Noble Planetarium Classroom Companion
Mars: The Ultimate Voyage

SHOW OVERVIEW
How will we get to Mars? What challenges will we face on the way there? In Mars: The Ultimate Voyage, we explore these questions and more as we embark on a two-year journey to the Red Planet.

Length: 25 minutes
Grade level: 6-8

EXTENSION IDEAS FOR TEACHERS:
Design a Mars Mission Spacecraft – Students design a spacecraft that could safely transport astronauts to Mars and explain how their design supports long-distance space travel.
Mars vs Earth Compare – Students compare characteristics of Mars and Earth, including atmosphere, temperature, gravity, and availability of water to determine what makes life possible.
Gravity and Motion Model – Students model how gravity keeps planets in orbit around the Sun using a simple demonstration or diagram.
Mission Timeline Activity – Students create a timeline of major milestones in space exploration leading up to future missions to Mars.
Build a Mars Habitat – Students design a habitat that would protect astronauts from extreme temperatures, radiation, and limited resources on Mars.
Life on Mars Investigation – Students examine evidence of water on Mars and discuss how water supports the possibility of life.

PROGRAM TEKS
6.11(B) understand that gravity is the force that governs the motion of our solar system

6.11(C) describe the history and future of space exploration, including the types of equipment and transportation needed for space travel

7.9(A) analyze the characteristics of objects in our solar system that allow life to exist such as the proximity of the Sun, presence of water, and composition of the atmosphere

7.9(B) identify the accommodations, considering the characteristics of our solar system, that enabled manned space exploration

Critical Thinking Questions:
Ask students, *"Based on what you learned in the show, what challenges might astronauts face when traveling to Mars?"*
Ask students, *"Based on what you learned in the show, how does gravity affect the motion of planets and spacecraft in our solar system?"*
Ask students, *"Based on what you learned in the show, why is Mars considered a possible place to explore for signs of life?"*
Ask students, *"Based on what you learned in the show, how is Mars similar to and different from Earth?"*
Ask students, *"Based on what you learned in the show, what characteristics must a planet have in order to support life?"*
Ask students, *"Based on what you learned in the show, what types of technology are needed to travel safely to Mars?"*