**Name: Period: Date:**

**Focus Questions for Chapter 16.1 (DNA is Genetic Material) due Tuesday, 2/4**

# Questions to answer as you read about the study of DNA as genetic material. You will not be asked to turn these in, but Ms. Ransom may check to make sure you have completed them through a clicker quiz or short written response. You should be ready to discuss the answers during class.

1. Before the 1940s, scientists thought that genetic material was composed of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ or \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. For which type of molecule did scientists have a stronger case? Why?
2. In Frederick Griffith’s experiment, what organism was the pathogen? What organism was the test subject? How was he able to tell that the genetic material had been transferred?
3. What is a **bacteriophage**?
4. How did Hershey and Chase label the protein and DNA in their experiment? What did they conclude from this experiment?
5. What are Chargaff’s rules?

1. What was the importance of X-ray crystallography in determining the structure of DNA?
2. What does it mean that DNA is **antiparallel**?
3. Why must a purine (which are the bases \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_) always pair with a pyrimidine (which are the bases \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_)?

**Questions I have that I plan to ask about in class:**