



Canada-France-Hawaii Telescope
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Elementary School Visit Topics

Our Solar System:

- Planetpalooza (preK-6)
- Earth, Moon & Sun (preK-6)
- Comets & Asteroids (preK-6)

The Night Sky:

- Introduction to Constellations (preK-3)
- Constellations of the World (4-6)
- Harry Potter and the Constellations (3-6)

Stars:

- Graphing the stars (2-6)
- Why are stars different colors? (5-6)
- How stars make energy (5-6)

Misc Topics:

- Laser Jello (3-6)
- Careers (2-6)
- Aliens and Adaptations (4-6)
- Calendars (2-6)
- Famous Astronomers (preK-6)

Planetpalooza (preK-6)

A grade appropriate overview of our solar system focusing on what makes each planet unique. Younger students will learn the names and features of each planet while older students will uncover the mysteries of the planets including their distance from the sun, their moons, comparative sizes, differences in gravity, units used in astronomy and other fun facts. Talk can be modified to focus on a specific planet or subset of planets if desired.

Earth, Moon & Sun (preK-6)

Focusing on the most dominant objects in our sky: the moon and the sun. This talk explains the phases of the moon and for older students the science of eclipses. We'll also discuss the Hawaiian lunar calendar.

Comets & Asteroids (preK-6)

The unsung components of our solar system, this talk focuses on comets and asteroids. Students will learn the difference between the two and how they help astronomers understand our solar system better. Teachers can request the "Edible

Asteroids” component of the talk where students classify “asteroids” by their features.

Introduction to Constellations (preK-3)

Targeted for young students, the talk focuses on the definition of a constellation and the stories behind a few of the most popular constellations including Orion the Hunter and Maui’s Fish hook. Students will draw their own constellation and create a short myth- meeting FA, LA, SS and SC standards for some grade levels.

Constellations of the World (4-6)

A more advanced look at constellations. Program begins with reviewing the definition and movement of constellations, but expands to cover constellation myths from Egypt, China, Mayans and Incans. The traditional Greek and Hawaiian names will also be covered. May meet WL, SS, LA standards for some grade levels.

Harry Potter and the Constellations (3-6)

The Harry Potter books are filled with references to stars and constellations. Using the books as a launching point, this talk explores the constellations, star names and their movements across the sky. May meet LA standards for some grade levels.

Graphing the Stars (2-6)

Astronomers can predict the life cycle of a star based on its position on one of astronomy’s most handy graphs- the HR diagram. Younger students will learn about the fundamentals of graphing and how graphs are useful tools. Older students will expand on that knowledge and begin to understand how astronomers use math. May meet MA standards for some grade levels.

Why are stars different colors? (5-6)

Targeted to upper elementary school students, this talk explains how the temperature of a star affects its life and color, energy transformations, energy transfer within stars.

How Stars Make Energy (5-6)

What is the difference between stars and planets? How do stars make energy? What happens when they run out of energy? An exploration of energy creation in stars and a hands-on demonstration of fusion and science’s most famous equation: $E=mc^2$.

Laser Jello (3-6)

How do astronomers use light to study the stars? Why are they interested in some colors but not others? This talk is an introduction to the electromagnetic spectrum and optics. Students will learn terms like absorption, transmission and how light changes when it interacts with an object.

Careers (2-6)

An overview of the different jobs at an observatory. For younger students, the talk will introduce terms like engineer, astronomer, computer programmer, etc.. Older students will learn more about those careers including a discussion of the schooling involved. May cover CTE standards for some grade levels.

Aliens and Adaptations (5-6)

One example of how astronomers have discovered using telescopes is exoplanets or planets outside of our solar system. The talk focuses on how exoplanets are discovered, where life may be found and how that life would differ from life on Earth.

Calendars (2-6)

The sky was the basis for most early calendars. Younger students will learn that the moon and its phases was the basis for many calendars, including the Hawaiian calendar. Older students will expand on that topic also looking at how the seasonal motion of the sky influenced the start of the new year for several cultures. May cover SS or WL standards for some grades.

Famous Scientist (preK-6)

By introducing famous scientists (Galileo, Einstein, & Newton) students will learn see the scientific method in action and begin to understand that science is an evolving discipline. Older students will learn the story behind two of the most famous equations in physics, $F=ma$ and $E=mc^2$. May cover MA and SS standards for some grades.

To schedule a classroom visit or for more information (including grade level specific standards covered for each talk), please contact Mary Beth Laychak at laychak@cfht.hawaii.edu or 885-3121. Topics outside this menu are available upon discussion.