Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Block\_\_\_\_\_\_\_\_

**Biotechnology: Gel Electrophoresis**

**Use the link below to complete the following questions:**

http://learn.genetics.utah.edu/content/labs/gel/

1. Gel electrophoresis is used to sort DNA strands according to their\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. Where do you place DNA samples on the gel? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. What makes the DNA move? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. Short stands move (faster/slower) than longer strands? \_\_\_\_\_\_\_\_\_\_\_\_\_
5. Place the steps in the correct order: 1-5

A.\_\_\_\_\_ Load the DNA sample into the gel

B.\_\_\_\_\_Stain the gel and analyze the results

C.\_\_\_\_\_Make the gel

D.\_\_\_\_\_Hook up the electrical current

E.\_\_\_\_\_Set up gel apparatus

6. In the “Gel Electrophoresis Laboratory”, follow the steps to make your own gel, answer the questions as you go.

A. What is agarose made from?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

B. Melted agarose is poured into a?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

C. What is the purpose of the comb?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

D. The black ends generate a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ charge, the red end a \_\_\_\_\_\_\_\_\_\_\_\_charge.

E. The bubbles in the electrophoresis chamber indicate what? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

F. Staining the DNA will make it show up under a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ light.

G. What are your estimates for the number of base pairs in the three bands? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

