INDIGENOUS WISDOM:
CENTURIES OF PUEBLO IMPACT IN NEW MEXICO

A Pueblo-Based Educational Curriculum • IndianPuebloEducation.org

ELEMENTARY SCHOOL CURRICULUM

2nd Edition

Title of Unit: Pueblo Creation Story: Our Awe Inspiring Cosmos

Content Area: Science

Grade Level: K-1

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The Indian Pueblo Cultural Center K-12 Indigenous Wisdom Curriculum is Supported by:

Indian Pueblo Cultural Center

Gateway to the 19 Pueblos of New Mexico

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Section A: Introductory Materials

Name: Trisha Lynn Moquino
Title of Unit: Pueblo Creation Story: Our Awe Inspiring Cosmos
Subject Area: Science
Grade Level: K-1

Rationale:

This unit was inspired by a love of our culture, a love for children, and a love of children's books. In all Pueblo cultures, stories are told as a way to understand many things including how our world came to be. We call these creation stories. These stories are told as a way of teaching respect for all things, living and non-living and to help us recognize that there are some things in our world that cannot always be thoroughly explained or understood. For example, the sun which gives us life, or the moon which watches over us, or the stars in our universe which continue to inspire in us both, awe and mystery. Creation stories teach us, therefore, that there is always balance in the natural world and that we must respect this delicate balance in order to ensure a healthy life here on earth. This unit includes a creation story retold and written by a Santa Ana Pueblo author. It reminds us of the beauty of Pueblo culture and the universe we live in. In the busy and increasingly technology driven world we live in today, children can often become disconnected from the natural world missing out on important lessons about how life is sustained and how humans play a critical role in maintaining a balance in the use of nature's resources.

While science can often seem too abstract a concept for young children to understand, there is a need to present science in a way that is culturally relevant to their lives and making it accessible to them. We must help them understand that science and the natural world are present all around us and in everything we do. Story telling as a traditional teaching medium in Pueblo culture is still as relevant today as in the past. This unit connects to the core values of love and respect for our universe and provides a foundation for understanding how maintaining balance in our environment is a critical need in today's world.

Unit Goals:

- Students will develop an appreciation for the natural world through a retelling of a Pueblo creation story.
- Students will develop an awareness of the underlying lessons contained in an adaptation of a Pueblo creation story.
- Students will explore through observation the beauty and wonderment of life, the earth we live upon and the limited natural resources we must care for.

Standards:

Next Generation Science Standards: K-LSI-I. Use observation to describe patterns of what plants and animals (including humans) need to survive.
NCTM Benchmark I: (Life Science) K-1-1. Know that living organisms have needs (e.g. water, air, food, sunlight). **NCTM Benchmark I**: (Earth and Space Science): K-1. Observe that there are many objects in the night sky and that some are brighter than others.

Section B: Lesson Plan One
Title: Science through Story: *Coyote in the Sky: How the Sun, Moon, and Stars Began*
Duration: 20-30 minutes (60 minutes with follow up activity)
Grade Level: K-1

Lesson Objectives
Students will be able to:

- Retell a Pueblo Indian story *Coyote in the Sky: How the Sun, Moon, and Stars Began* written by Emmett "Shkeme" Garcia.
- Recognize the characteristics of objects in the natural world identified as living objects.
- Recognize that Pueblo people, in their understanding of the natural world take into consideration the spiritual world (which at times can be unexplained).
- Recognize that certain habitats/biomes exist for a variety of living things.
- Develop an understanding that all people and living things in this world have a purpose that keeps our world in balance.

Prerequisite Skills and Knowledge:

- Emerging development of listening and observation skills.

Materials and Resources:

- Book: *Coyote and the Sky: How the Moon, Sun, and Stars Began by* Emmett "Shkeme" Garcia. Published in 2006 by University of New Mexico Press. Available at Amazon.com.
- Printed labels for classifying "animals/objects" and "living/non-living"
- Pictures of different habitats/biomes for animals featured in the story.
- Various animal pictures available at: Safari Ltd Tools.

Guiding Questions:

- What defines something as living object?
- If something is not classified as living, how can we describe it?
- What is the importance of the sun in relation to animals as told in this story?
- What is the importance of the sun in our natural world?

