Program: Fossett Explorers  
Grade Level: 6 to 8  
Group Size: Max. 30  
Length: 90 minutes  
Location: The Museum of Flight

OVERVIEW

With Steve Fossett’s Perlan Glider as the focal point, students will learn about the layers of our atmosphere, explore the effects of high altitude flight on the human body, and test their glider engineering skills.

BIG IDEAS

- Atmospheric pressure
- The basic mechanics of glider flight
- The engineering process: testing and evaluating models

OUTCOMES – What will the students know or be able to do at the end of the lesson?

- Identify how atmosphere and pressure are related
- Explain why humans must wear space suits outside of Earth’s atmosphere
- Explain the basic mechanics of glider flight and how pilots utilize their knowledge of atmospheric conditions to control the glider

Vocabulary

- Atmosphere
- Atmospheric pressure
- Standing mountain wave
- Glider
- Lift
- Drag
- Thermals

Extended Learning

In your classroom:

- The Perlan Project: learn about the Perlan Project, where Steve Fossett and Einar Enevoldson soared in the Perlan I research glider to set a new record altitude for gliders.

At the Museum:

- Space: Exploring the New Frontier: learn about the early days of space exploration
- Spaceflight Academy: explore what it takes to leave the Earth and set out into the solar system
- The Perlan: A Record-Setting Sailplane
• Gliders: Chanute-Herring 1896 Biplane Glider Reproduction, Wright 1902 Glider Reproduction, Cessna CG-2 Glider, McAllister Yakima Clipper Glider

**Standards Supported** – NGSS/CCSS/21st Century Skills

**Next Generation Science Standards (NGSS)**

- Space Systems: Stars and the Solar System: 5-PS2-1
- Earth’s Systems: MS-ESS2-5
- Engineering Design: MS-ETS1-1, MS-ETS1-2, MS-ETS1-3, MS-ETS1-4

**Common Core State Standards (CCSS)**


**21st Century Skills**

- Creativity and Innovation
- Critical Thinking and Problem Solving
- Communication and Collaboration
- Flexibility and Adaptability
- Initiative and Self-Direction
- Social and Cross-Cultural Skills
- Productivity and Accountability
- Leadership and Responsibility

**Reservations**

For reservations, please call 206-768-7175 or email: outreach@museumofflight.org. For grant assistance, please visit www.museumofflight.org/education/grant-assistance.