



A Collection of Curricula for the STARLAB Navajo Skies Cylinder



Including:

*A Guide to Navajo Astronomy by Nancy C. Maryboy, Ph.D. of the
Indigenous Education Institute (IEI)*

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***A Guide to Navajo
Astronomy***



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We hope that this guide will be used in accordance with Navajo protocol for cultural winter stories, out of respect for the knowledge and the knowledge holders who so generously shared their wisdom with us.

General Introduction

Teaching Navajo Astronomy and related cultural stories is very different from teaching western academic astronomy and folk tales. The very time and space in which the knowledge can be transmitted is different when one talks about native ways of knowing, in comparison to scientific knowledge transmission.

Navajo astronomy, as taught in a traditional setting, would take place in a hogan or home, among the family. A most knowledgeable elder would generally tell the stories as part of a legacy of traditional knowledge transmission. Today much of this knowledge has been forgotten or lost. It lives on in the realm of the esoteric, with pieces of the whole story held by different clans, different families and different knowledge holders. There is no one “correct” way to tell these stories. Each version holds its own integrity and lineage. Traditionally these stories were told in an eloquent manner as oral stories, with the storyteller infusing enhanced meaning through voice, movement and sound.

We have endeavored to collect stories and knowledge of Navajo astronomy ranging over periods of decades and lifetimes. We have compiled much of this knowledge from interviews and conversations with many Navajo elders and ceremonial practitioners. We have verified everything we include in this booklet with renowned cultural resource people. This knowledge is now being taken into classrooms in and around the Navajo Nation, including the states of Utah, Arizona and New Mexico.

We have developed a Mylar cylinder for use in the STARLAB, a portable planetarium. Telling oral stories in the darkness of the STARLAB, which resembles the cultural environment of a circular Navajo hogan, with music and voice, approximates the traditional Navajo ways of passing on knowledge. This Guide to Navajo Astronomy has been developed for use in the STARLAB but can also be used in a classroom or museum settings.

An important protocol to respect is the time during which the stories can be properly told. In accordance with traditional Navajo culture, stories of the sky, including stories of the Sun, Moon and Stars, can be told only during the winter months. There is also a brief period at midsummer, following the summer solstice, when some of the stories can be told.

Winter stories can be told from October to March. Navajos respect the time between the coming of the first frost, usually in October (Ghaaji’) when winter traditionally begins, and the coming of the first thunder, usually in late February (‘Atsa’ Biyaazh) that heralds the emergence of spring. Winter is considered to be a time of rest and reflection. The bears and reptiles are hibernating under the ground or in caves. The plants are gathering their strength to begin growing again in the spring. Traditionally families would gather in the Hogan and tell winter stories, including star stories and coyote stories.

After the summer solstice, Navajo astronomy stories can be shared in accordance with prescribed cultural traditions. At other times of the year it is not culturally appropriate to tell these stories.

Most of the drawings in this Guide have been identified and placed on the Navajo cylinder in the correct locations on the starfield. A few, however, have been just placed in the general vicinity of their correct location. This is in accordance with the desires of Navajo ceremonial practitioners and elders who wish the actual locations to remain anonymous in order to protect traditional knowledge.

A Brief Introduction to Navajo Astronomy

Navajo Reservation

Navajo Indians have been living in the Four Corners region of the American Southwest for hundreds of years. The land of the Navajo includes parts of three states: Utah, Arizona and New Mexico. The Navajo Reservation is similar in size to the state of West Virginia, extending over 25,000 square miles. According to the 1990 census there were 220,000 Navajos in the United States, with the majority living on the reservation.

Navajos have always believed that their homeland is geographically and spiritually located within the area delineated by four major and sacred mountains. Today, Navajo land, held in trust by the US government, has been set aside by treaty and executive order as an Indian Reservation.

Historical and Cosmological Origins

Traditionally and historically Navajos refer to themselves as the Diné, meaning “the People.” Sacred stories passed down from generation to generation tell of earthly and cosmological origins and relationships with continuous historical evolution through four worlds, ultimately leading to the Emergence that brought the Navajos to their present location.

Along with the traditional knowledge of evolution through the four worlds, higher Navajo consciousness acknowledges the origin of life through light, which preceded and gave birth to the evolutionary process. Thus it was a biological and metaphysical process that manifested as life on earth. The ancient origin of light provided the seed of consciousness and knowledge that is still acknowledged today in traditional Navajo society.

Organization of Star Knowledge

Navajos have organized their star knowledge from their central location surrounded by the four sacred mountains. The order of the stars is associated with the geographical information provided from the cardinal directions of the sacred mountains. The cardinal directions, east, south, west and north, are directly connected to the cosmic stellar process as observed from this position of centrality in the area of the four corners of the American southwest.

