

# Gene Frequency Encyclopedia Article

## Gene Frequency

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

<a href="#">Gene Frequency Encyclopedia Article.....</a>	<a href="#">1</a>
<a href="#">Contents.....</a>	<a href="#">2</a>
<a href="#">Gene Frequency.....</a>	<a href="#">3</a>

# Gene Frequency

Gene frequency is a measure of how common a particular allele is as a proportion of all possible alleles at a given locus (a physical location on a chromosome) within a population. This measure is also referred to as allelic frequency.

If a given allele exists in a population in two different forms "A" and "a", then the percentage of "A" taken as a measure of the overall occurrence of both "A" and "a" would be the gene frequency for "A" in that population. So, for example, if there are 30 individuals with a genotype "AA," 50 with "Aa," and 20 with "aa," then it can be seen that "A" is present a total of 110 times ( $30 + 30 + 50$ ). This is from a total possible occurrence of 200 ( $30 + 30 + 50 + 50 + 20 + 20$ ) alleles at the locus under study. The gene frequency in this case for "A" is  $110 / 200 = 0.55$  or 55%.

Gene frequency can only be quoted for a population; the population can, however, be of any number of individuals. Gene frequency can, in certain circumstances, only be an estimate due to the hidden, recessive alleles that occur in populations.