Navajo Nation Flag

Learning about Climate Change through the Navajo Nation Flag

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Introduction

Y1’1t’44h, Sh7 47Alex Gatewood Yinishy4. Ta’neeszhaii nish9go T1chii’ni b1sh7shch77n, Kinjich7i’ni47 dashiicheii, 11d00 T1b22h7 47 dashin1l7. Ts4nitsaa Deez’1h7d00 47 1yis7 naash1. Ts4hootsoo7di 47 Din’é k’ehj7 sh1’0lt1a.’

I became interested in the Diné Institute for Navajo Nation Educators because it promoted Diné cultural, historical, land-based, and oral language standards. I signed up with the hope that I would pick up some Diné language teaching strategies and would gain research and presentation experience. I have included the following verses from the bible because I believe that it relates to my research:

Praise him, sun and moon! Praise him from the skies! Praise him, skies above! Praise him, vapors high above the clouds! Let every created thing give praise to the Lord, for he issued his command, and they came into being. He established them forever and forever. His orders will never be revoked. (English Standard Version Bible, 2001, Psalm 148:3-6)

Context & Rationale

Rationale

What will our climate look like 30 to 50 years from now? The students that I’m working with will be in their late-thirties. What will they be doing? Will they be doing activities that help mitigate climate change?

Children need to be taught about how heat builds up in the earth’s atmosphere and about other greenhouse gases that cause climate change. They should be taught that fossil fuel emissions are the primary cause of the increase of carbon dioxide (CO2)e in the atmosphere. The amount of CO2 has increased from 280 to 419 parts per million by volume from 1958 to 2021 (Stein, 2020). Students also need to be informed that this increase in CO2 may help more plants grow, but can also cause droughts, floods, and extreme temperatures. Weeds, diseases from pests, and fungi are likely to increase due to warmer and wetter climates. CO2 may also reduce the protein and essential minerals in food crops leading to a decrease in the supply (The Causes of Climate Change, n.d.).

Finally, students should be taught that there are possible substitutions for fossil fuels such as solar, wind energy, and forests (Tree Facts, n.d.). We need to teach students to have the mindset that they can help solve the problem of climate change.

Context

During the pandemic, I realized that activity packets were the preferred method of learning. A few parents helped their children with the printed packets at home while most parents preferred online learning with their teacher. A small group of my students’ parents stated that getting an internet connection was not possible. Most of the packet work done by students got dropped off at school in a timely manner by their parents.

With the online, Zoom group lessons I tried to cover the same amount of work as I would on a normal non-pandemic day. This became overwhelming for English Limited Learner students
(ELL), Exceptional Student Service (ESS) students, and even regular students. I decided to focus on teaching the concepts covered and to hone a few skills that needed re-teaching. The contents on the packets were vocabulary, the Anchor text, phonics, phonemic awareness, and grammar in the morning hours and math in the afternoon.

I believe that presenting the learning packets in PowerPoint helped the students better understand the learning objectives. This included visual presentations from the text, graphic organizers, and student friendly text. My lessons in ELA and Math ranged from 30-45 minutes for each session. I thought that anything beyond 45 minutes would be too much sitting down and too much information for students to remember. I created some brain break exercises and we did these between learning sessions. This routine helped students understand the packet contents better. The pandemic created situations where I could not help students that really needed one-to-one instructions. If a student who signed up for learning packets preferred the teacher’s instruction over the parent, very little work would be completed at home. Fortunately, close relatives like grandparents, parents, and siblings could help in getting packets completed.

Now that we will be back in the classroom for 2021-2022, our district psychologist asked me to include lessons that enhance the healing of the mind after the pandemic. I think activities that focus on healing the Earth will also create a sense of social and emotional healing. Technology helped us teach children during the pandemic and now we need to teach children how to balance technology and Diné values.

Demographics

Tséhootsooi Primary Learning Center, or TPLC is located in Fort Defiance, Arizona on Navajo Route 12. TPLC is one of the five schools under Window Rock Unified School District No. 8 and is a forty-five-minute drive west of Gallup, New Mexico. Fort Defiance is a historical site because this is where the Long Walk to Fort Sumner began in 1864 (Dunbar-Ortiz, 2019).

