

Name _____

DNA Review

1. What NAME is given to the L-shaped “**building blocks**” of DNA?
2. List the 3 parts of each DNA “build block”
3. What is **deoxyribose**?
4. List the 4 Nitrogen bases found in DNA.
5. Which Nitrogen bases are purines and which are pyrimidines?
6. What is a **helix**?
7. What type of bond and how many connect the complimentary Nitrogen bases?
8. How many **TOTAL** nitrogen base letters are there in one human DNA blueprint?
9. How many strands of nucleotides are there in one DNA molecule?
10. What is the DNA **backbone**?
11. List 4 situations in which a cell’s DNA might be **replicated**?
12. Explain what a DNA “**gene**” is?
13. How many TOTAL genes are there in one human blueprint?

14. DNA REPLICATION REVIEW:

Explain the **FUNCTION** for each enzyme and then number their correct sequence during replication.

_____ DNA Ligase:

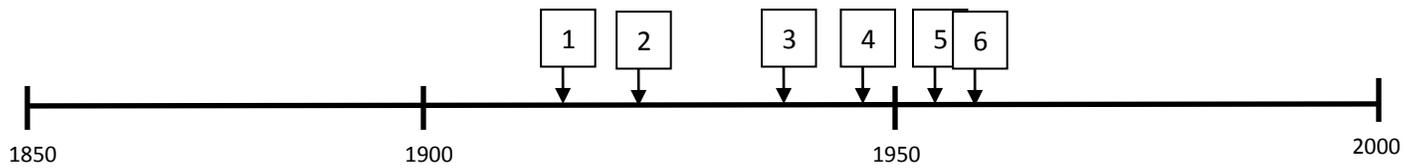
_____ DNA Polymerase II:

_____ DNA Repair Enzymes:

_____ DNA Helicase:

_____ DNA Polymerase I:

_____ DNA Primase:



15. DNA DUDES REVIEW

Summarize the important contribution each researcher made toward our growing understanding of DNA as the heredity molecule. Also match each researcher to the correct chronological number on the timeline above.

_____ Erwin Chargaff:

_____ Watson & Crick:

_____ Fred Griffith:

_____ Oswald Avery:

_____ P.A. Levene:

_____ Hershey & Chase:

16. Explain how bacteriophage viruses were used to prove that DNA, not protein, carries the genetic code. Use a diagram to strengthen your answer.

17. What would happen to a mouse injected with dead SMOOTH bacteria and dead ROUGH bacteria and WHY?

18. Draw a neat diagram of the DNA structure for the following code. Outline one **NUCLEOTIDE** and label the **hydrogen bonds**. Make sure your DNA is **Antiparallel**.

T G C T T A