

Text Complexity Analysis of

Genetics Provide New Hope for Endangered Freshwater Mussels (*title*)

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Recommended Complexity Band: 9-10

Qualitative Measures

Meaning/Purpose: (*Briefly explain the levels of meaning (Literary Text) or purpose (Informational Text.)*) The author's purpose in writing the article is to explain the impact of recent research that scientists with the United States Geological Society (USGS) have conducted on freshwater mussels. The article explains that scientists have studied the genetic makeup of different mussel species within a river. The similarities they have found may make it easier to preserve threatened species.

Text Structure: (*Briefly describe the structure, organization, and other features of the text.*) The text is generally sequentially organized. The author explains the importance of freshwater mussels and the dangers they face. The author goes on to explain what research was done and what was found. Text features are sparingly used by the author. The graphics help the reader, but aren't essential for understanding.

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 author uses a number of science-specific words (e.g., macroinvertebrates, tributaries) and academic terms (e.g., degradation, imperiled, augmenting). The sentence structure is fairly simple with little use of figurative language. In paragraph 13, the author lists the species examined and provides their scientific names (these aren't essential to understanding, however).

Knowledge Demands: (*Briefly describe the knowledge demands the text requires of students.*) The article discusses freshwater mussels and the threats they face. Some knowledge of mussels and/or freshwater ecosystems would make the article easier to comprehend, but it not essential for understanding. There is little intertextuality in the article.

Text Description

Briefly describe the text: This informational text is designed to explain the impact of scientists' studies on a number of freshwater mussel species and their genetic makeup. The intent of the research was to find ways of protecting threatened and endangered species of mussels. The article explains that the genetic similarities of species that cohabitate a river could lead to development of new methods of protecting mussel species.

Quantitative Measures

Complexity Band Level (provide range): 11-12

The text falls at the high end of 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:

The text is very focused on freshwater ecosystems. For students that are unfamiliar with this type of ecosystem, it may be hard to fully understand what the author is discussing. Pre-teaching will help overcome this. There are a number of domain-specific terms that students may struggle with. The meaning for most of these can be inferred using context clues. The author's purpose in writing the article is to discuss what research was done and what the findings were, including why they were important

Recommended Placement

Briefly explain the recommended placement of the text in a particular grade band: The quantitative measurement places this article in the 11-12 grade band (just above the upper range of the 9-10 grade band). Most of the categories in the qualitative measures rubric fall in the lower-to-middle portions of the complexity continuum. There are some domain-specific terms that students may be unfamiliar with. These factors lead to a recommendation of an overall rating in the 9-10 grade band.