Tséhootsooi Primary Learning Center serves preschool and 1st-3rd grades levels. The special areas at our school currently include Diné Language and Culture, PE, and Library. Each special area teacher is assigned to a grade level to assist students with iRead (an online reading program) during the morning hours and teach their special areas in the afternoon.

Content Objectives

The goal of this curriculum is to examine Diné cultural knowledge and western based knowledge and to discuss how students can use this knowledge to practice behaviors that support a healthy environment. In learning about our cultural and western knowledge, Grades K-3 can learn to analyze, compare and contrast, and think critically about historical Diné and present knowledge in the midst of climate change and discuss possible solutions based on what has been learned.
In this program, I want to look at the elements of the Navajo Nation flag designed by Jay R. Degroat in 1968. The flag is a tangible artifact for students to see and be familiar with in school and community events. Students will discuss the value of the symbols and how each has contributed to the harmony of Diné lives based on cultural teachings which might have answers and valuable solutions to climate change. As a result of my lesson, when students see the Navajo Nation flag (at school presentations, ceremonies, or the Navajo Nation Fair), they will be reminded of what they learned and I hope it motivates them to continue educating themselves and others to help fight climate change.

The majority of the students in my class are Diné, and in a Diné Language and Culture classroom at TPLC they must meet the standards expected of them through Diné culture, history, and Diné oral language experiences.

Pre K-3rd Diné Culture Standards

Standard: I will develop an understanding of the Diné way of life.
Concept 4 – I will apply and practice the Diné way of life with confidence.
PO1: I will recognize the cultural teachings of fire.
PO2. I will recognize the value of water (Diné Content Standards).

Pre K-3rd Diné History Standards

Standard: I will understand historical/factual events, people, and symbols that influence my family.
Concept 2 – I will understand historical events, people, and symbols with significant ties to my family.
PO2. I will identify symbols of the Navajo Nation (Diné Content Standards).

Pre K-3rd Oral Diné Language Standards

Standard: Utilizing the Navajo language and culture, I will listen, communicate, observe, and understand what I am being taught.
Concept 3 – I will utilize the Diné language to present information in a variety of situations.
PO2. I will use puppetry, acting and imitation to present information.
PO4. I will sing a simple song (Diné Content Standards).

Topics for the Curriculum

The Sun

Traditional Diné people believe that the sun is a deity that keeps them healthy through prayer and by making offerings to him. They would offer their prayers and offerings toward Ha’a’aah (the East) before the sun rose. Then, they would pray and make offerings again as the sun was set up at its highest point toward Sh1di’l1h (the South), and again in the evening toward E’e’aah (the West) as the sun set.

Another traditional teaching was that the Diné people had to be up with the sun. If the sun came up and someone was still asleep in bed, the sun considered her or him to be dead along with the others that died in the night. Children were taught that the sun will only count them with the living if they were up early before the sun rose. In late fall and winter, the Diné got rest because the sun allowed himself to rest, by making less daylight. This was a time for children to listen to winter stories while staying inside, and focus on planting corn during the spring and summertime (Parsons-Yazzie et al., 2007).

The Rainbow

Children can learn about Diné cultural tradition of why they should point at the rainbow with their thumb to show respect. Folklore tells that the Diné word N11ts’ilid (rainbow) is a symbol of protection and the pathway of the ‘Yeis.’ The rainbow intercedes between the Creator and the people and it controls the sun, moon, wind, and rain. A rainbow, ‘Yeij,’ encircles most traditional sand paintings to protect the image from evil spirits (Navajo Nation Flag: Meaning Behind the Symbols, n.d.-a).

The light that we see from the sun is called ‘visible light’ (The Color of Light, n.d.). When the energy (electromagnetic radiation) reflects off the raindrops, we see the rainbow colors red, orange, yellow, green, blue, indigo, and violet. Diné students can discover the characteristics and value of each color. For example, students will learn that “Leaves appear green because chlorophyll absorbs red and blue light energy, causing the green energy to bounce off the leaf’s surface” (Fun Facts About Trees, n.d.).

