

Text Complexity Analysis of

Parasites: Rulers of the Reef (*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 text informs the reader about interesting behavior of the coral reef damselfish and how the female damselfish behavior is modified because of parasitic infestation. It gives evidence that parasites have an influential role on coral reef species. The author's purpose is also to explain how the initial research he conducted into the behavior of damselfish lead to new observations that led to further questions and additional research.

Text Structure: (*Briefly describe the structure, organization, and other features of the text.*) Text features include a title, subtitle, headings, and one picture with a caption. The article is structured sequentially as it describes a chain of events the researcher took as new observations lead to new questions that lead to new research. The text has two main foci going from basic behavior and how it is influenced by parasitic infestation to details on how parasites can influence reef species by carrying other pathogens (disease causers).

Language Features: (*Briefly describe the conventions and clarity of the language used in the text, including the complexity of the vocabulary and sentence structures.*) There are many domain-specific words (e.g., parasites, ecology, ecosystem, host organism, anesthetize, species) and academic vocabulary (e.g., spawn, vulnerable, harbor, loads, dependence, grist, exonerate, devoid). Sentence structure is mostly a mix of simple and compound sentences. There are several colloquial phrases (e.g., "providing grist," "game-changing"), a comparison to scientific investigations being like a roller coaster ride, and the article is written in first person (an usual approach for a science text).

Knowledge Demands: (*Briefly describe the knowledge demands the text requires of students.*) Students would benefit from knowledge of a coral reef, damselfish behavior, and parasite-host symbiotic relationships. They would also benefit from knowing how cleaning stations work on coral reefs.

Text Description

Briefly describe the text: This informational text is designed to support reading in the content area. The text informs readers about the influence of parasites on damselfish, a coral reef species. The author explains how his team determined the reason for the consistent behavior of damselfish leaving their aggressively guarded territory each morning to go to a cleaning station. Through the scientist describing how his research lead to new observations that lead to new questions and research, the text is a good example of how scientific investigations are conducted, including working collaboratively and communicating important results.

Quantitative Measures

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

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

Considerations for Reader and Task

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

Using the details provided in this text, readers can learn about certain parasitic and mutualistic relationships, as well as the process scientists might take when conducting scientific investigations.

Potential Challenges this Text Poses:

Students may be challenged by some vocabulary, particularly by words with different meanings in science compared to their common usage, like the word "loads," which refers to the amount of infestation on a given fish. Students who live near coral reef environments may be more familiar with the ecology and ethology of coral reef biomes, but those who are not may not have enough background knowledge to readily understand the details of things like cleaning stations and parasitic infestations. Teachers may need to enhance students' background knowledge on coral reefs before students read the text.

Recommended Placement

Briefly explain the recommended placement of the text in a particular grade band: This text is recommended for the 9-10 grade band. This text will provide readers with challenging content due to the numerous domain-specific and academic vocabulary, the repeated use of non-literal language, the complexity of the text's organization in following how the scientist's research focus changed and what caused it to change, as well as the knowledge demands readers need to have to fully understand the text.