

# Plagiarism or Paraphrase?

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## Original paragraph written by Ingall *et al.* 2013

**Siliceous phytoplankton** are **abundant and productive components of marine ecosystems, with diatoms accounting for B43% of annual marine carbon fixation** worldwide<sup>1</sup>. Sedimentation of the dense silica produced by these microorganisms has a critical role in the transport of carbon to the deep ocean<sup>2</sup> and may also enhance the export of phosphorus and nitrogen below the mixed layer<sup>3,4</sup>. Previous **observations of iron in siliceous frustules of cultured diatoms**<sup>5</sup> suggests **that sedimentation of biogenic silica may also be a quantitatively significant mechanism for the removal** of bioavailable **iron**. Yet, this potential mechanism has remained largely unexplored in natural settings.

**Student paragraph included in their symposium article is plagiarized.**  
*(The plagiarized phrases and sentences in this paragraph are in red.*  
*Compare them to the red phrases in the original article above.)*

Algae living in the ocean are called phytoplankton and they from the bottom of the food web. Phytoplankton need nutrients like iron to grow and this paper is about how scientists are studying how iron transfers within the ocean ecosystem. One type of algae is called **siliceous phytoplankton** and it is a **abundant and productive component of marine ecosystems, with diatoms accounting for about 43% of annual marine carbon fixation** in the world (Ingall *et al.*, 2013). **Observations of iron in siliceous frustules of cultured diatoms** shows **that sedimentation of biogenic silica may also be a quantitatively significant mechanism for** removing **iron**.

**Student paragraph written in the student's voice with acceptable paraphrasing.**

Algae living in the ocean are called phytoplankton and they form the bottom of the food web. Phytoplankton need nutrients like iron to grow and yet research has shown that iron is rare in most seawater and much of the ocean's iron ends up lost in bottom sediments. Dr. Ellery Ingall (2013) from Georgia Tech and his colleagues collected samples of phytoplankton in the Southern Ocean and are studying how iron transfers within the ocean ecosystem. One type of algae is called siliceous phytoplankton. It is a common type of algae and is causes 43% (Ingall *et al.*, 2013) of they yearly carbon fixation in the ocean. These phytoplankton create siliceous frustules that settle to the bottom of the sea and carry the iron with them.