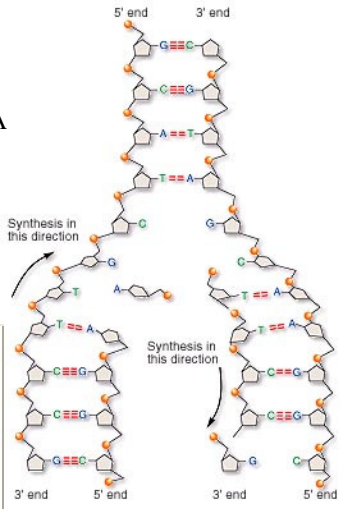
Name _____
Date _____ Period 1 2 3 4 5 6

DNA Worksheet

Mr. Hoyle

Objectives: • Know the building blocks and structure of DNA • Replicate DNA



Structure of Nucleic Acids

1. The building blocks of nucleic acids are known as _____.

2. Draw and label the three parts of a nucleotide.

3. Diagram and label the two types of nitrogenous bases.

Function of DNA

1. The acronym DNA stands for _____.

2. DNA makes up chromosomes, which are located in the _____ of a cell.

3. Small sections of a DNA molecule that determine genetic traits are called _____.

Structure of DNA

1. The sugar found in DNA is _____.

2. The pyrimidine bases are _____ and _____.

3. The purine bases are _____ and _____.

4. In complimentary base pairing, _____ bonds with _____ and _____ bonds with _____.

Diagram of DNA molecule

1. A DNA molecule consists of _____ strands.

2. DNA is a long chain made of repeating units called _____.

2. Nucleotides are attached by bonds between the _____ and the phosphate group.

3. DNA is shaped like a _____ helix.

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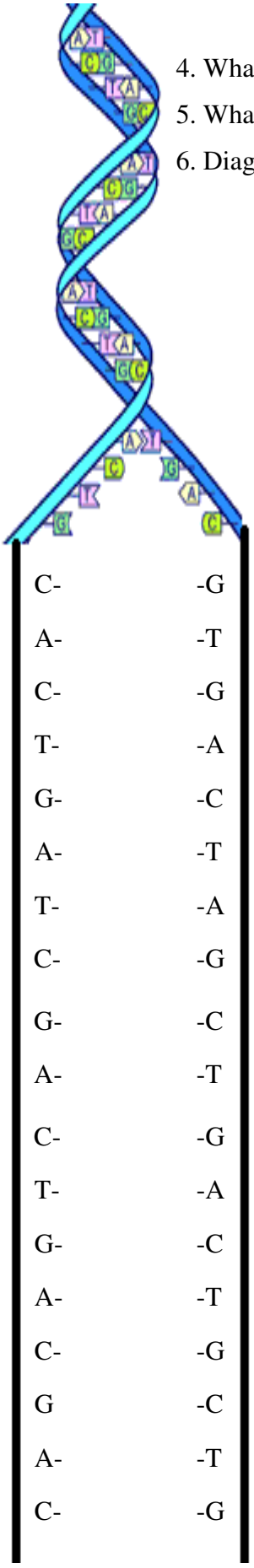

4. What are the "sides" of the DNA ladder made of? _____

5. What are the "rungs" of the DNA ladder made of? _____

6. Diagram and label a section of DNA →

DNA Replication

1. The replication (exact duplication) of DNA begins with the _____ of the double helix.

2. DNA replication is said to be _____ because each strand acts as a template to construct the other half of the molecule.

5. Show the complimentary base pairing that would occur during replication of this DNA molecule to the left. Notice how two strands are made from one.

6. Below, fill in the missing bases from this DNA molecule.

G C T A C A C G C A

T A C G C A G