Willebrord Snel Biography

Willebrord Snel

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

Willebrord Snel Biography.....1

Contents.....2

Biography.....3

Biography

Snel is most famous for his research on the refraction of **light**, which yielded Snel's law. He also devoted a considerable amount of time to the calculation of geographic distances through trigonometric triangulation, and he is often credited with founding the modern science of mapmaking.

Snel was born in Leiden, Holland, in 1580, where his father taught mathematics. He was considered something of a prodigy, and at the age of twenty, though he had not yet completed his master's degree, he was allowed to lecture in mathematics at the University of Leiden. Snel spent the next few years traveling across Europe and meeting such influential scientists as **Tycho Brahe** and **Johannes Kepler**. He completed his graduate studies in 1608 and, in 1613, was appointed to his father's chair at the university teaching mathematics, physics, and **optics**.

Shortly after his appointment, Snel began his experiments with triangulation. Very little work in this field had been attempted, and so Snel had to develop most of its techniques along the way. Using a large quadrant, he began to equate distances with the angle by which they were visibly separated. After many repetitions Snel even suggested a figure for the radius of Earth based on his trigonometric findings; this figure has been recently tested and found to be very precise.

Probably Snel's most important contribution to the annals of science was his law of refraction. He noted that a ray of light passing from one transparent medium into another (for example, moving from air into water or glass) would bend slightly at the boundary. This phenomenon had been observed long ago by **Ptolemy**, had never been properly explained. Snel showed that the sine of the two angles (the angle of incidence and the angle of refraction) were related, and that their ratio was a constant. That constant is known as the index of refraction and is determined by the type of material the light is passing through.

There is some controversy over the true authorship of Snel's law. Snel himself never published his findings, and it was not until 1637 that the law of refraction was introduced by **René Descartes**. Descartes's equation differed slightly from Snel's but was blatantly derivative. Some prominent scientists--most notably **Christiaan Huygens** --accused Descartes of plagiarism, particularly after it was found that he had made a number of trips to Leiden after Snel's death.