

A Planetarium Guide for



This guide includes the following:

- Contact information
- Resources on the Web
- *Starry Storytime* summary and objectives
- Astronomy investigations at Arizona Science Center
- *Starry Storytime* concepts
- How *Starry Storytime* corresponds with Arizona State Science Standards

Contact Information

Please contact us with any questions or comments! If there are any particular topics that you would like discussed during your show, please let us know after you have made reservations for the planetarium.

MIKE GEORGE

Director of Theaters Experience

602-716-2079

mikeg@azscience.org

Neil Goldstein

Planetarium Presenter and Coordinator

602-716-2077

goldsteinn@azscience.org

Sarah Tackett

Planetarium Presenter and Production Coordinator

602-716-2075

tacketts@azscience.org

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Resources on the Web

Windows to the Universe
<http://www.windows.ucar.edu>

The Nine Eight Planets
<http://www.nineplanets.org/>

Solar System Exploration Page
<http://solarsystem.nasa.gov/educ/>

Views of the Solar System
<http://solarviews.com/eng/homepage.htm>

StarChild
<http://starchild.gsfc.nasa.gov/docs/StarChild/StarChild.html>

Thursday's Classroom
<http://www.thursdaysclassroom.com/>

HubbleSite
<http://hubblesite.org>

Astronomy Magazine's Intro to Astronomy
<http://www.astronomy.com/asy/default.aspx?c=ps&id=6>

The Evening Sky Map
<http://Skymaps.com>

Starry Storytime Summary

Starry Storytime provides our youngest visitors with the ability to locate constellations, visit the planets in our Solar System, and hear stories about interesting objects in the night sky. The children witness the rotation of the Earth and learn that this spinning causes day and night. This presentation is completely interactive, allowing the audience to answer questions vocally and by using the buttons on their armrests.

This presentation is 25 minutes long.

Suitable for preschool through Grade 2.

Features

- An investigation of how the rotation of the Earth causes day and night
- Learn ways to locate some constellations
- An introduction to the Sun, planets, Solar System and galaxy
- A Mobius strip ride at the end of the show
- Simple concepts in a non-threatening environment
- Completely live
- Uses interactive questions and buttons throughout the presentation

Objectives

At the end of *Starry Storytime*, students will be able to do the following:

1. List at least two constellations.
2. State that our Sun is a star.
3. Describe how the Earth's rotation causes day and night.
4. Describe some of the planets.

Astronomy Investigations at Arizona Science Center

When entering the planetarium, look at the lights in the hallway. Let the students cover them up with their fingers.

Can you see the light through your fingertip? What color is the light? Why?

Outside the planetarium, look for patterns of sunlight on the wall, refracted from the giant lens mounted up above the planetarium entrance.

What colors are showing? Where are these colors coming from? Are the colors moving? Why? What does the pattern look like to you?

Concepts

Binary/Multi-star System: A system of two or more stars. Our Sun is different from many stars in our galaxy because it is not part of a multi-star system.

Constellation: Any of the 88 areas into which the sky is divided. Originally, the constellations had no fixed limits and were just groups of stars that held some symbolic meaning for ancient cultures.

Crater: A large hole in a planet or moon, formed from an asteroid or comet impact.

Dwarf Planet: A round celestial body that orbits around the Sun, has not cleared the neighborhood around its orbit, and is not a satellite.

Galaxy: A very large group of stars, gas, and dust that exists separately from other groups. Our galaxy is called the Milky Way.

North Star: Also called Polaris, this star is almost directly over the North Pole of the Earth. The North Star remains almost stationary in the northern sky as the Earth rotates. The North Star is not the brightest star in the sky.

Planet: A round celestial body that orbits around the Sun and has cleared the neighborhood around its orbit.

Revolution: The motion of the Earth and the other objects around the Sun. The Earth takes one year to revolve around the Sun.

Rotation: The spinning of an object on its axis. The Earth takes one day to rotate once.

Solar System: The system around our Sun, Sol, which consists of all of the objects that orbit it, including the eight planets and their satellites, dwarf planets and their satellites, asteroids, and comets. Some other stars have similar systems of objects that orbit them.

Star: A large object made of gas that gives off light. Our Sun is the star nearest to the Earth. Stars are bigger than planets; the smallest star would be about 100 times more massive than Jupiter.

Arizona State Science Standards Alignment

Starry Storytime includes information that meets the new Arizona State Science Standards as described below. Coding follows this system: SC06-S2C2-01 (Grade 6, Strand 2, Concept 3, PO1).

Grade 1

SC01-S6C2-02: Compare celestial objects (e.g., Sun, Moon, stars) and transient objects in the sky (e.g., clouds, birds, airplanes, contrails).

SC01-S6C2-03: Describe observable changes that occur in the sky (i.e., clouds forming and moving, the position of the Moon).