

Writing About the Book

On a separate sheet of paper, write the answers to each of the following.

Extending the Story

1. Watson and Crick's discovery of the structure of DNA opened the door for further genetic research that has led to current use of DNA testing for many purposes. Imagine that you are Watson. Write a short narrative in which you extend his story by hypothesizing about future uses of DNA testing.

Thinking about Assumptions

2. Throughout the time of the research on DNA, Rosalind Franklin assumed that DNA was not a helical structure. Since she was in a position to produce the best X-ray data on DNA, her assumption directly affected the research efforts to discover its structure. Write a summary of how the research process might have differed had Franklin assumed that the DNA molecule was a helix.

Responding to a Review

3. *The Double Helix* was published amid controversy over Watson's forthright portrayal of his colleagues. The Harvard University Press refused to publish the book. *The Harvard Crimson* commented editorially that such a work was "bound to offend somebody." Write an essay in which you react to this statement. Do you think Watson's book is offensive to anyone? Were his comments about his colleagues necessary for him to tell the story? Cite examples from the book to support your opinion.

Evaluating a Character

4. James Watson would not have been able to complete the structure of DNA without Francis Crick. Write a description of their joint discovery from Crick's perspective.

Writing a Journal Entry

5. Suppose that you are a scientist working on the problem of DNA during the time that Watson and Crick discover the structure. You have just heard and seen a presentation by these two men, detailing the DNA structure. Write an entry in your journal describing your response to their discovery and why you think it is important.

Analyzing the Discovery

6. If you were James Watson what would you think and feel about your discovery? Was there a step in the process that you feel led directly to discovering the structure of DNA? Cite examples that support your response. Do you feel that Linus Pauling, Maurice Wilkins, and Rosalind Franklin deserve part of the credit for their work on the problem? Which parts of their work, and why?

Testing on the Book

On a separate sheet of paper, write the answers to each of the following.

Critical Thinking and Writing

1. Watson states, “There had been far too many days when Francis and I worried that the DNA structure might turn out to be superficially very dull, suggesting nothing about either its replication or its function in controlling biochemistry.” Why would this type of finding have been such a disappointment to them?

2. The personalities of both Watson and Crick, as well as their friendship, contributed to their research abilities. Cite examples of how these nonscientific aspects affected the discovery of the DNA structure.

3. The structure of DNA is considered one of the major scientific discoveries of the twentieth century. Why? Describe another scientific discovery that you feel is as important. Include a brief profile of the scientist(s) who made the discovery.

4. Watson did not possess extensive mathematical knowledge, and neither he nor Crick was as proficient in chemistry as Linus Pauling. How were they able to circumvent these deficiencies?

5. *The Double Helix* is Watson’s personal history of the discovery of the structure of DNA. Is it an accurate historical account?