For example, east is associated with the place where the sun comes up, as evidenced by the equinox and solstice travels of the sun. Likewise in the evening, as the Navajo language clearly articulates, the area in which the sun goes down provides location and directionality. Embedded in the Navajo language all directions have a clear relationship with cosmic processes. Ha’aa’aah (east) means “where the sun comes up.” Shádi’ááh (south) means “as the sun travels with and for me.” E’e’aah (west) means “where the sun goes down.” Náhookqos (north) refers to the North Star (Náhookqos Bikq’), and Náhookqos Bikq’ (Big Dipper) and Náhookqos Bi’áád (Cassiopeia) as they always rotate and revolve in the northern direction of the night sky.

Cosmic Vision and Spiritual World View

Navajo astronomy is little known, even among the Navajos. Navajo astronomy has always been somewhat esoteric, more so today even than in the past. Navajo star knowledge is based on a world view and cosmology significantly different from western academic astronomy. Navajo astronomy can best be understood within a much larger context of Navajo philosophy.

The Navajo world view includes a holistic and ordered universe where everything is interrelated and all the pieces of the universe are enfolded within the whole. At the same time every piece contains the entire universe, creating a network of relationships and processes in constant flux. Unlike western astronomy, traditional Navajo astronomy is highly spiritual in accordance with a world view where everything is considered living and sacred. The entire universe is considered to be a living organism, a sacred organism existing in a non-static and constantly regenerating process.

The human is an integral participant within the dynamic whole. Every human action is considered cosmic and affects the web of universal relationship. This is similar to tenets of quantum physics in regards to principles of non-locality.

Constellations Provide Guidance and Values

Navajo relationships with the stars can be very personal. Star constellations can be utilized for healing body, mind and spirit. Many Navajo constellations are depicted in human form, providing principles and values for living. The Náhookos constellations represent family relationships, similar to that of a mother and father in their home. Náhookos Bikó', the North Star, stands for the central fire in a home, providing warmth, stability and security.

Other Navajo constellations that are depicted in human form represent differing stages of life, such as childhood, maturity, and old age. Likewise the stages themselves are tied to traditional values and the development of wisdom. These constellations include Dilyéhé (Pleiades), Átsé Etsózí (Orion), Hastiin Sik'áí'í (Corvus) and Átsé Etsóh (Scorpius). Still other constellations conceived of in human form depict stories of major importance to Navajo cosmology, such as Sq' Ahóts'í'í, (in Taurus).

Stars as Related to Animals and Natural Elements

Many Navajo constellations are directly connected to animals. Constellations such as Porcupine, Gila Monster, Mountain Sheep, Snake, Butterfly, Bear, Turkey, Coyote and Horse (Carrier of the Moon and the Sun) illustrate attributes of the animals and show how animals interact with human life. Coyote occupies a special place within Navajo cosmology, as trickster and balancer. Although Coyote often creates chaos, at the same time on a larger plane he provides harmony and balance.

Other Navajo constellations include natural elements such as Flash Lightning, the Sun, the Moon, and Thunder in the form of a Thunderbird. Although these may seem distant from one another, at another level of understanding they are interrelated and do not exist apart from each other. They connect through vital energies and vibrations.

The stars are also closely related to seasonal vegetational growth and animal life processes such as birth and mating. These processes follow a cosmic order as observed and experienced through Navajo observations. The cycles of the Sun and Moon provide calendrical structure and order that in turn are closely tied to the design and structure of the traditional round Navajo home, or hogan.

Order Provided by Cosmic Process

There are 8 main Navajo constellations, paired into twos, which are traditionally ordered in sequence. When one talks about these main constellations, one traditionally follows this order, beginning with the North Star (Náhookos Bikó') and ending with the Milky Way (Yikáísdáhá). According to Navajo tradition the 3 Náhookos constellations are not considered to be separate but rather as one complete constellation. The 8 primary constellations are listed first in the list of constellations that we have provided in this guide.

Special Stars

It is interesting to note that each constellation is connected to an igniter star that pro-

vides light to the constellation group. For example, Aldebaran in Taurus is considered to be the igniter star for the constellation Sq' Ahóts'i'i, the Pinching Stars.

In addition most Navajo constellations have a feather which signifies the spiritual essence of the constellation, and the link to the spiritual wholeness of the universe. A good example of the feather is Ii'ni, the Thunderbird, for which the feather itself consists of 6 stars which take 6 months to become manifest and visible in the night sky.

Astronomy Reflects a Holistic World View

The study of Navajo astronomy is very complex. It is highly cosmic and reflects a holistic worldview and way of life. This overview is a brief glimpse of seeing the skies through Navajo eyes.

Navajo Star Locations

The locations given are approximations. Most Navajo constellations are larger, or in some cases smaller, than the Greek equivalents. We name the Greek equivalents in order to show where the Navajo locations are located in the sky. In a few instances, we have not located the constellation with precision, in accordance with the wishes of our Navajo elders.