Navajo Nation Map

As the Diné population grew, it was difficult for the Diné to remain in the Treaty Reservation of 1868. The elders would say bił99’ helped them recover their lands. The Navajo agent, missionaries, and school administrators helped in requesting more land. In 1878, President Hayes signed an Executive Order to give the Diné people the land west of the Treaty Reservation. In 1880, more land to the east and south of the Treaty Reservation was added since the Diné continued to live there. The land between the San Juan River in southern Utah and the northern
border of Arizona was added to the Diné lands in 1884. Then in 1900 more land was added west of the Hopi Executive Order lands. Reverend William Johnston, a Protestant missionary, helped get more land after traveling with the Diné leaders to Washington, D.C., to inform President Theodore Roosevelt that the Diné of the Southwest were in dire need of land. The land east and southeast of the present-day Reservation was added from 1907 to 1917 (Parsons-Yazzie et al., 2007).

Mountains and Colors

Sis Naajini Ha’a’aahjí ‘igai (Blanca Peak to the East is White), Tsoodzi[ Sh1di’lahji doot[‘izh (Mount Taylor to the South is Blue), Dook’o’oos[iid E’eeahj7 ‘itso (San Francisco Peaks to the West are Yellow), and Dibé Nitsaa N1hook-sjí ‘izhin (Mt. Hesperus to the North is Black). The four directions of the sacred mountains can be used as a teaching tool about the cycle of life. According to Yazzie, the East direction represents infancy where a person depends on family members. The South represents entering childhood, a time when a child grows physically, emotionally, intellectually, culturally, and spiritually. It is also a time when he or she must be taught well to be able to apply the teachings of the Diné. To the West, the person’s responsibility is to be a good example when caring for and teaching his or her children. A person must model caring for their elders as their children will also care for them when they become old. To the North, an elder becomes like a baby again because they are dependent on the help of others again, but in this phase of life they are still responsible for teaching (Parsons-Yazzie et al., 2007). The Diné people treat mountains as sacred because the mountains provide for them (Yazzie et al., 2019). Diné elders say that the Diné have always lived on the land between the four sacred mountains. They believe that this natural boundary was given to them by the holy people (Parsons-Yazzie et al., 2007).

Corn

The Naad33’ (corn) stalks are considered the primary food staple representing fertility and sustenance. The yellow corn tassels are a sacred element used in healing rituals (Navajo Nation Flag: Meaning Behind the Symbols, n.d.-b). The Diné use tldiidiin (corn pollen) to ask for protection and power to the holy people so that their pathways in life would be positive (Raitt, 1987). Students can make many traditional Navajo dishes such as blue corn mush and kneel-down bread (Navajo Culture, n.d.).

D1’lk’éh (cornfield) unifies the family because the whole family, from toddlers to grandparents go out and work the field. The family will prepare the ground, plant the corn, make prayers to the Creator, and eat together. Toddlers represent seeds, life, innocence, and purity. Therefore, they plant corn in the freshly broken ground. Youngsters are taught that if they take care of the environment, the environment will take care of them. The elders say that the word “cornfield” means that only one person uses a tractor to prepare the ground and that the sound of the tractor interferes with the prayers of one’s planting (Parsons-Yazzie et al., 2007).

During the winter planting tools are made and repaired. The corn seeds are separated and stored by color (red, blue, yellow, and white). When the first thunder is heard in the spring, family members walk the length of the D1’lk’éh (cornfield) with prayers to let the Earth know that her
people are ready to adorn her with the planting of corn. With the scent of her fertile soil the people voice their prayers for rain to nourish the fragile seeds. As the Naad33’ (corn) sprouts their tassels in early summer, the Diné people collect the Tídidiín (corn pollen) to use for prayers for the survival of the D1’1k’eh (cornfield). In early fall, all the Naad33’ (corn) is gathered and piled up on the ground of the Chaha’oh (brush shelter). Diné families eat steamed Naad33’ as they share stories and plan for the next planting season. No one leaves the D1’1k’eh until all the empty corn stalks have been gathered so the D1’1k’eh can rest until the next planting season (Parsons-Yazzie et al., 2007).

**Ponderosa trees, Animals, Resources, and Homes**

Historically, the Navajo Nation relied heavily on sawmills, sheep, and oil for economic stability. This is why their symbols are on the Navajo Nation flag. In addition a traditional hogan and a modern home sitting behind an oil derrick are also on the Navajo Nation flag (*Navajo Nation Flag: Meaning Behind the Symbols*, n.d.-c).

