



Teacher's Guide for:

Odyssey

OBJECTIVES:

- To see how our ideas of our place in the universe have changed over time
- To observe the life cycle of a star
- To hear several Native American stories about the sky and its origins
- To survey the planets in our solar system
- To bring to light the power of observation, exploration and discovery

This show conforms to the following Illinois state science standards: 12.F.2a, 12.F.2b, 12.F.3b, 12.F.3c, 12.F.4a, 12.F.4b, 12.F.5a. Next Generation Science Standards: 1.ESS1.1, 5.PS2.1, MS.ESS1.1, MS.ESS1.3, HS.ESS1.1, HS.ESS1.2, HS.ESS1.3

BRIEF SHOW DESCRIPTION:

"Odyssey" was the very first original program produced by the Staerkel Planetarium, first showing in 1987. The show is a wonderful and comprehensive look at our universe and how our views of it have changed. From Native American stories around a crackling campfire, to Copernicus and Galileo, to space observatories, the wonder of exploration is portrayed. And the discovery process doesn't stop; it continues today. The show was updated to include Kuiper Belt Objects and extra-solar planets when it was converted to a full-dome show in 2012, just in time for the planetarium's 25th anniversary.

PRE-VISIT ACTIVITIES/TOPICS FOR DISCUSSION:

- * What is an "odyssey?" Try looking it up in the dictionary. What would be included in a planetarium show called "Odyssey?"
- * Build a scale model solar system by using the scale of one "unit" is equal to 10, million miles. The "unit" could be a paperclip or even a sheet of toilet paper. Then look up the distances of the planets from the Sun. For example, Mercury, at 36,000,000 miles would be 3.6 paperclips or 3.6 sheets of toilet paper from the Sun. On this scale, how far away would the nearest star be?
- * Radio waves from our Earth are venturing out into space at the speed of light. If there were people listening on a hypothetical planet surrounding the closest star, Alpha Centauri, they'd be hearing our broadcasts from just over 4 years ago (the star system is 4.3 light years away). What would some of the planets around some of closer stars be listening to about now? (Hint: you need a table of star distances in light years and an idea of what was playing on the radio during certain years. Try America's top ten!).

POST-VISIT ACTIVITIES/TOPICS FOR DISCUSSION:

- * Find the poem spoken at the beginning of Odyssey. It can be found in first volume of "Burnham's Celestial Handbook."

- * Where will our next odyssey be? If you had an unlimited budget, where would your next destination be?
- * Research more Native American stories. What were they trying to explain? Many Native American tribes used the stars to teach lessons. As you look at stories, what lesson are they trying to teach?

INTERNET RESOURCES:

- * Ask Starman an astronomy question: dleake@parkland.edu
- * Do some observing with the Champaign-Urbana Astronomical Society: <http://www.cuas.org>
- * Astronomical Society of the Pacific: <http://www.astrosociety.org/>
- * Read the latest astronomy news at: <http://www.astronomy.com/> or <http://skyandtelescope.com/>
- * Astronomy picture of the day: <http://apod.nasa.gov/apod/astropix.html>
- * Native American star stories: <http://www.wvu.edu/skywise/legends.html> or <http://www.native-languages.org/legends-star.htm> or <http://starryskies.com/articles/dln/5-97/native.myths.html>
- * The “Sky Tellers” program: <http://www.lpi.usra.edu/education/skytellers/constellations/preview.shtml>