

## DNA Models

This assignment is designed to give you the opportunity to demonstrate that you fully understand the composition and shape of a DNA Molecule.

### Important Things to NOTE:

1. You will NOT have class time to work on this assignment. It is homework!!!
2. Each person will turn in their own DNA Model!!
3. The due date for this assignment is March 7 for 5<sup>th</sup> & 7<sup>th</sup> Hours and March 8 for 2<sup>nd</sup> and 3<sup>rd</sup> Hours!!! (MINUS ONE LETTER GRADE FOR EACH DAY LATE!!!!!!!!!!!!)

### Model Requirements:

1. Your model must be three-dimensional. 15
2. Your model must be free-standing (on a base) or able to hang from the ceiling. 15
3. Your model must show a double-helix shape (twisted ladder) 15
4. Your model must indicate the following:
  - a. Deoxyribose (sugar group) 15
  - b. Phosphate Group 15
  - c. 4 Nitrogen Bases—be sure to differentiate between adenine, thymine, guanine, and cytosine. 15
  - d. Hydrogen bonds 15
5. Your model must have at least 10 rungs to the ladder. 15
6. Your model must include a key identifying the 7 different things listed in #4. 15

**Extra Credit:** Indicate the number of rings in the bases (purines/pyrimidines). Each “step on the ladder” should consist of 3 rings total. (Up to 15 points EC)

**Hints:** You should use inexpensive, easy to find materials such as pipe cleaners, beads, styrofoam, wire, wood, coat hangers, cotton balls, string, paint, markers, etc.

Put some effort into this project. Be creative and do your best!!

This project is worth 135 Points!!

**DUE: MARCH 7 for 5<sup>th</sup> and 7<sup>th</sup> Hours, March 8<sup>th</sup> for 2<sup>nd</sup> and 3<sup>rd</sup> Hours.**