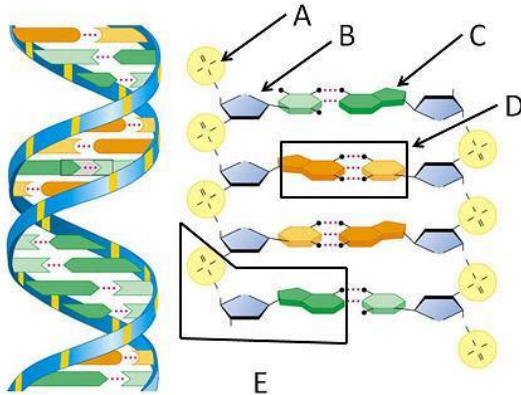


LAB 3: DNA and Gene Expression SNOW DAY Homework

You may need to refer to Lab #3, your textbook and lecture resources to answer the following:

1. List the three parts of a nucleotide.
2. On the lines corresponding to the letters on the diagram, identify the following parts of the DNA molecule: nucleotide, deoxyribose (a sugar), phosphate, base pair, nitrogenous base.



- A: _____
- B: _____
- C: _____
- D: _____
- E: _____

3. How do we describe the shape of a DNA molecule?
4. What is the primary function of DNA?
5. What would the complementary DNA strand be for this segment of DNA: ATTCGACTT?
6. What is a difference between RNA and DNA?

7. a) What is the name of the process in which a complimentary strand of RNA is made from a DNA template?

b) Where does the above process occur?

c) What would the be the complimentary strand of RNA be giving the DNA template ATTCGACTT?
8. What is the name of the process in which a protein sequence is made at the site of a ribosome from an RNA template?
9. Why do individuals in the same species have differences in their traits?
10. What is a mutation?
11. Using the terms and processes of the Central Dogma, explain how a mutation can lead to a change in the phenotype (traits) of an organism.