Core Values: Faith, Spirituality, Balance

Procedure:

1. Introduce children to an enlarged New Mexico map that shows where 19 Indian Pueblos are located. Begin by pointing out locations of places that are familiar to them. Next circle with a brightly colored marker the locations of all the Pueblo tribes, ending with Santa Ana Pueblo.
2. Tell children that Santa Ana Pueblo is home to a story teller named Emmett "Shkeme" Garcia. Download a picture of the author (sometimes provided on the inside cover of books or by accessing Facebook link for the author). Explain that they will hear a story written by this author and based on a Santa Ana Pueblo tale.
3. Start a brief introductory conversation with students about the book title *Coyote and the Sky: How the Moon, Sun, and Stars Began* and what they see on the book cover. What do they think this story is about?
4. Start with a first reading of the story solely for enjoyment.
5. Before you read the story for a second time, ask the children to think about the "living" things mentioned in the story. What does this word (living) mean to them? What are their ideas regarding the characteristics of living objects?
6. When you are done with the second reading of the story, ask the children to identify what they consider to be "living" things. Using illustrations of the animals featured in the story and pre-printed labels (animals/objects and living/non-living) have children take turns placing the pictures under either of the two categories: living or non-living.
7. Next, have them identify the gifts provided by each of the animals and entities included in the story. Draw and label these as well.
8. Have the children think about the needs of living things such as animals. Using illustrations of various biomes or habitats have them match these with the animal pictures. Ask: What do they need to live? Ask: How can people help ensure that animals are able to survive in their respective habitats? Explain the importance of keeping nature in balance in order to sustain living animals in our world. What are examples of ways in which humans can disturb that balance?
9. Share with children that all animals are living things and that they are interdependent with their environment as well as the cosmos (especially the sun). Explain why they need it. They all need the sun for survival.
10. Close the lesson by having children draw one of the living things they saw in the book or create an extension using other creative materials e.g. clay, recycled materials, fabric, etc.. Display children's creative work alongside the book or book cover.

Assessment:

- Completion of a creative work or illustration based on the story.
- Completion of Handout #1: Living things in *Coyote and Sky*

Modifications/Accommodations:

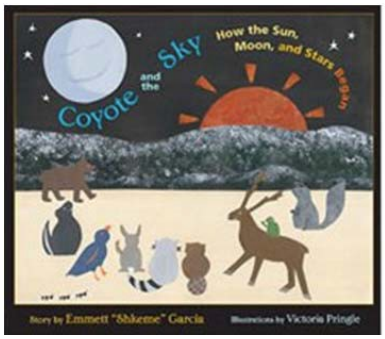
- Record the book so children can listen to the reading on their own.
- Pair students together to complete a project.

Notes to Teacher:

There are many other extensions that one can do with this lesson.

- Assign an animal to each child and have them create a large poster showing what makes them a "living" organism.
- Have puppets available of the animals in the story and have children retell the story using the puppets.
- Have children create dioramas illustrating the living environment of a particular animal.
- Have children collaborate on a mural illustrating their interpretation of the relationship between the cosmos and living things on earth using poster paints and a large clear shower curtain. This can be hung in the classroom or in a large window or if permissible, somewhere in the school.

Handout #1: Living things in *Coyote and Sky*



Draw as many living things from *Coyote and the Sky* as you can. Why are they considered living?

Lesson Two
Title: Science through Story: *The Sun, Moon, and Stars*
Duration: 20-30 minutes
Grade Levels: K-1

Lesson Objectives:
Students will be able to:

- Identify and name the three major objects in the sky (sun, moon, stars) featured in the story, *Coyote in the Sky: How the Sun, Moon, and Stars Began* by Emmett "Shkeme" Garcia.
- Understand that this story is a creation story and is one culture's (Santa Ana Pueblo People) interpretation of understanding the origin of the awe-inspiring cosmos.
- Identify the location of the three major entities in the sky.
- Apply their knowledge of what they learned from the story about the constellations, Milky Way, and the Big Dipper and locate these in the night sky at home with their parents.

