

Part 3. Time to get DNA and Dirty!

5. Identify where DNA is separated so it can be copied. _____
6. What molecules make up the backbone of the DNA molecule? _____
7. What bond connects the backbone to the nitrogenous bases? _____
8. What bond connects the parts of the backbone together, meaning, what connects the deoxyribose to a phosphate to the next deoxyribose? _____
9. Count up the number of each nitrogenous base from Part 2 and fill in the table below which you will use to analyze your molecule's composition in the questions to follow.

Nitrogenous Base	Number present	% of the total number of bases
Adenine (A)		
Thymine (T)		
Guanine (G)		
Cytosine (C)		
Purines only		
Pyrimidines only		
All bases		

- (a) How does the number of A's relate to the number of T's?
- (b) How does the number of G's relate to the number of C's?
- (c) How does the number of purines compare to the number of pyrimidines?
- (d) DESCRIBE what concept(s) the answers to a, b, and c above help to support, and the name of the scientist who found these "rules" (*hint: you can use the terms on the opposite side of this page*).
- (e) Now look at the percentages and composition of the DNA model of a classmate using the second class model. How related would you guess the two organisms represented by these DNA molecules are? **USE DATA TO SUPPORT YOUR ANSWER.**
10. Has this model build helped you to better understand DNA? How so? What are you still struggling with that the model did not help you to understand better?