

Name: _____

Period: _____

DNA Molecule Model - LAB

Objective: To make a model illustrating the structure of DNA

Background information:

- a) What does DNA stand for? _____
- b) Where is DNA found in Eukaryotes? _____
- c) What is the importance of DNA? _____
- d) What is the subunit of DNA? _____
- e) What are the three parts of a nucleotide? _____

Materials: 6 different colored pencils or markers, scissors, glue.

Procedure:

- 1. Obtain all materials
- 2. Record the color code for your model below
 - a. Sugar: _____
 - b. Phosphate: _____
 - c. A = _____
 - d. T = _____
 - e. C = _____
 - f. G = _____
- 3. Follow the given instructions to build your DNA molecule
- 4. Answer the following questions about your model
 - a. How do the nitrogen bases pair? _____
 - b. Where are the sugar phosphates found? _____
 - c. Where can the bases be found? _____
 - d. Why did you start with sugar on one side and phosphate on the other side? _____

 - e. How many A and T base pairs do you have? _____
 - f. How many C and G base pairs do you have? _____
 - g. What would represent the hydrogen bonds in your model? _____
 - h. How many hydrogen bonds form between A and T in a real DNA molecule? _____
 - i. How many hydrogen bonds form between C and G in a real DNA molecule? _____
- 5. When your model is finished **sketch, label and color** your DNA molecule on the back of this paper.

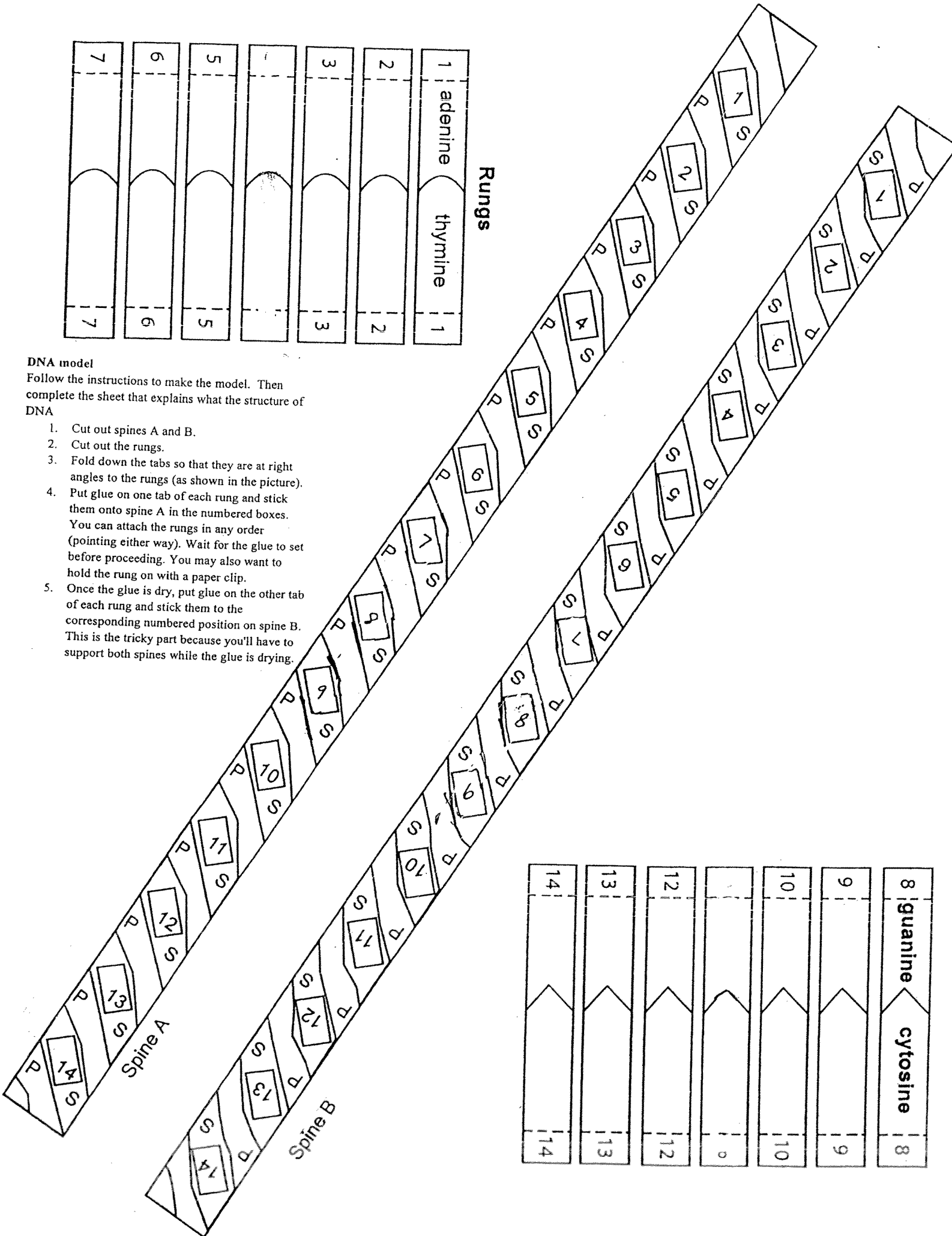
1	adenine	thymine	1
2			2
3			3
4			
5			5
6			6
7			7

Rungs

DNA model

Follow the instructions to make the model. Then complete the sheet that explains what the structure of DNA

1. Cut out spines A and B.
2. Cut out the rungs.
3. Fold down the tabs so that they are at right angles to the rungs (as shown in the picture).
4. Put glue on one tab of each rung and stick them onto spine A in the numbered boxes. You can attach the rungs in any order (pointing either way). Wait for the glue to set before proceeding. You may also want to hold the rung on with a paper clip.
5. Once the glue is dry, put glue on the other tab of each rung and stick them to the corresponding numbered position on spine B. This is the tricky part because you'll have to support both spines while the glue is drying.



8	guanine	cytosine	8
9			9
10			10
11			11
12			12
13			13
14			14