

Reading, Writing, and Rings

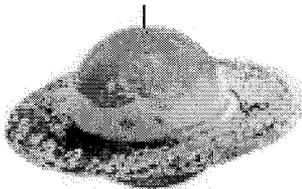
Welcome to a spectacular journey of learning – the Cassini-Huygens mission to Saturn and Titan!

The lessons in Reading, Writing, and Rings serve as a roadmap of student learning. You'll see that each lesson contains age-appropriate learning goals for language arts and science. The lessons provide multiple opportunities for young students to develop important literacy skills – reading, writing, and oral communication – and to expand and enrich their scientific understanding of Saturn and the amazing Cassini-Huygens voyage

Instructional Materials for Grades 1 & 2

Language Arts Components

Descriptive Writing
Pre- and Post-assessment through writing and illustration
Non-Fiction Texts: Listening and Structured Writing
Scientific Captions and Labels
Writing an Informational Postcard
Written Reporting and Oral Peer Presentations
Descriptive Analogies
Drafting and Writing a Paragraph
Descriptive Scientific Language
Writing and Illustrating Expository Texts
Using Poetry to Describe Saturn



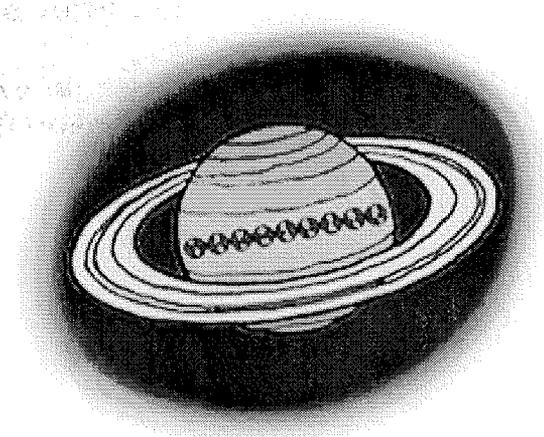
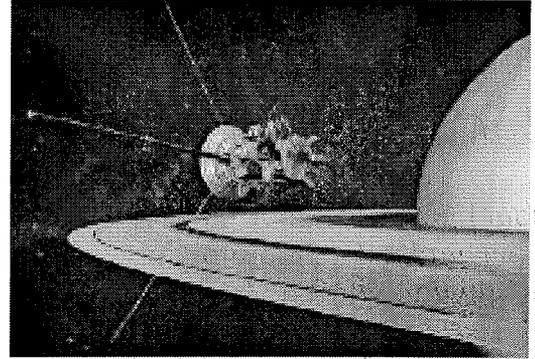
Science Components

Learning about the Structure of the Solar System
Creating an Earth/Saturn Model
Using a Playground Model to Explore Distance
Planning, Building and Explaining a Spacecraft Model
Understanding the Attributes of Earth and Saturn
Modeling Saturn's Ring System of Water Ice
Sorting by Scientific Attributes
Creating Saturn Books—Rings, Moons and other Features
Summative Reflections on Saturn

Instructional Materials for Grades 3 & 4

Language Arts Components

My Saturn Discovery Log
Observing and Wondering: Essential Writing Tools
Reading as Inquiry
Nonfiction Writing Practice
Nonfiction Reading and Writing
Problem Solving with Nonfiction Writing
Compare and Contrast
Writing and Information Article and Diagram
Writing to Learn: Plan, Problem Solve, and Analyze
Illustrations with Text
Descriptive Writing



Science Components

Observation
Build Hypotheses
Create a Sun/Earth/Saturn Model
2-D and 3-D Saturn Models
Build Problem Solving Skills
Design and Test a Parachuting Probe

All lessons are available through the Cassini Mission website at:
<http://saturn.jpl.nasa.gov>

All lessons in “Reading, Writing, and Rings” are aligned with National Science Education Standards and English Language Arts standards set forth by the national Council for the Teachers of English (NCTE) and the International Reading Association (IRA).

“Reading, Writing, and Rings” was developed in partnership with the Cassini-Huygens Mission, the Bay Area Writing Project, Project FIRST, and the Caltech Pre-College Science Initiative. The Cassini Mission is a joint effort of the National Aeronautics and Space Administration (NASA), European Space Agency (ESA), and the Italian Space Agency (ASI). The mission is managed for NASA by the Jet Propulsion Laboratory of the California Institute of Technology.