

Explorer 1 Encyclopedia Article

Explorer 1

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

Explorer 1 Encyclopedia Article.....	1
Contents.....	2
Explorer 1.....	3

Explorer 1

On October 4, 1957, the Soviets launched the first satellite to reach earth orbit: Sputnik 1. The American government tried to downplay the event, but in actuality began aggressively pursuing their own satellite program.

The German-born American scientist Wernher von Braun had developed a Jupiter-C rocket for the Army and asked permission to launch a satellite with it. The government turned him down; however, having already decided on a Navy project, called Vanguard. On December 6, 1957, officials gathered the press to witness the first launch of the Vanguard rocket, which, after hovering a few feet off the ground, exploded into flames. After other disasters with Vanguard, von Braun was given the green light. On January 31, 1958, a Jupiter-C lifted off. Two and a half minutes later, the first stage shut down and the next fired. Orbit was attained. The satellite itself orbited with the top stage of the rocket, ranging in distance from the earth between 218 miles (352 km) and 1,586 miles (2,554 km).

This satellite, called *Explorer 1*, was small in comparison to the *Sputniks*. It weighed only 10.5 pounds (4.7 kg). The Russians had larger rockets to launch their mammoth satellites, but the American representative had its advantages. Unlike *Sputnik 1*, *Explorer 1* contained more than just instruments to measure the temperature and density of the upper atmosphere. It had a micrometer to measure debris in space and a radiation detector that found intense rings of radiation surrounding the earth at great altitude. Later, these rings were called the Van Allen radiation belts, named after the scientist who designed the experiment. *Explorer 1* thus proved the great scientific value of satellites.