Rockets and Rovers Videos and Resources

EiE-created videos can be found on the EiE YouTube Channel. This list includes both EiE-created videos and EiE-curated third-party content.

Videos and Resources for Educators

Category & Resource Type	Adventure	Resource Title	Link to Resource	Description & Credit
Background Website	Adventure 1	International Space Station	https://www.nasa.gov/international-space-station/	Learn more about the International Space Station, a research station that is currently in orbit 230 miles above the surface of the Earth.
Background Website	Adventure 1	Jet Propulsion Laboratory	https://www.jpl.nasa.gov/	The Jet Propulsion Laboratory (JPL) is a division of NASA that is located in Pasadena, California. The JPL is the location in the United States where rovers are engineered and tested, including the Mars rover Curiosity.
Classroom Video	Adventures 3–4	Liftoff: Engineering Rockets and Rovers	https://youtu.be/KlIm1gdqg84?si=DLZpy0M-aKftpFER	See kids complete Adventure 3: Shoot for the Moon and Adventure 4: Create a Rocket. (6:26). EiE - Museum of Science, Boston.

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Rockets and Rovers Video and Resource Links

For Students: Optional Videos and Resources

Adventure	Resource Type	Resource Title	Link to Resource	Description	Credit / Source
All Adventures	Website	NASA	https://www.nasa.gov/	There are many great videos, images, and interactive games on the NASA website.	NASA
Adventure 1	Website	In-Flight Education Downlinks	https://www.nasa.gov/learning-resources/in-flight-education-downlinks/	What is life like on the Space Station? Find out from people who have lived there.	NASA
Adventure 2	Video	How Do You Get to Mars?	https://www.youtube.com/watch?v=-nAhag_iFx0	This animated video from the Jet Propulsion Laboratory describes the engineering challenges inherent in sending a rocket to Mars. (1:00)	NASA Jet Propulsion Laboratory
Adventure 2	Video	How Hard Is It to Land Curiosity on Mars?	https://youtu.be/syA7ml64zY4?si=dDjvaFq_gav0FP5q	This animated video from the Jet Propulsion Laboratory describes the technologies that engineers created in order to land Curiosity on Mars. (1:00)	NASA Jet Propulsion Laboratory
Adventure 2	Video	Seven Minutes of Terror	https://youtu.be/Ki_Af_o9O9s?si=StuxOOc1CgaK9CbV	This video features interviews with JPL engineers as they describe the challenges of the final minutes of Curiosity's journey to Mars. (5:07)	NASA Jet Propulsion Laboratory
Adventure 2	Video	How Do Rovers Drive on Mars?	https://youtu.be/_hN4XdS7NMY?si=kxXdNDHSsYfTq9B0	This animated video from the Jet Propulsion Laboratory shows how Curiosity is controlled from millions of miles away. (1:00)	NASA Jet Propulsion Laboratory

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Adventure	Resource Type	Resource Title	Link to Resource	Description	Credit / Source
Adventure 2	Website	Mars Curiosity Rover Instruments	https://mars.nasa.gov/msl/spacecraft/instruments/summary/	Includes technical information on the tools that Curiosity uses to collect data about the geology, atmosphere, and environmental conditions on Mars.	NASA
Adventure 2	Website	Mars 2020 Mission Perseverance Rover	https://mars.nasa.gov/mars2020/	Describes the Perseverance rover that landed on Mars in 2021.	NASA
Adventure 3	Website	Billion-Pixel View From Curiosity at Rocknest	https://mars.nasa.gov/resources/5368/billion-pixel-view-from-curiosity-at-rocknest-white-balanced/?site=msl	Uses real images taken by Curiosity to create an interactive panorama of the surface of Mars.	NASA
Adventure 3	Game	Mission: Mars	https://www.mos.org/game/mission-mars	In this free educational experience, Roblox players are challenged to design and build vehicles fit for navigating different terrains and fulfilling different missions on Mars.	Museum of Science, Boston and Filament Games, under a grant from Roblox
Adventure 5	Video	Curiosity Has Landed	https://youtu.be/N9hXqzkH7YA?si=-c5lBiBvnbw5g_83	Watch Curiosity land on Mars in 2012.	NASA Jet Propulsion Laboratory
Adventure 5	Video	Perseverance Rover's Descent and Touchdown on Mars	https://youtu.be/4czjS9h4Fpg?feature=shared	NASA's Mars 2020 Perseverance mission captured thrilling footage of its rover landing in Mars' Jezero Crater on Feb. 18, 2021.	NASA

Rockets and Rovers Video and Resource Links

EVOLVE Series – NASA / MOS Partnership Videos

A collection of videos that spotlight topics in aerospace engineering, astronomy, and the use of technology to understand Earth and space. Videos range from 2 to 8 minutes long, with most between 3 and 4 minutes. Recorded in English; Spanish subtitles also provided. These videos were developed by the Museum of Science, Boston with support from NASA under grant number 80NSSC21M0042.

Adventure	Video Title	English VIdeo	Spanish Subtitles	Description
Adventures 1, 2, 4	How Big Is the Solar System?	https://youtu.be/u3mTd_0_m0g?feature=shared	https://youtu.be/bESklZ9b3zs?feature=shared	Objects in the solar system are huge, but the distances between them are even bigger. Find out just how much space as we create a scale model of the solar system that stretches across Greater Boston. (8:22)
Adventures 1, 2, 4	Where's the Oxygen?	https://youtu.be/xWr-1iolTf8?feature=shared	https://youtu.be/0RR2SLxtvV8?feature=shared	What do humans and rockets have in common? They both need oxygen! And it turns out it's in short supply on Mars. (2:14)
Adventures 2, 3, 5	Forces on a Rocket: Gravity	https://youtu.be/lUyB5suavSY?feature=shared	https://youtu.be/ZfNJQsWaBdU?feature=shared	According to Newton's Second Law of Motion, an object's weight depends on Earth's gravity. The heavier a rocket is, the more fuel it takes to get that rocket into Earth's orbit. (5:35)
Adventures 2, 3, 5	Forces on a Rocket: Thrust	https://youtu.be/Y9FkvulBytI?feature=shared	https://youtu.be/2jhRk0Dm8dY?feature=shared	Find out how Newton's Third Law of Motion makes it possible for rockets to generate thrust, the force needed for a successful rocket launch. (4:08)
Adventures 2, 3, 5	Forces on a Rocket: Drag	https://youtu.be/SukE_Nc1SaE?feature=shared	https://youtu.be/G4WKrJSSF2g?feature=shared	Rockets experience drag as they travel through Earth's atmosphere. Learn about the different types of drag, and how rockets are designed to minimize the negative effects of these forces. (4:45)

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Adventure	Video Title	English VIdeo	Spanish Subtitles	Description
Adventure 3	Solar System Grand Tour	https://youtu.be/pjez-OuLAVk?feature=shared	https://youtu.be/eN4mJbfeSJM?feature=shared	Did you know that Mars has a volcano over twice the height of Mount Everest? Or that one of Saturn's Moons has lakes on its surface? Explore the most amazing surface features in our solar system. (5:00)
Adventure 3	Weather Reports from Around the Solar System	https://youtu.be/gXAoFu1HrfM?feature=shared	https://youtu.be/klbbVujO8FI?feature=shared	Earth's weather extremes aren't nearly as extreme as the conditions found on other worlds. Learn about global dust storms, rain made of acid, and methane weather as we check in on forecasts from around the solar system. (5:34)