

Name: _____ Date: _____ Period: _____

DNA Unit: DNA Webquest

Part 1 – History, DNA Structure, DNA Replication

DNA History

<http://www.dnafb.org/dnafb/1/concept/index.html>

Read the text and answer the following questions.

1. What have people wondered since the beginning of human history? _____
2. Who discovered that individual traits are passed on from one generation to the next? In what year? _____

On the menu at the right click on number 15 "DNA & proteins are key"

3. When was DNA discovered as a major chemical of the nucleus of cells? _____
4. In the early 1900s what molecule was considered to be a better candidate to transmit hereditary information from one generation to the next? _____
5. Why was protein considered to be a better candidate as the hereditary molecule than DNA? _____

On the menu at the right click on number 16 "one gene makes one protein"

6. What was the conclusion made by Beadle & Tatum? What year was this? _____

On the menu at the right click on number 17 "a gene is made of DNA"

7. What did Oswald Avery's team of scientists conclude from their experiments? In what years? _____

On the menu at the right click on number 19 "The DNA is shaped like a twisted ladder"

8. What did earlier work on DNA show? _____
9. Who won the race to show the 3-dimensional structure of DNA? _____
10. What year was this? _____

Click on animation at the bottom of your screen (step through the animation and answer the following questions)

11. What makes up a nucleotide? _____
12. How could DNA be an "intelligent molecule" (carry hereditary information)? _____
13. What was Erwin Chargaff's contribution to the DNA puzzle? _____
14. What important tool did Linus Pauling use to determine the structure (shape) of proteins? _____
15. How was this tool used to help discover the shape of DNA? _____
16. Name the two scientists that made the x-ray diffraction patterns that Watson & Crick used? _____
17. The distinctive "X" meant the DNA had what pattern? _____