In order to help the students, understand the benefits of trees and their relation to the symbol on our flag, the teacher and students can do temperature readings outside to understand the benefits of having trees around. Outside temperatures matter because, “Tree shaded surfaces can be 20-45 degrees Fahrenheit (11-25C) cooler than surfaces in direct sun, helping homeowners reduce summer cooling costs” (ISA and Trees Are Good, 2021). While taking the temperatures, teachers should inform students on other benefits of our local trees such as their use as timber.

**Livestock**

The elders prefer to use the term “Nihil99’” (our animals), instead of “livestock” because these animals (sheep, horses, goats, and cows) take care of us like relatives. These animals have been with the Diné from the beginning. When people have a hunger for mutton, they butcher the sheep to satisfy their cravings. The sheep’s wool provided clothing for the Diné long ago. Now the sheep’s wool is used to make traditional clothing for the Diné. The goats also provide warm milk that the Diné people still drink during winter mornings. The horses provide an extra pair of feet and legs to travel long distances. Cows were mostly sold and gave their owners the ability to buy expensive things. Nihil99’ are also important for traditional weddings where the groom would herd a selected number of Nihil99’ to the bride’s home (Parsons-Yazzie et al., 2007).

**Teaching Strategies**

Graphic organizers: teachers can use a Venn-Diagram to compare climate change with our normal, historical climate. This way students can observe how climate change effects like drought might look like contrasted with a flourishing land. If the lesson is on animals, the teacher can label the concept map with sheep, goats, cows, and horses. They can then lead a discussion about why these animals are important to the Diné people and likely climate change effects on these animals.

**Journals**
Students can keep a journal of what they’ve learned. These notebook journals can help them review Diné words. The teacher can encourage students to write about what they’ve learned and new questions that they might have. Student questions can be used for science research projects.

**Advanced Organization**

Similar to the practice of previewing a book before reading by skimming to get the gist of what will be read, students can be led to learn some vocabulary words before reading materials, like the book *Ponderosa Pete*, related to climate change.

**Monitoring Production**

Instead of having the students do a lesson of Continuous Writing, students can be given the opportunity to continuously draw. Later, teachers should guide the students in finding the correct Diné words that describe the picture they have drawn. Often, students are not able to speak the Diné language. The teacher can also use specific pictures to teach vocabulary in Diné.

**Rhythmic Beats**

Singing and dancing can be a daily opener for each new class. Whether the students are singing or not, at least they will be practicing by keeping in step with the drum beat in one of the cardinal directions. One Navajo pledge can be the 1966 Navajo Nation Flag song by Kay C. Bennett. Other songs related to the flag are the “Corn Grinding” song by Native artists like Radmilla Cody. The teacher should model how to sing and dance. If the students are sitting on the floor, they can review or learn new words by tapping their hands on their legs or other motions as they say the syllables of each word (i.e., Ni-dish-chii’).

**Classroom Activities**

The Navajo Nation Flag  
C2PO2: I will identify symbols of the Navajo Nation.  
This will be the first activity to start off the unit. While displaying the Navajo Nation flag, the teacher will ask where they have seen our flag.

For this first activity, the students will make their personal Navajo Nation flag. The materials needed are a printed coloring page of the flag, glue sticks, straws, and color pencils or crayons. The teacher will inform the students that it takes good listening and observational skills to complete the flag correctly.

The teacher will first show students how to wrap one side of the paper flag to the straw. As the teacher and students discuss each symbol, they will color that part of the flag. The teacher will introduce each symbol starting with the sun. The Diné hold the sun as a very sacred entity because it tells them when to rest and work the D1’1k’eh (cornfield) which continues to give them life. When the sunlight refracts through millions of rain droplets it creates a rainbow. The teacher should also discuss the sacredness of the rainbow from the Diné perspective.

Next, the teacher will show the students pictures of the four sacred mountains: Sis Naajin7, Tsoodzi [Dook’o’os] 77d, and Dib4 Nitsaa. The students will be taught that the Diné believe that the holy people gave them the Navajo land between the four sacred mountains. They can use their
colors to help them remember the positions of the mountains. The sky is bright as it rises from the East, the sky is blue as the sun travels southerly across the sky, the sky is yellowish when the sun sets in the West, and the sky is dark when the sun disappears and all that can be seen is the moon and constellations.

