Autotroph Encyclopedia Article

Autotroph

The following sections of this BookRags Literature Study Guide is offprint from Gale's For Students Series: Presenting Analysis, Context, and Criticism on Commonly Studied Works: Introduction, Author Biography, Plot Summary, Characters, Themes, Style, Historical Context, Critical Overview, Criticism and Critical Essays, Media Adaptations, Topics for Further Study, Compare & Contrast, What Do I Read Next?, For Further Study, and Sources.

(c)1998-2002; (c)2002 by Gale. Gale is an imprint of The Gale Group, Inc., a division of Thomson Learning, Inc. Gale and Design and Thomson Learning are trademarks used herein under license.

The following sections, if they exist, are offprint from Beacham's Encyclopedia of Popular Fiction: "Social Concerns", "Thematic Overview", "Techniques", "Literary Precedents", "Key Questions", "Related Titles", "Adaptations", "Related Web Sites". (c)1994-2005, by Walton Beacham.

The following sections, if they exist, are offprint from Beacham's Guide to Literature for Young Adults: "About the Author", "Overview", "Setting", "Literary Qualities", "Social Sensitivity", "Topics for Discussion", "Ideas for Reports and Papers". (c)1994-2005, by Walton Beacham.

All other sections in this Literature Study Guide are owned and copyrighted by BookRags, Inc.

Contents

Autotroph Encyclopedia Article.....1

Contents.....2

Autotroph.....3

Autotroph

Autotrophs are organisms that are capable of making their own food. They are "self feeders." These organisms make their own food by converting relatively simple inorganic nutrients into more complex, energy-rich, organic forms. Thus, the autotrophs do not need any outside source of organic material. There are two types of autotrophs, divided according to the processes by which they make their food. Photoautotrophs use the process of photosynthesis, while chemoautotrophs use the process of chemosynthesis. Photoautotrophs are far more common, and examples include green plants, algae and some bacteria. This type of autotroph uses photosynthesis to convert the inorganic chemicals, carbon dioxide and water, into the organic sugar glucose, using sunlight as its source of energy. Glucose is the "food" produced by these photoautotrophs. Chemoautotrophs differ from photoautotrophs because they use chemicals from inorganic chemical reactions, rather than sunlight, as their source of energy to produce organic materials. Certain types of bacteria are chemoautotrophs. For example, there are chemoautotrophic bacteria at deep sea hydrothermal vents where there is no sunlight. These bacteria support the entire food web at these great ocean depths through chemosynthesis, since photosynthesis cannot occur due to the lack of sunlight. In a food web, the autotrophs are the producers. They are the base of the food web, and all other organisms ultimately depend upon them for their energy and organic material. Autotrophs are consumed by other organisms, the heterotrophs, passing along organic nutrients and energy. Thus, without the autotrophs, other organisms would not be able to obtain the food or energy needed to survive.