

Name \_\_\_\_\_

Period \_\_\_\_\_

Regents Biology

Date \_\_\_\_\_

### NUCLEIC ACIDS

1. What are the functions of a nucleic acids in living organisms?

a. \_\_\_\_\_

b. \_\_\_\_\_

2. What is the building block (monomer) for a nucleic acids? \_\_\_\_\_

3. What are the 3 parts of a nucleic acid monomer?

\_\_\_\_\_

\_\_\_\_\_

4. Draw a simple diagram of the nucleic acid building block.

5. Name the two examples of nucleic acids in all organisms.

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6. What type of bond is used to bond the nucleic acid monomers together along one chain?

**STRONG**                      or                      **WEAK**

7. What type of bond is used to bond the nucleic acid chains together across the DNA double helix?

**STRONG**                      or                      **WEAK**

8. How is this difference in bonds important to the function of DNA in living organisms?

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9. List the different kinds of nitrogen bases in all nucleic acids \_\_\_\_\_

10. List the nitrogen bases in DNA. \_\_\_\_\_

11. List the nitrogen bases in RNA. \_\_\_\_\_

12. Draw a simple diagram of a nucleic acid polymer.

13. Describe the shape of the DNA molecule. \_\_\_\_\_

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14. Explain why this specific structure of DNA is very important to life on Earth.

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15. Who was awarded the Nobel prize for the discovery of the structure of DNA?

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16. When did they discover it? \_\_\_\_\_