Then the teacher will help students understand that the brown rectangular shape on the flag represents the Treaty of 1868 that helped the Diné people return to homeland between the four sacred mountains and after being imprisoned at Fort Sumner, New Mexico for four years. As time passed by the Diné population grew so the government gave them more land which is indicated by the orange on the map. Teachers should ask students if they think more land will be added in the future.

Teachers will show students pictures of an oil rig, a generating station, and a ponderosa pine tree and ask if they can see them on their maps. They will tell the students that the people valued oil and coal because it created revenue for the tribe. However, the smoke created by the burning of coal and oil adds CO2 to the atmosphere and causes the earth to heat up. Additionally, people should not breathe the smoke because it is toxic for humans. Fortunately, the trees breathe in the dirty air and respirate (exhale) clean air for people and animals to breathe. Trees also provide shade to cool the air. After explaining how trees help us have cleaner air, ask the class how they feel about trees.

The next lesson will be a discussion on Diné housing. The teacher will share pictures of the male and female hogan and a gable roof house. They will tell students that the people also value trees for their use as timbers in the building of homes. At the conclusion of this activity, the students’ flags should match the original flag. Not all students will have an identical picture because they may have a different learning style that will influence how they made their flags. The teacher will explain to students that each new learning activity that they have done will relate to each of the symbols on the Navajo Nation flag.

Dioramas
Since each class attends Diné Language class for 45 minutes just once a week, the teacher only has one opportunity to do this learning activity. This activity is about the value of water. The main purpose is to help students understand how water is important to plants, trees, animals, and people. If all the plants dried up, the animals would starve, and if the animals starve, then what would happen to people?
S1C4PO3: I will recognize the value of water.

This lesson will be started by explaining that the Diné people depended on favorable weather for their survival. Their lives were organized around the changing seasons and the position of the moon. When the moon predicted a lot of moisture, the Diné people were happy because it meant bountiful plants and watering holes for their L99’ (their animals).

Dark strands created by the n7[ts3 (rains) evokes the image of a young woman’s long hair cascading down her back. The Diné people believed that as long as young women didn’t cut their hair, they would always be blessed with moisture. Parents tell their daughters that if they cut their hair, the rain will stop and their family will starve in the coming winter.

Therefore, children should show respect whenever the moon shows that there will be rain the next day because if the rain notices that the children are disrespecting the rain by running around and making loud noises, the rain will just move away.

The Diné people continually pray for the rains to come during the spring and summer seasons so that their crops and animals will always have water (Parsons-Yazzie et al., 2007). The teacher can test the students by having them name the animals and water in Diné. Conclude this lesson by having students create a simple diorama of animals surrounding a body of water.
Read *Ponderosa Pete*

*Ponderosa Pete* Skit

C3PO2: I will use puppetry, acting and imitation to present information.

This lesson requires lots of time for students to learn their lines and acting. Since each class attends Diné language and culture only once a week, it will be difficult to learn everything in one class time. Therefore, this will have to be an after school activity where there will be enough time for students to practice.

This activity is a good opportunity for students to experience planning, organizing, creativity, teamwork, self-evaluating, and skit production. This skit is adopted from the book *Ponderosa Pete* by Julia Gidley and illustrated by Scott Sink. The words are translated into Diné language.

Narrator: Hazeets’osii lei’ Bertie wolye jini. Shiigo t’oo ahayoi Nidishchii’ tahgii at’aatsin haalzheeh. (p. 1)

Tsin bigaan yikaa’doo naghal nit’ee’ tsedaa’gi nidishchii’ ayoi anilneez lei’ yiyiiltsa. T’aa ayisi daats’i la’i binaahai niizii’. (p. 4)

Nidishchii’ yee yaa dahneezda, aadoo yilchin nit’ee’ likan halchin.

Bertie: “Ayoo la’ likan halchin!”

Pete: (T’iiis nezii haadzii’) “Ahehee’”

Narrator: Bertie atsideesiyizgo nikidiighal. (p. 5)

Pete: “T’aadoo nalildzidi, shi adishni, Nidishchii’ Pete.”

