
Writing About the Book

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

Extending the Story

1. McClintock was convinced that there are valid ways of “knowing” other than those conventionally advocated by science. Imagine that you are a scientist 50 years from now and that applied science has taken McClintock’s approach. Write a short narrative that describes McClintock’s historical contribution to science.

Thinking About Assumptions

2. Once McClintock had arrived at her understanding and conclusions about transposition, she was frustrated by her colleagues’ seeming lack of knowledge, which she attributed to “tacit assumptions.” Explain how tacit assumptions impede scientific understanding and progress.

Responding to a Social Attitude

3. Barbara McClintock was frequently confronted with difficulties caused by the social attitude toward women in science that prevailed during her lifetime. Write an essay in which you react to this issue. Do you think she handled her circumstances well? Was there anything she could or should have done differently? Use references to support your answer.

Evaluating Characters

4. *Brilliant*, *remarkable*, and *genius* are just some of the words that have been used to describe Barbara McClintock. At times, some of her colleagues also described her as *eccentric*, *crazy*, and *mad*. Explain how all of these descriptions apply to McClintock. Why did her personality make her such a great scientist?

Writing a Letter

5. Imagine that you are Barbara McClintock and that you have just presented your work at Cold Spring Harbor for the third time. Write a letter to a trusted colleague and friend. Explain why you are certain your methodology and results are accurate and important, and describe how you feel.

Analyzing Scientific Methodology

6. Compare and contrast McClintock’s methodology with that of traditional scientists. If you were Barbara McClintock, would you attempt to explain your methodology to your colleagues?

Testing on the Book

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

Critical Thinking and Writing

1. The early part of McClintock's career was marked by success in her findings and presentations concerning maize chromosomes. Cite examples of her success.
2. Transposition explains the elements that control or regulate rearrangement of genes. Describe McClintock's initial process for concluding that "jumping genes" and exhibited mutations were correlated.
3. During McClintock's lifetime, the study of genetics changed dramatically. Write an overview or outline of genetics in the 20th century.
4. Molecular biology ultimately provided the information that corroborated and explained McClintock's findings. Explain why this was so. Why was McClintock unable to achieve this on her own?
5. McClintock's unique approach to observation and gaining a "feeling for the organism" contributed to her research success. Cite specific examples of her personal and scientific style that aided her scientific study.