Prerequisite Skills and Knowledge

- Emerging development of listening and observation skills.

Materials and Resources

- Book: *Coyote and the Sky: How the Sun, Moon, and Stars Began"* written by Emmett "Shkeme" Garcia.
- Clear pictures of constellations, big dipper, and the milky way so children can see pictures more closely. If available, clear transparencies and an overhead projector can be used to project these on the ceiling or wall.
- String and plastic star beads for making a star necklace (available at most Hobby Lobby or Michaels stores).
- Attachment #1: Constellation lace cards (printable patterns)

Guiding Questions:

- What are some entities you see in the sky when you look up during the day?
- What are some entities you see in the sky when you look up during the night?
- How do you the think the sun came to be? How do you think the moon came to be? How do you think the stars came to be?
- Why is it important to know about these entities in the sky?

Core Values: Respect, Faith, and Balance

Procedure:

1. Reread *Coyote and the Sky: How the Sun, Moon, and Stars Began*
2. Tell the children the purpose for reading the story this time around will be to note how the Sun, Moon, and Stars came to be.

3. Tell the children they will also read for the purpose of understanding what a constellation is and to be able to name some of them.
4. Read the story to the children.
5. Afterwards, ask them: According to this Pueblo story, how did the sun come to be? How did the moon come to be? How did the stars come into being? What do these celestial objects provide to our cosmos?
6. Show children real pictures of constellations, explaining the names that are used to refer to them. Project these on the ceiling or wall using transparencies and an overhead projector.
7. Explain to children that they will have the opportunity to make two things: string a star necklace and/or lace different constellations. Display finished creations alongside the book or book cover.

Assessment:

- Completion of a creative project based on the story.

Modifications/Accommodations:

- Record the book on tape/cd/Ipad and have it available in the listening area of the classroom.
- Provide puppets representing animals/celestial objects from the book and have children help act out the story.
- Pair students to help string necklaces or lace constellations.

Notes to Teacher

- This can be broken up into three separate lessons focusing on one celestial object at a time.
- Provide illustrations of constellations for students to take home with explanations for parents of where they can be located in the night sky and viewed with their children.
- There are always many more activities do with this lesson. One could have the class paint a giant poster together, make a book on constellations, and/or an illustration about the role of the three cosmic entities in our world.
- For the constellation cards, one can search the Internet for more variety.

Culminating Activity:
A possible culminating activity (there are many one could come up with) for this unit would be to do an author study of Emmett Shkeme Garcia. Mr. Garcia lives in Santa Ana Pueblo, NM near Bernalillo, NM. It would be great to have the children learn about him, his work, and then invite him to come in and share his stories in person. He regularly does visits to schools to share his book and stories. His Facebook address is: https://www.facebook.com/e.shkeme.g.

Stringing a Star Necklace

Attachment #1: Constellation Lace Cards

Constellation Lacing Cards

Print, cut, laminate. Using a hole punch, make a hole in the middle of every circle in each constellation picture. Cut a long string, thread, yarn. Tie a knot in one end and wrap the other end with tape or dip in glue and let it dry.

Have fun lacing your string through your constella-tions!