Bertie: “Da’ Nidishchii’ Pete?”
Pete: “Aoo’ dii dzil biyi t’aa ayisi la’i shinaahai, taa’di neeznadiin doo bi’aan.”
Bertie: “Yaah doolaal honaahai dooleel, shi ei inda t’ala’i shinaahai.”
Pete: “Dii kwe’e shighan binaagoo t’aa ayisi laagoo ahoodzaa. Bee nil hashnewish?”
Bertie: “Aoo’ dii nidishchii’tah baa hane’igi k’adee distsi’ii.” (p. 7)
Pete: “1679 yee daa’ hosiili’. Idaa’ ei t’iis t’aa af’aa dahnaazhjaa’. Naaldlooshii la’igo keedahati. T’aa alts o nanise’ nidishchii’ doo tl’oh doo gado da t’aa aheelt’eego shandiin chodayool’i. Nidi t’ahdii t’iis yazhi jiligo ayoo hoooyee’ nit’ee’e.” (p. 10)
Pete: “Hat’isha’ biniinaa ayoo hoooyee’ nit’ee’?”
Pete: “Jo shigo nitsa bits’aadoo atsiniltl’ish ni’goo hodiiiltli’go nanse’ yazhi yee ahidideses nit’ee’e. Naaki ts’aa daa ninahahgo akonat’ii. Nidishchii’ t’aa danineezigii t’eiya t’aa daahinaa leh. Nidishchii’ yazhi t’aa dikwihiigo t’eiya holoo leh.” (p.11)
Pete: “Doo nizhoni da!”
Pete: “Ako nidi, ko’ ni’goo haziisgo bits’aadoo nanise’ anididigii nahoodleel. Ako naaldlooshii bich’iyya’ ba nahoodleel doo binahji ni nidishchii’ bitsiin nandiih.” (p. 13)
Pete: “Baa shil hozho, taa’di neeznadiin doo bichiya’ baa’ooh daa.” (p. 26)
Pete: “Baa shil hozho, taa’di neeznadiin doo bichiya’ baa’ooh daa.” (p. 26)
Student Assessment Plan

Considering that the school only has one 45 minutes class per week for each special area of instruction, the teacher can observe the students’ use of the Diné language and practice the language as needed.

The teacher should keep a notebook to be compared with the students’ notebooks. Each PowerPoint should be reviewed regularly to access what’s been learned. Teachers and students can also add lessons to the power point when new related learning has occurred. The 2nd and 3rd graders can paste teacher-made worksheets that support the learning activities into their Diné notebooks. If their classroom teachers ask them to reflect on what they have learned, these worksheets can be visual guides to help them write.

Resources


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This skit is a simplified version of the Ponderosa Pete skit. The teacher can use this script if students are having difficulty learning their lines. Instead of a few students saying their lines, the whole group can have a chance to say the lines in chorus.

All: Hazeets’osii l4i’ Bertie wolye jin7. Sh98go naalzheeh.
Bertie: Ay0o la’ [ikan halchin.
Pete: Ah4hee’.
Bertie: H17 sh2’ 1n7?
PPete: Sh7, N7d7shch77’ Pete.
Bertie: Da’ N7d7shch77’ Pete?
PPete: Aoo’, t1a’di neezno then shin11hai.
Bertie: Y1ah dool2[ hon11hai doolee[, sh7 47 t’11[1’i shin11hai.
All: Alk’id33’ 47 t’iis t’11 al’22n dahnaazhjaa’, Sh98go ko’ ni’g00 n1h1zis.
Bertie: Y1ah.
All: !ko nidi ch’il d00 nanse’ n1hoodlee[.
Ch’il nanse’ bits33d00 azee’ d00 [eets’aa’ h0l=.
K- na’a[b22sii hazl99’ d00 tsin l2’7go heeskal.
B44gashii d00 dib4 k’asd33’ a[ts0 da’77[chozh jin7.
T’iis y1zh7 t’00 ahay07 h11j44’.
Naaldlooshii d00 naat’agii bid33’ bi’o sil99’.
K’ad 47 k-‘ t’iis d00 kin iidiyi[k’33.
D77 47 nizh0n7, d77 47 doodah.