

“Connect the Dots”

Summer > Sky > Science (06.summer.sky.connect_the_dots)

Season & Location:

Summer, could be associated with any summer “camp” activities, including Culture Camp, Scout Camp, SMILE activities, etc.

(The activities outlined here could really be done any time that the sky is clear – including Winter – but summer is definitely going to be the season of the highest concentration of nice warm nights for stargazing.

This activity could be done in conjunction with activities surrounding the Persied meteor shower, which peaks in mid August.

Partnerships/Community Connections:

SMILE Club; local astronomers/astronomy club, any of the Siletz and community organizations working with kids in the summer (also, similar groups in other communities), local acting group/performing arts organization.

Standards* Focus:

Science:

6.1E.2 Describe the properties of objects in the solar system. Describe and compare the position of the sun within the solar system, galaxy, and universe.

**“Second Language” standards are addressed by default – consult state scoring guide.*

Additional Standards:

Art:

Historical And Cultural Perspectives

Distinguish works of art from different societies, time periods and cultures.

AR.08.HC.02 Identify and relate works of art from different societies, time periods and cultures, emphasizing their common and unique characteristics.

Cultural Knowledge:

Tools and Technology

Belief/World View

Arts and Aesthetics

Science

Vocabulary Necessary to Translate “Coyote” story:

Sky/“Heavens”	Yaa-min
Starry	Svn'-ta lhan
Idea (Think about)	nay-srit-'a

Secret	Tin-ta
Whistled (He/she/it)	Yuu-yer'sh-nays-tan'
Clever (Genius)	Ihtin'-day-yulh-ts'it
Waddle/waddled	Naa-gha
Places (as in "puts")	Nuii-'vsh

Vocabulary related to "Sky" and astronomy in general:

Stargazer ("Star looking person")	Svn'-ta nelh-'i~-ne
Meteor	Svn'-ta
Comet	Svn'-ta
Constellation	Svn'-ta lhan
Planet	Svn'-ta
Star	Svn'-ta
Earth	Nvn-nvst-'an
Moon	Ch'aa-ghvtlh-sri~
Sun	Xaa-shi
Night Sky	T'et-dvn Yaa-min

Vocabulary related to constellations and modern astrology:

Fire	Xwvn
Air	Yaa-min
Earth	Nvn-nvst-'an
Water	Tvl-xvt'
Bull	Dis-ne mush-mush
Twins (as in children)	Ch'ee-nantlh-yu
Crab	Ga'-srvsr

Lion (mountain lion)	Chutlh-ts'as-ne
Maiden	Ch'ee-sii-ne
Scales (balanced, or fair)	Lhee-k'e
Scorpion	Nan-ts'vn-gha'-srvsr
Archer	Tvt-k'vsh-ne
Fish	Lhuk
Constellation	Svn'-ta lhan

Grammar & Language Concepts:

Many and various translations using tense, possessives, newly created Dee Ni words, complex compound sentences, written language, and underlying language philosophies.

Prior/Concurrent Lesson Plan Materials:

Calendar

5th Grade “Run to the Rogue” activities, focusing on geography and mapping.

counting;

calendar:

Space and Sky:

Lesson Objectives – After completion, students/instructors will be able to:

Identify major constellations in the summer sky, and understand that what we see up there changes through the seasons;

Understand that all cultures have theories about the sky, stars, planets, and space;

Understand the science behind modern theories that describe the way celestial bodies move, and the origins of the universe and solar system;

Read and understand a Coyote story using Dee Ni phrases and vocabulary.

Identify the cardinal directions, seasons, celestial objects, and features of the night sky using Dee Ni vocabulary, both in writing and orally.

Create a quiz for their classmates based on recognizing their constellations in the night sky and identifying them using Dee Ni vocabulary.

Perform a skit (Coyote Puts Up the Stars) using Dee Ni vocabulary and translations.

Lesson Procedures:

Students study prior Dee Ni lessons to learn Dee Ni phrases and vocabulary from “Space and Sky”, “Calendar”, “Counting”, Students study science unit(s) related to planets and stars and

sky;

Students study origins of the named Greek constellations, and ideally study other cultures' concepts of the sky, planets, and stars (origins, description, position, etc.)

Students use Internet, print, and expert resources to understand various cultures' beliefs about the origin of the sky and celestial objects;

Students read Dee Ni translation of the Coyote story, "Coyote Places the Stars".

Students use Internet resources to produce an accurate map of the summer sky, and use that map to visualize the named constellations. (The map should be used to look at the actual sky; this activity should be done as part of an outdoor event/workshop).

Students can collaborate to make a large sky map, or use small paper to make their own.

Students can use transparency film to make an overlay that identifies the position and outline of the constellations;

Once students have learned the "modern" constellations, they should use their imagination to create new constellations of their own. These constellations can be diagrams of characters from favorite stories, heroes from movies, favorite animals, etc. Students should be prepared to translate the English words describing their constellations into Dee Ni.

Students should create several constellations in total – instructor should decide in advance how simple or elaborate this project will be.

This project could be done in groups using "big" paper and displayed somewhere in the school or community (library, for instance).

Students create a quiz in which their classmates locate and identify (using Dee Ni vocabulary) their "constellations" in the night sky.

As a grand finale (or as a completely separate activity), students perform the Dee Ni skit "Coyote Puts Up the Stars", based on a Wasco Coyote story.

Assessment:

Assessment via standard quiz format;

Authentic Assessment (constellation map and written components); oral fluency as determined by Dee Ni speaker (see rubric).

Also, participation and audience response will serve as an assessment – as in the reaction to the skit.

Materials & Supplies:

"Coyote Places the Stars" translated story,

Prior lesson materials (05.HC.03 "Run to the Rogue", 01.MA.01a-b "Counting", ?) Calendar

"Stellarium" software (<http://www.stellarium.org/>);

Printed night sky maps;

Art supplies – pens, pencils, etc. Glow-in-the-dark paint would be ideal.

Telescope(s)

"Coyote Puts Up the Stars" play and associated materials.