

# Saturn V Rocket 3D

Teaching the Saturn V Rocket, astronomy, and science through 3D simulation

## Lesson

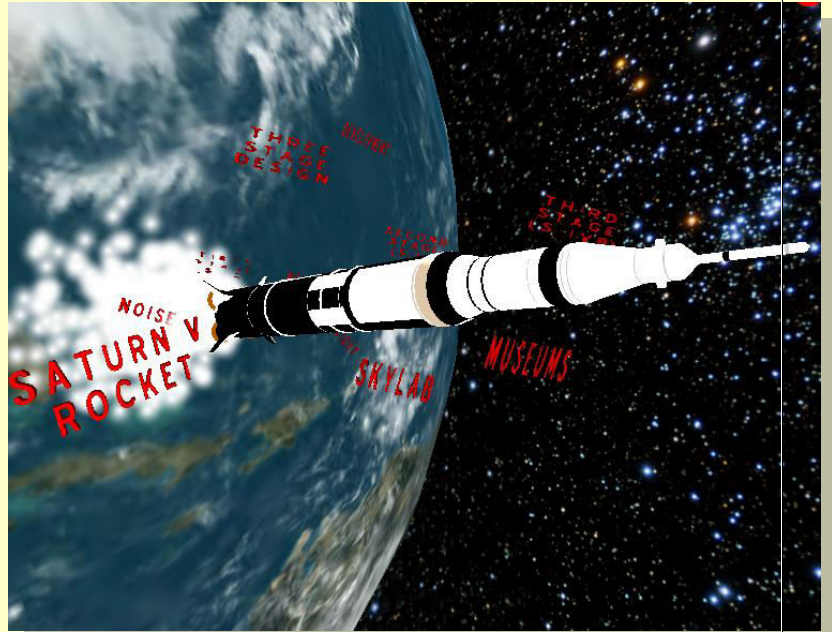
Teaching the Saturn V Rocket, astronomy, and science through 3D simulation

## Objectives

- 1) Students will gain a basic understanding of the Saturn V Rocket through 3D simulation and visualization
- 2) Students will gain a deeper understanding of the components of the Saturn V Rocket and how they function together

## Activity

Students travel through the Saturn V Rocket in real-time 3D, helping them to visualize and understand its structure and function



## Materials

### [Saturn V Rocket 3D Homepage](http://www.sunrisevr.com/saturnvrocket3d)

(click or cut and paste URL into browser)

<http://www.sunrisevr.com/saturnvrocket3d>

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## 3D Simulation and Investigation

*3D simulations are designed to make subject matter more engaging to today's technology-savvy kids, and help them bridge the gap between the "concrete" world and the abstract world of concepts. When students experience complex subject matter in real-time 3D it becomes clearer. Students learn best when they are actively immersed in subject matter from a variety of different viewpoints; 3D simulation is designed to help students visualize difficult ideas and objects through investigation at any scale (atomic, cellular, planetary, conceptual, etc), and doing things that would normally be impossible.*

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### Required Technology

- PC/Tablet

### Optional Technology

- Projector
- Multiple Computers
- Internet Connection

### Grouping

- Large Group Instruction
- Small Group Instruction

### Staging

Check computer/Tablet for Internet access if needed

## Procedure

- 1) Access program
- 2) Pick a lead student navigator to control movement through the 3D environment
- 3) Pick a lead student reader to read information about the Saturn V Rocket as it appears on-screen
- 4) Begin the lesson by asking students what they already know about the Saturn V Rocket; write responses on the board
- 5) Review basic facts about the Saturn V Rocket including:
  - The Saturn V rocket was the largest, most powerful rocket ever created
  - The Saturn V rocket was designed to take us to the Moon
- 6) Start traveling through the program, facilitate discussion by asking students where the class should go
- 7) Use the 3D simulation as a visual aid; explain information as needed
- 8) Have students pay special attention to:
  - Stages
  - Height
  - Noise
- 9) Have a final wrap-up with students with a question and answer period. Ask them why the Saturn V Rocket was built, how it works, and what are the important parts of the rocket

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## Optional Activity: 3D Scavenger Hunt + Discussion

Have students find a particular part of the Saturn V Rocket, such as the Second Stage (S-II) section. If students are on multiple computers, have them “race” to the part of the Saturn V Rocket the teacher wishes to highlight. Once students find/arrive at the location, the teacher may commence discussion. Repeat in other areas of the simulation as desired to build understanding.

## Homework/Review

Students may also access the program outside the classroom to supplement textbook questions

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## Functional Notes

- The program is available on multiple platforms
- If using the program online, please ensure the Unity3D Player is installed on the computer; through the Internet Explorer Browser; download the latest at <https://unity3d.com/webplayer>.
- If you see something in **red** you can probably click on it
- For ease of use you can go through most 3D objects, and even the ground
- The school library can request and access programs (free) at [www.sunrisevr.com](http://www.sunrisevr.com) for off-line use via PC and Mac if there is no internet connection