12-3 DNA Replication

Copying the Code

* Because Watson and Crick noticed that the the same way ( ) they concluded that each end had the info to

Replication Process

* Before a cell divides it must copy its DNA in a process called
  + Occurs during the
* The DNA splits or “ ” creating two complimentary base pairs as a
  + If a thymine is being shown then an is added and so forth
* All of the new DNA formed has and one strand attached

Role of Enzymes

* Different play a role in DNA replication
* The first enzyme
* The second and joins the to produce new DNA
* This is called
* Why would the enzyme need to “proofread” the DNA?

Telomeres

* DNA at the tips are known as . They are hard to and need a special enzyme called a
* In cells (stem or embryonic) the telomerase prevents
* Usually they are switched off in adults but in what type of cells can they be turned back on?

Replication in Living cells

* DNA cells in prokaryotes are found in the cytoplasm
* DNA in Eukaryotes contains many more

Prokaryotic DNA Replication

* DNA replication does not start until bind to a single on a chromosome
* The protein triggers the beginning of the and replication begins
* Starts at a single point and spreads
* When finished the cell separates ( )

Eukaryotic DNA Replication

* Replication can begin at on the DNA strand
* check the DNA for , but isn’t
* Changing of the base pairing causes
* The two sets of chromosomes remain close until
* What are the two phases that separate DNA and create two cells?