**Molecular Genetics Review Sheet**

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_

**Make a chart of the different scientists involved in the process of discovery of DNA and its structure.**

|  |  |  |
| --- | --- | --- |
| **Scientist** | **What was his/her experiment?** | **Conclusion** |
| Griffith |   |   |
| Hershey and Chase |   |   |
| Watson and Crick |   |   |
| Chargaff |   |   |
| Meselsohn and Stahl |   |   |
| Franklin |   |   |

**Complete the chart to review the enzymes involved in DNA Replication and Protein Synthesis and their functions.**

|  |  |
| --- | --- |
| **Enzyme** | **Function** |
| Primase |   |
| DNA Polymerase III |   |
| helicase |   |
| ligase |   |
| DNA Polymerase I |   |
| RNA Polymerase |   |
| Aminoacyl Synthetase |   |

**Complete the chart to review the different molecular players in the Protein Synthesis process.**

|  |  |
| --- | --- |
| **Molecular Identifier** | **Function** |
| TATA Box |   |
| Promoter |   |
| Acetyl Group |   |
| Poly A Tail |   |
| Intron |   |
| Exon |   |
| Methyl Group |   |
| GTP |   |

**Label the following diagram of DNA. Include in your labels:**

 Phosphate, Deoxyribose, Purines,

Pyrimidines, 5’ and 3’ ends

Hydrogen Bonds

**What are the 3 steps of Transcription, in order?**

**Complete the chart to review the 3 types of RNA and what are their functions?**

|  |  |  |
| --- | --- | --- |
| **RNA form** | Function | Location |
| mRNA |  |  |
| tRNA |   |   |
| rRNA |   |   |

**How is RNA modified before it leaves the nucleus and why?**