

## S.T.A.R. TOUR

Our STAR-LAB planetarium takes students on an exploration of the night sky — during the day! Activities match grade level standards. The tour is 90 minutes including teacher-supervised museum exploration time. Program options include bird migration, weather, constellations, star fields, and Native American legends. (Also available as a “Museum-to-Go” program.)

### 4th GRADE

#### Standards:

Science

Language Arts

#### Earth and Space Science

#### **Standard 6. THE UNIVERSE:**

**Conceptual Strand 6:** The cosmos is vast and explored well enough to know its basic structure and operational principles.

**GLE 0407.6.1.** Analyze patterns, relative movements, and relationships among the sun, moon, and earth.

#### **Teacher Questions, Pre-Tour**

**Q:** Why is the system we live in called ‘the solar system’? List the planets that make up our system, describing their size, orbit time, etc.

#### **Teacher Questions, Post-Tour**

**Q:** After our STAR-LAB program, what did you learn about the relationship between the Earth and the moon? What causes “moonlight” and how is it that we see a similar pattern of moon shapes over approximately 29-30 days’ time?

Over time, how have people tried to explain the movements of the planets and the stars? How have people used stars in their exploration of our own planet?

#### Language Arts

#### **Recommended Reading:**

##### Nonfiction:

*A Child's Introduction to the Night Sky: The Story of the Stars, Planets, and Constellations--and How You Can Find Them in the Sky* by Michael Driscoll (2004).

*Don't Know Much About the Solar System* by Kenneth C. Davis (2004). (Ages 6 - 9 and older.)

*Find the Constellations* by H.A. Rey (2008). HMH Books, 2<sup>nd</sup> edition.

*Flight of the Golden Plover: The Amazing Migration Between Hawaii and Alaska* by Debbie Miller. (2011). (Grade 3 +).

*Janice VanCleave's Constellations for Every Kid: Easy Activities that Make Learning Science Fun* by Janice VanCleave. (1997).

*On the Wing: American Birds in Migration* by Carol Lerner (2001). (Gr 3-6.)

*The Stars* by H.A. Rey (2008, 1952). HMH Books, 2<sup>nd</sup> edition. (Upper elementary, classroom reference).

Fiction:

*All the Stars in the Sky: Native Stories from the Heavens* by C.J. Taylor (2006). (Ages 8 and up.)

*Native American Tales and Legends* by Allan Macfarlan (2001). (Age 9 and up).

*They Dance in the Sky: Native American Star Myths* by Ray A. Williamson (2007). (Ages 10-14)