



Text Complexity Analysis of

Exploring the Heart of Matter (*title*)

Kandice Carter (*author*)

Recommended Complexity Band: 9-10

Qualitative Measures

Meaning/Purpose: (*Briefly explain the levels of meaning (Literary Text) or purpose (Informational Text.)*) The purpose of the article is to inform readers about a new particle accelerator. The purpose is clearly and succinctly stated.

Text Structure: (*Briefly describe the structure, organization, and other features of the text.*) The author does a great job of organizing the article to anticipate and answer questions readers might have as they interact with the information in the piece. Subheadings are not essential but focus the reader on salient points and thus aid comprehension.

Language Features: (*Briefly describe the conventions and clarity of the language used in the text, including the complexity of the vocabulary and sentence structures.*) The article is written in a straightforward no-nonsense style, utilizing contemporary vocabulary that is easy to understand. Science vocabulary is used judiciously when called for, with several opportunities for inferencing the meaning. The sentences are not overly complex.

Knowledge Demands: (*Briefly describe the knowledge demands the text requires of students.*) Students will need a thorough understanding of the structure of an atom and a basic understanding of the nucleus of an atom in order to appreciate the significance of the particle accelerator discussed in this article. Terms students should know include *nuclear physicist, sub-atomic, speed of light, quarks, gluons, electron, neutron, proton, and particle accelerator.*

Text Description

Briefly describe the text: This informational text is intended to support reading in the content area. Under the direction of the Department of Energy, the Jefferson Laboratory is making strides in its development of a new high-speed particle accelerator. This accelerator promises to operate at double the maximum speed of existing accelerators, and it will reveal more details about the forces which bind subatomic particles inside an atom, as well as the very nature of those particles. These discoveries will help us refine our ideas about atoms and nuclei.

Quantitative Measures

Complexity Band Level (provide range): 11-12

The text falls in the above grade band according to a quantitative reading measure.

Considerations for Reader and Task

Below are factors to consider with respect to the reader and task.

Potential Challenges this Text Poses:

Beyond the science terminology, a few academic terms may pose some slight difficulty for struggling readers. The teacher is advised to review these using vocabulary “attack” strategies with readers before or during their reading of the text. (Some words to review include *underpinned, careening, incrementally, vying, and plumb.*)

Recommended Placement

Briefly explain the recommended placement of the text in a particular grade band: Although the quantitative reading measure referenced above is high, this text is recommended for grades 9-10 because of its straightforward nature and relatively uncomplicated language features.