

Name: _____

Date: _____

Period: _____

DNA Notes

Remember, DNA is found in the _____. DNA is tightly wound into structures called _____. _____ are located on _____ and are the _____ of the cell.

Genes must:

- Have _____ on how to perform all of the cell's _____ and how to _____ cell parts.
- Be able to be _____ every time a cell _____.

DNA makes a shape that looks like a _____. This shape is called a _____.

DNA is made of a _____, _____, and _____.

There are 4 different bases:

- _____
- _____
- _____
- _____

The bases in DNA make _____. _____ pairs with _____ and _____ pairs with _____. These bases are the _____ of the ladder.

The arrangement of _____ (A, T, C, G) is the code for all _____. This code determines what you _____ (and any other _____ that is determined by genes.)

When _____ needs to copy itself, it _____, the base pairs _____ and _____ come in to form new pairs. This happens every time a cell _____ itself (during mitosis and meiosis).

Sometimes the _____ of the bases in DNA do not get copied
_____. This is called a _____ (when the order of the
bases _____). A base can be _____ (deletion), a base can
be _____ (insertion), or a base can be _____
(substitution).

Normally DNA changes are _____ by a _____. If the
change _____ corrected, it can be an _____, a
_____, or it can make _____ difference at all.

Sometimes DNA is _____ by _____ or other things
called _____. _____, UV rays, _____,
and chemicals in _____ can all be mutagens.

DNA Notes

Remember DNA is found in the nucleus of a cell on its chromosomes. On the chromosome there are genes that are directions for the cell.

Genes must:

- Have information on how to do all the cell activities and how to build cell parts

- Be able to be copied every time a cell divides

DNA makes a shape that looks like a twisted ladder or “double helix”.

DNA is made of a sugar, a phosphate and a “base”: Adenine, Thymine, Guanine, or Cytosine.

The bases make pairs: Adenine pairs with Thymine and Guanine pairs with Cytosine. These are the “rungs” of the ladder. (A=T and G=C)

The DNA is a code for all living things what to look like (or any other trait that is determined by genes).

When DNA needs to copy itself, it untwists, the base pairs break apart and new bases come in to form new pairs. This happens every times a cell copies itself (during mitosis and meiosis).

Sometimes the order of the bases in the DNA do not get copied correctly. This is called a mutation (when the order of the bases changes). A base can be left out (deletion), a base can be added (insertion), or a base can be changed (substitution).

Normally DNA changes are fixed by a repair enzyme. If the change isn't corrected, it can be an improvement, a harmful change or it can make no difference.

Sometimes DNA is damaged by chemicals or other things called mutagens. X-rays, UV rays, asbestos and chemicals in cigarettes can all be mutagens.
DNA