Teacher's Guide

"Creek and Cherokee STARLAB"

Chattahoochee NATURE CENTER

Grade Level:
2nd

GSE Reference:
S2E1a, SS2H2a, SS2G2b,d;

Summary:
Students will learn how the Creek and Cherokee met their basic needs using their environment, the Chattahoochee River Watershed. Students will be able to explain grade level astronomy concepts by participating in activities that demonstrate the concepts.

Objective:
Students will understand that the Creeks and Cherokees used their environment to obtain food, clothing, shelter and medicine, and that the Chattahoochee River influenced their lives. Students will understand that Native Americans used the night sky for entertainment and education. Students will learn grade level astronomy concepts.

Essential Questions

When reviewing "Creek and Cherokee STARLAB" with your students, begin by discussing what life would be like 500 years ago.

- Where would you get your food?
- What would you do if you were sick?
- What would you do for entertainment?
- How would you navigate without GPS or a compass?
- What else might be different than how we live today?

Feel free to keep a list of questions from the students to bring to the naturalist.

Vocabulary

- *Native* - anything indigenous to an area, not imported
- *Edible* - able to be eaten and digested
- *Planet* - a sphere made up of rock, liquid, or gas that orbits a start
- *Star* - a hot, massive, shining ball of gas that makes its own energy and light
- *Apparent Magnitude* - The brightness of a star
- *Constellation* - a group of stars in close proximity that form a shape in the night sky. In modern times constellation refers to an area of the sky.
- *Solar System* - the whole family of objects that orbit the sun, including planets and comets
- *Rotation* - the action of turning around an axis
- *Revolution* - the action of the earth orbiting the sun
- *Phase of the Moon* - The lit portion of the moon facing the Earth

Pre-Visit Activities

- **Read a book from our suggested reading list**
- **Pictures in the Sky** Have each student place a tiny bit of kosher salt on a sheet of black paper. Can they imagine any pictures among the salt grains? Draw the picture of the salt constellation by connecting the dots with chalk. Write a story about your constellation.
- **Moon Phase Snack** Have the students remove the lids of 4 Oreo cookies and scrape off varying amounts of crème filling to show a new moon, crescent, first quarter, and full moon. These can be displayed on a paper plate in the monthly order. Students can draw the earth in the center of the plate . For detailed instructions see http://analyzer.depaul.edu/paperplate/Oreo%20Moon%20Phases.htm.

Post visit activities

- **Review the major concepts and grade level vocabulary.**
- **Moon Phase Tracker** Have students go outside each night for two weeks after your program and draw the phase of the moon.
- **Star Finder** Encourage students to go outside and share their knowledge with their families by using this monthly template to make a starfinder and selecting a constellation to find: http://spaceplace.nasa.gov/starfinder/en/
- **Adopt a Tree** How did the Creek and Cherokee use trees? For edible and non-edible uses? Read *The Giving Tree* by Shel Silverstein and discuss what the tree gave. Find an area at your school that you can plant a tree and watch it grow or adopt a tree that is already there. You can place fallen leaves to give in nourishment, water it, keep trash picked up. Have the students record their experience in their class journals.
- **Where Did Your Lunch Come From?** The goal is to have students think about the raw ingredients needed to make their lunch. As a class you, can use the lunch on the student menu. Working in groups have them break down the entire menu or parts of the menu to the basic ingredients. For example if a roll is included in lunch - what ingredients are used to make the roll? Flour, which comes from wheat, water, and butter (from cows). How would lunch have been different if they were kids 500 years ago?

Suggesting Reading

If You Lived With The Cherokees, Peter Roop and Connie Roop
The Cherokee Nation: A History, Robert J. Conley
Living Stories of the Cherokee, Barbara R. Duncan
The Cherokee (True Books - American Indians), Andrew Santella
The Trail of Tears (Step into Reading - Step 5), Joseph Bruchac
Creek History and Culture, Helen Dwyer and Amy Stone
Pushing up the Sky: Seven Native American Plays for Children, Joseph Bruchac
Children of the Longhouse, Joseph Bruchac
Keepers of the Night: Native American Stories and Nocturnal Activities for Children, Joseph Bruchac and Michael J. Caduto (anything from the Keepers Series)
Once Upon A Starry Night—A Book of Constellations by Jacqueline Mitton and Christina Balit
Zoo in the Sky—A Book of Animal Constellations by Jacqueline Mitton, Christina Balit and Wil Tirion
Our Solar System (Book Series) by Dana Meachen Rau
Faces of the Moon by Bob Crelin
The Moon Book by Gail Gibbons
Find the Constellations by H.A. Rey
The Kids Book of the Night Sky by Ann Love and Jane Drake

Suggested Websites

http://www.cherokeemuseum.org/
http://ngeorgia.com/history/cherokee.html
http://ngeorgia.com/history/creek.html
www.skymaps.com
http://spaceplace.nasa.gov/starfinder2/
http://spaceplace.nasa.gov/starfinder3/
http://www.astronomy.com/
http://www.kidsknowit.com/interactive-educational-movies/free-online-movies.php?movie=Eclipse

Further Investigations!

GSE S2E2a,b

Before there were clocks, people used shadows to tell time!

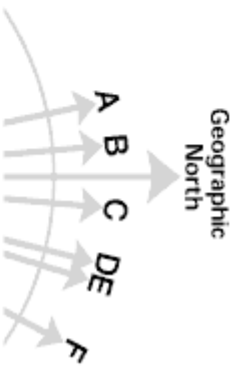
On a sunny day, go outside with a compass, pencil, and the Sun Clock Diagram below. Put your compass on the ground and turn it so that the arrow and the "N" (for "North") line up. Follow the directions on the Sun Clock Diagram to find out how to line up the Sun Clock with your compass. Once you have the Sun Clock pointed in the right direction, you can figure out what time it is.

Start Here!

1 Put a compass on the ground and notice which way the arrow points.

A Washington DC New York, NY	B Atlanta, GA Miami, FL Chicago, IL Lousiville, KY Detroit, MI	C Minneapolis, MN Kansas City, KS Dallas, TX New Orleans, LA
D Denver, CO	E San Francisco, CA Salt Lake City, UT Rapid City, SD	F Seattle, WA Boise, ID

3 Put this page on the ground and move it around until the arrow that represents your city points the same way as the arrow on your compass.



4 Stand a pencil on today's date and look at the shadow to find out what time it is.