Means
* 1) Gene mutations
  + Changes to a
* 2) Chromosomal mutations
  + Changes to a

Gene Mutations

* Also called – a change is occurring at a single point in the DNA
* – a switch is occurred at to create a different
* Insertion and Deletion are called “ ” because they shift frames of what is being by either inserting a base or taking one out
* Chromosomal
* Causes the change in the chromosome structure by deletion, , inversion, or

Effects of Mutations

* Some mutations can of some organisms to survive

( )

* Others are caused by , chemical or physical agents in the
* List of chemical (3)
* List of Physical (3)

Harmful Mutations

* The change of the code could cause at a cellular level
  + Sickle Cell Anemia causes
  + Cancers are caused by

Helpful Mutations

* Can produce with a different function to promote
* Organisms can become to certain things
* Explain how planters my see a “good mutation” page 376