



FSC SINGLE VISIT PROGRAM DESCRIPTION

1612- Impact Earth!

Grade Level: 6th Grade
Location: Fernbank Planetarium
Capacity: 275

Instructor: Mark Lancaster, Rachael Lambert
Type: Outreach
Length: 50 minutes

Program Description

Impact Earth teaches about meteors, meteorites, asteroids, and comets. The film shows dramatically the effects of the Chixulub and Tungusta events, plus the Pallasite impact that resulted in the Brenham meteorite fall. Impact Earth describes ways that asteroid hunters seek new objects in the solar system, and how ground penetrating radar is used to find meteorites that have survived to the Earth's surface. Narrated by astronaut Tom Jones, the show also discusses ways that humans might try to deflect an asteroid or comet that is on a collision course with Earth.

Georgia Performance Standards Addressed

- S6E1.** Obtain, evaluate, and communicate information about current scientific views of the universe and how those views evolved
 e. Ask questions to compare and contrast the characteristics, composition, and location of comets, asteroids, and meteoroids.
- S6E5.** Obtain, evaluate, and communicate information to show how Earth's surface is formed.
 e. Develop a model to demonstrate how natural processes (weathering, erosion, and deposition) and human activity change rocks and the surface of the Earth.

Vocabulary

Meteoroid, Meteorite, Meteor, Comet Asteroid Cycle

Learning Targets	Success Criteria
Students will be able to differentiate meteors, meteoroids, meteorites, asteroids, and comets.	Students can accurately describe features of comets, asteroids, and Meteoroids
Students will understand why so few meteor craters are visible on Earth vs. The Moon or Mercury.	Students can clearly describe the potential dangers of these items to Earth.
Students will understand the difference between the Asteroid Belt, The Kuiper Belt, and the Oort Cloud.	Students clearly understand how these items have shaped the Earth's history.

Science Cross Cutting Concepts

		
Students will explore the cause-and-effect relationships between the physical relationships of comets, asteroids, and meteoroids.	Students will examine the scale and proportion of asteroids, meteoroids, and comets.	Students will understand the Earth has been shaped by collisions of comets, asteroids, and meteoroids.

Science and Engineering Practices (at least 3)

		
Students ask questions about the characteristics and properties of rocks and minerals in regards to their formation.	Students construct explanations about how the physical characteristics of rocks and minerals are necessary for humans.	Students engage in discussions, using evidence to support characteristics of rocks, how different environments allow for different rock formation

Pre-Visit Activities

Have students understand the difference between the key vocabulary terms

<https://www.nisenet.org/asteroids>

Post-Visit Activity

Students can find their own space debris with a magnet! <https://www.popsci.com/hunt-micrometeorites/>

- Facilitate FSC Instructor and student interactions, prompt students for participation when appropriate.
- After the program, please complete the FSC Program Evaluation Survey using the link or QR Code below.

FSC Program Evaluation Survey Link:

<https://forms.office.com/r/CSckZYqxjY>

