



Text Complexity Analysis of

Gut Reaction: Digestion Revealed in 3-D (title)

Adriana Gil (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 this article is implied in the title: to describe research on creating 3-D imaging of the gastrointestinal tract. The article also describes the gastrointestinal tract and how it performs the act of digestion.

Text Structure: (Briefly describe the structure, organization, and other features of the text.) The text structure of the article is largely descriptive and chronological. It starts with a description of the gastrointestinal tract and then continues by describing how scientists will create a 3-D model of the tract, finally ending with hopeful future endeavors. Subtitles are used and are helpful in providing information about the organization of the text. There is a picture of 3-D reconstructions of a rat's GI tract, which is not essential to the comprehension of the article.

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 uses some figurative language, mostly in the context of the ongoing metaphor comparing the human digestive system to coral. The vocabulary is somewhat complex, using a large amount of subject-specific and academic language. The sentences within the article are somewhat complex but easy to understand.

Knowledge Demands: (Briefly describe the knowledge demands the text requires of students.) The article does require knowledge of the GI tract in order for a student to fully comprehend it. However, it does a good job of defining terms such as digestive conduit and villi.

Text Description

Briefly describe the text: This informational text is designed to support reading in the content area. The article describes how villi in the small intestine and muscle contraction work together to digest food and provide nutrients to the body, using the metaphor of coral working with an ocean current to circulate nutrients in the sea. A team of scientists plans to use technology to create 3-D imaging of digestion, and their research is described in the article along with the specific physiology and function of the villi within the digestive tract.

Quantitative Measures

Complexity Band Level (provide range): 9-10, 11-12

The text falls into the above grade bands according to a quantitative reading measure. It falls at the upper end of the 9-10 band and in the lower range of the 11-12 band.

Considerations for Reader and Task

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

Potential Challenges this Text Poses:

The subject-specific language in this article may make it difficult for a struggling reader to comprehend without teacher guidance. A review of the organs in the GI tract that includes pictures would be helpful, as would a review of some basic technology referenced in the article, such as MRI.

Recommended Placement

Briefly explain the recommended placement of the text in a particular grade band: The quantitative measures place this article within the high school grade bands, 9-10 and 11-12. While the article does contain a large amount of subject-specific vocabulary and challenging academic concepts, the relatively simple organization and structure make it accessible for an early high school student in the 9-10 grade band.