Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date \_\_\_\_\_\_\_\_\_\_\_

AP Biology

***The Secret of Life***

**Introduction:**

"By the early 1950s, the greatest unsolved mystery in science was the secret of life itself - the process which all living things have reproduced themselves, generation upon generation, since the beginning of life on Earth. Although the mystery had a name, the 'gene', nobody knew what it was or how it worked." This movie details the research and personal interactions leading to the discovery of the structure of the molecule DNA.

**1.** What words would you use to describe each of the scientists involved in the discovery of the structure of DNA?

 **James Watson** –

 **Francis Crick** –

 **Rosalind Franklin** –

 **Maurice Wilkins** -

**2.**  What characteristics of Watson and Crick made others think they would never succeed?

**3.**  What was “Black Monday” and how did it affect the direction of Wilkin’s career?

**4.**  In the race to uncover the structure of DNA, there were three main teams.  Describe the three teams and the approaches they used to solve the mystery.

  **(1) (2) (3)**

**5.**   What got Watson and Crick banned from the Race?

**6.**  Why did Rosalind Franklin laugh at Watson and Crick’s first model?

**7.**  Why was Peter Pauling accused of being a double agent?

**8.** What are the Chargaff rules?  What does Chargaff have to be bitter about?

**9.**  Should science be an “open community” where ideas are exchanged and shared?

 How does NOT sharing information have an impact on scientific advancements?

**10.**  Do you believe that Watson and Crick went about their research in an ethical way?  Why or why not?