Honors Biology Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  
NDHS Per: \_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_

**DNA Structure**

**Genetics and Heredity**: the study of the inheritance of genes, genotypes, and phenotypes of individuals and populations.

**Gene**: Section of DNA that  by directing the .  
 Protein is then used as the materials to  OR it is an .   
 The expression of these proteins is what .  
 EX: Skin color is due to the presence of melanin in the skin. The genes tell the cell how much melanin to make. The more “dark genes” causes more melanin to be produced making the skin darker.

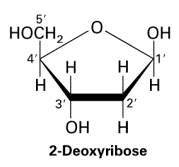
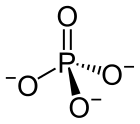
The structure of each gene is based on its .

**Structure of DNA:**

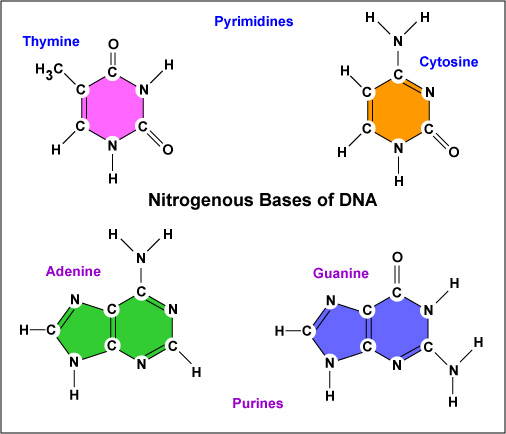
DNA =

– a

**Components of DNA:**Base unit =   
 Composition:   
 1.  **2.**

 [](http://en.wikipedia.org/wiki/File:Phosphat-Ion.svg)

3.

[](http://www.google.com/url?sa=i&rct=j&q=&esrc=s&frm=1&source=images&cd=&cad=rja&docid=6v-JqXfQxK3RKM&tbnid=ssODPFcMLDlLyM:&ved=0CAUQjRw&url=http://student.ccbcmd.edu/~gkaiser/biotutorials/dna/fg4.html&ei=Kzb5UuS4J8rb0QHCo4DgCw&bvm=bv.60983673,d.aWc&psig=AFQjCNGVnLTi8wlqDwIfphI8AFj3b9VpFw&ust=1392150380019501)

**DNA Molecule Structure**- Discovered by  using **( )** the work of

What they found:  
\_\_\_\_\_\_\_\_\_ of “ladder” are made of .   
 Phosphates bind to the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

**\_\_\_\_\_\_\_\_** of the “ladder” are made of

Bases .

Each side runs  to the other – they run