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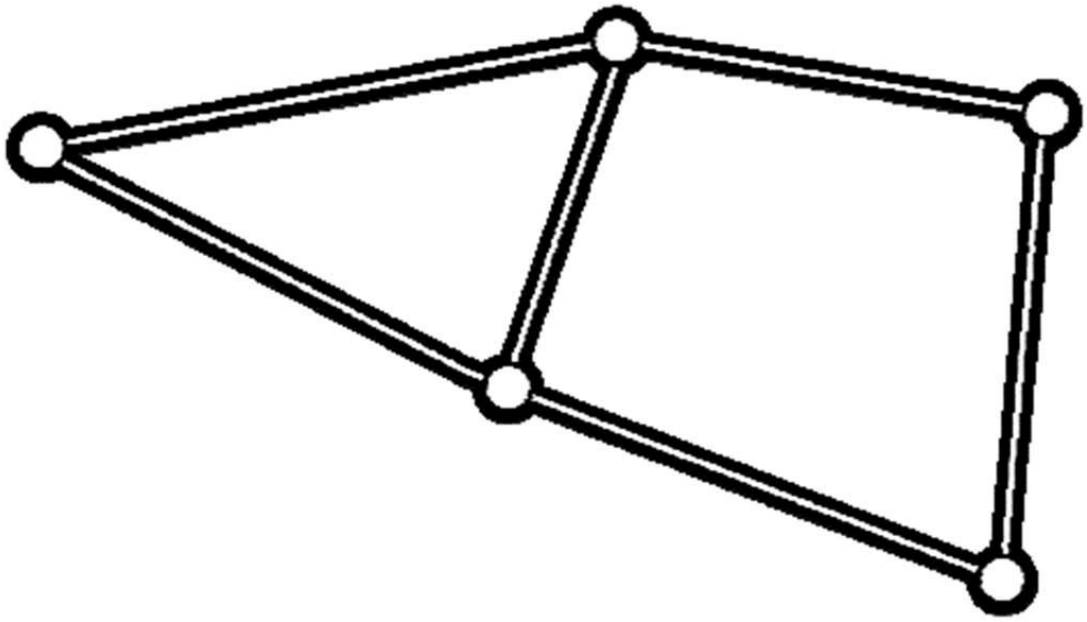

