

Name \_\_\_\_\_ Date 1/9/12 Science Period \_\_\_\_\_

### DNA Background and Information Homework



Directions: Answer the following questions in the spaces provided.

1. What does DNA stand for? \_\_\_\_\_

2. Describe the actual shape of the DNA molecule. \_\_\_\_\_

\_\_\_\_\_

3. Who first described the structure of DNA? (Which two scientists are given credit for the discovery of the shape/structure?) \_\_\_\_\_

\_\_\_\_\_

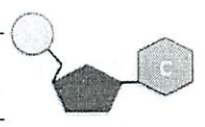
4. Who took an x-ray photograph of a DNA strand? \_\_\_\_\_

5. How can such a long strand of DNA fit into the nucleus of each cell? \_\_\_\_\_

\_\_\_\_\_

6. Name the three parts of a nucleotide. \_\_\_\_\_

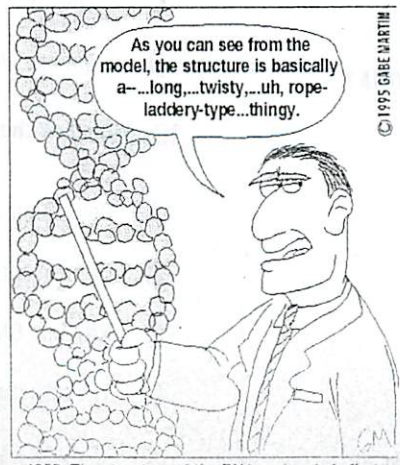
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7. What are the four bases that make up a strand of DNA and how do they match up? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



1953. The structure of the DNA molecule is first described.

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

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

Class: \_\_\_\_\_

1 A double helix looks like:

- A A solid sphere
- B A hollow tube
- C A twisting ladder
- D A pair of cubes

2 Which of your body's cells contain DNA? Choose the best answer.

- A Only your reproductive cells
- B Only your blood cells
- C Only your bone cells
- D Virtually all your body's cells

3 What can you infer about a DNA molecule from its name?

- A That it's a nucleic acid molecule
- B That it's a lipid molecule
- C That it's a carbohydrate molecule
- D That it contains blood

4 DNA can best be compared to:


- A The bricks that make up a building
- B An architectural blueprint of a building
- C The tenants that live in a building
- D The different apartments and offices in a building

5 Which trait is determined completely by your DNA?

- A Your personality
- B Your intelligence
- C Your hair color
- D Your weight

6 Place the following in order from largest to smallest. A) Base pair, B) Chromosome; C) DNA molecule


- A C, B, A
- B B, C, A
- C A, C, B
- D B, A, C

7  How can plants be made hardier through genetic modification?

- A Genes that code for disease resistance can be added to plant DNA
- B Genes from healthy human beings can be added to plant DNA
- C Genes from vaccines can be added to plant DNA
- D Genes from viruses and pathogens can be added to plant DNA

8 In the term "nucleic acid," what does the word "nucleic" indicate?

- A That energy from DNA can be used in nuclear power
- B That DNA is located in cell nuclei
- C That DNA molecules are held together by nuclear forces
- D That splitting DNA molecules results in nuclear reactions

9  What is the best definition of a clone? Choose the best answer.

- A A child who has no parents
- B Someone whose DNA is an exact copy of someone else's
- C Someone who looks exactly the same as another person
- D Someone whose DNA is similar to someone else's

10 Which of these is a true statement about DNA?

- A Only animals have DNA in their cell nuclei
- B DNA research is simple and inexpensive
- C RNA and DNA have nothing to do with one another
- D The structure of human DNA was not discovered until the 1950s