

Antifreeze Proteins in Antarctic Fish Prevent Both Freezing and Melting NSF

proteins are essential because they prevent the fish from freezing in the cold waters of the Southern Ocean, but it was discovered that these same proteins prevent ice crystals from melting when temperatures warm. The purpose of the article is straightforward, and the title provides a clear understanding of the author's main points. The author's purpose is to discuss the findings in which antifreeze proteins not only prevent fish in the Antarctic from freezing to death, but also prevent the ice crystals that have formed inside them from melting. Above 11-12 The text is straightforward with logical sequencing. The text uses mostly descriptive The text falls above the 11-12 grade band according to a quantitative reading and cause/effect text structures. There are no subheadings to provide clues to measure. divide the text into sections, but the text is organized in a logical manner. Below are factors to consider with respect to the reader and task. Language used is grade level-appropriate and very accessible. There are domainspecific vocabulary words ( ), but some have context clues which can help with determining the definitions. There are a moderate Prior to reading, the teacher may wish to discuss the idea of the different functions amount of academic vocabulary terms ( of proteins and discuss the binding of the proteins to the ice crystals. It is not ). necessary to cover this information, however, in order to understand the text. The knowledge demands for this text are manageable for students as long as they have an understanding of the scientific method and what constitutes good science and its practices.

This informational text is intended to support reading in the content area. The National Science Foundation article discusses research conducted in the Antarctic concerning the notothenioid fish, which contains "antifreeze" proteins. These

Despite its high quantitative measure, the text is definitely appropriate for 11-12 grades, and the content is accessible with moderate teacher guidance.

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