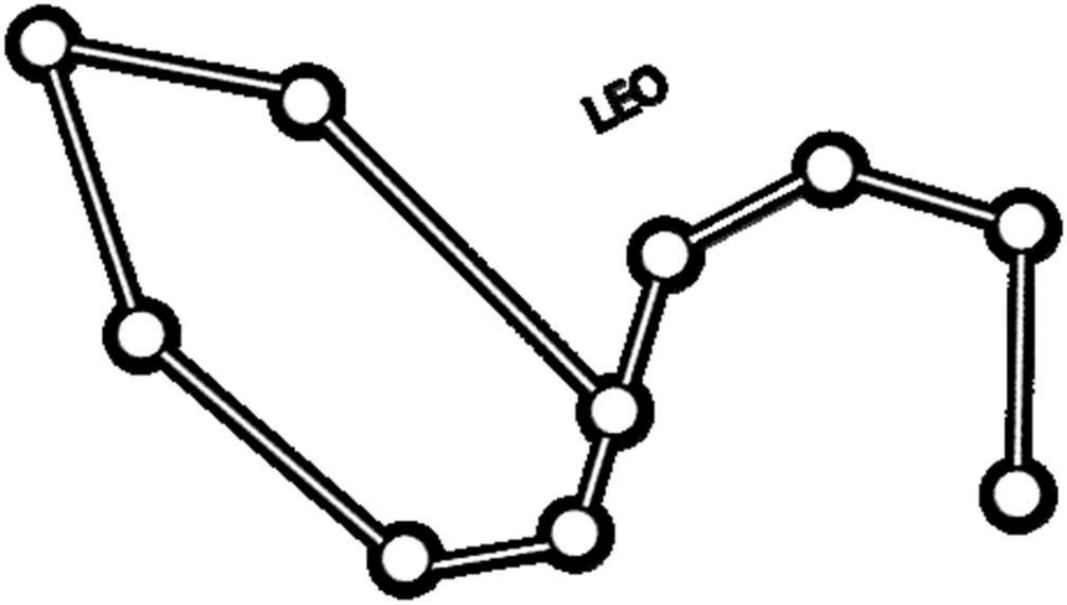

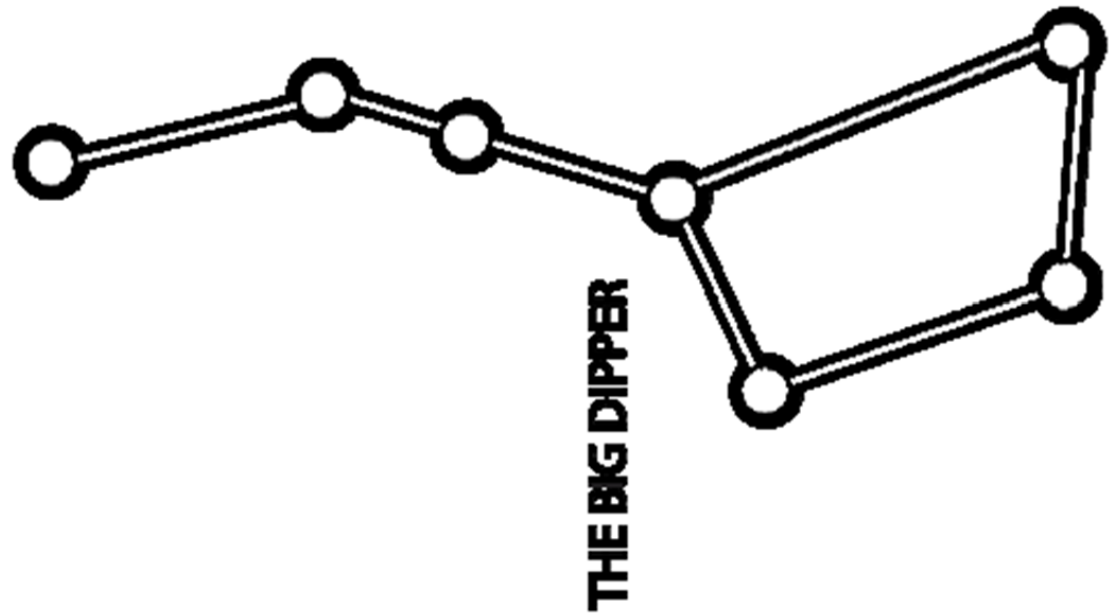

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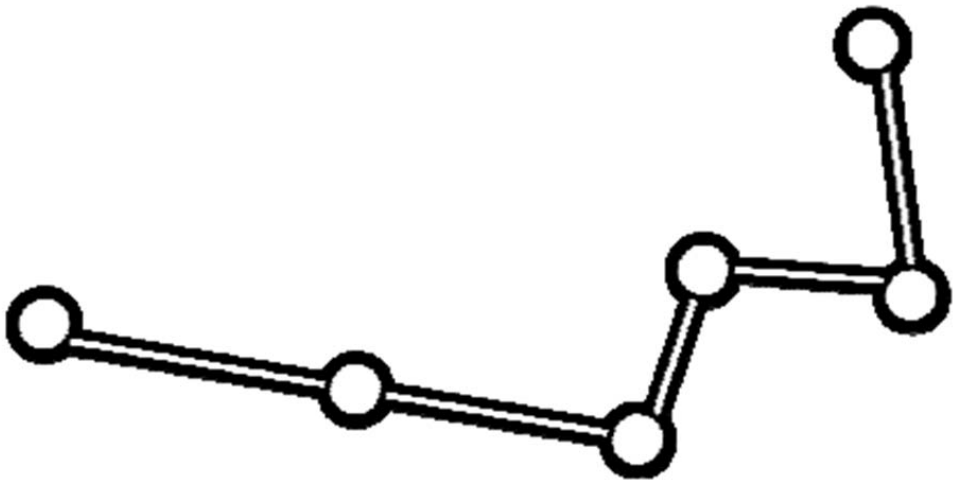

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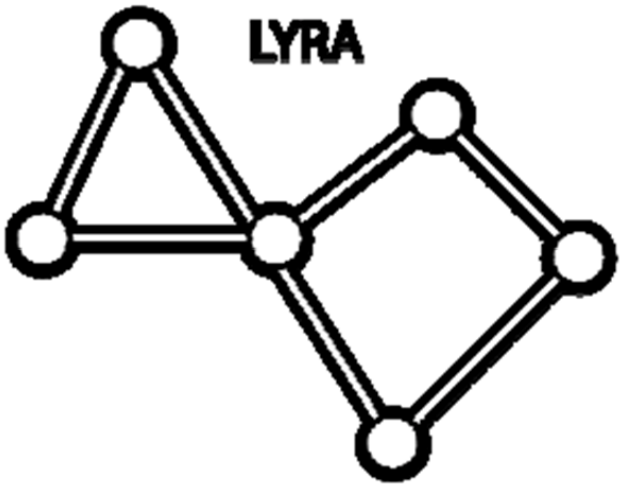
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