Náhookos Bi'ka'	Male Revolving One — Big Dipper
Náhookos Bi'áád	Female Revolving One — Cassiopeia
Náhookos Biko'	Central Fire — Polaris, North Star
Dilyéhé	Pinlike Sparkles — Pleiades
Átsé Ets'ózi	First Slim One — Orion
Hastiin Sik'a'íi	Man with Legs Ajar — Corvus
Átsé Etsoh	First Big One — Scorpius (upper part of Scorpius)
Gah Hahat'ee	Rabbit Tracks — Scorpius (lower curved hook of Scorpius)
Yikáisdáhá	Awaits the Dawn — Milky Way
Ma'ii Bizo'	Coyote — Canopus in the south is usually called the Coyote Star. There are actually four Coyote Stars. A second one is Polaris in the north. There are also east and west Coyote Stars.
Dahsani	Porcupine — northeastern sky
Sq' Ahóts'íi	Doubtful Stars — Hyades
Naayéé' Neizghání	Monster Slayer
Tóbáijishchíní	Born For Water
Yé'íitsoh	Giant
Íi'ni	Thunder — Pegasus for the body and stars for the feather, beginning with Denebola in Leo, (October).
Shash	Bear — Sagittarius
Tsetah Dibé	Mountain Sheep — Beehive Cluster in Cancer
Hoghan	Hogan — northern sky
Tachééh	Sweat Lodge
Tlish Tsoh	Big Snake — Puppis and Canis Major
Haashch'éshzhini	Black God — Near Pleiades
Tiníléi	Gila Monster — Andromeda
Jhil Gish	Flash Lighting
Kaalogi	Butterfly — southern sky
Asdzáán Nádlehé	Changing Woman — Hyades
Yoolgai Asdzáán	White Bead Woman — Hyades
Ma'ii	Coyote Tossing the Stars
Haashch'ééh Yálti'	Talking God
Haashch'éé'ooghan	Hogan God
Jo'hanaa'ei	Sun
v	Moon

Navajo Constellations Pronunciation Guide

There is a high tone to all vowels that are marked with an accent (á, é, í, ó).

There is a nasalization to all vowels that are marked with a hook (ą, ę, i, ɔ).

There is a glottal stop, a closing of the throat, for all vowels with an apostrophe (').

All pronunciations are approximate. Some sounds do not exist in the English language.

Náhookqos Bi'kq'	Na hoe kos Bih ka
Náhookqos Bi'áád	Na hoe kos Bih aad
Náhookqos Biko'	Na hoe kos Bih kwo (nasalize kwo)
Dilyéhé	Dil yeh heh
Átsé Ets'ózí	A tseh Ets osi
Hastiin Sik'af'ií	Hasteen Sick eye ee
Átsé Etsoh	A tseh Etsoh
Gah Hahat'ee	Gaa ha haat ay
Yikáisdáhá	Yih kais daahaa
Ma'ii Bizq'	Mah ee Bihzon
Dahsani	Daa saa ne
Sq' Ahóts'íí	Sew aho tsee ee
Naayéé' Neizghání	Naa yee Nez ghanee
Tóbájishchíní	Twoo ba jish chinee
Yé'iitsoh	Yay ee tso
lí'ni	Ee knee
Shash	Shaash
Tsetah Dibé	Tseh tah dibeh
Hoghan	Ho ghaan
Tachééh	Ta chay
Tlish Tsoh	Tli sh tso
Haashch'éshzhini	Haash ch' esh zhini
Tiníléí	Tyin il ay
Jhil Gish	Zhil gish
Kaalogi	Kah loe gi
Asdzáán Nádleehé	Ahs dzaan Naad leh eh
Yoolgai Asdzáán	Yolth guy Ahs dzaan
Ma'ii	Mah ee
Haashch'ééh Yálti'	Haash ch' eeh Yalth ti
Haashch'éé' ooghan	Haash ch'eh oh wan
Jo'hanaa'é'í	Jo haan aa ay
T'éhonaa'é'í	Tlay hon aa ay

Navajo Constellations and Stories

Náhookos Bi'kq̄' — Male Revolving One — Big Dipper

This constellation can be culturally seen as a male warrior, a leader who protects his people. He is sympathetic and charismatic, as well as a provider for his family and home. As a father he provides spiritual and physical protection to his family.

The term “Náhookos” refers to the double motion of the constellation as it revolves around the north star, while rotating at the same time. This constellation is always paired with a female counterpart, Náhookos Bi'áád, in a relationship of complementarity.



Náhookos Bi'áád — Female Revolving One — Cassiopeia

This constellation is the female partner of Náhookos Bi'kq̄'. She is a woman who exemplifies motherhood and regeneration. She provides growth, stability in the home and the strength necessary for harmony. Instead of a bow and arrow, her weapons are her grinding stone and stirring sticks, which ensure that she will always be able to feed her family.



Náhookos Bikq̄' — Central Fire — Polaris, North Star

This constellation depicts the central fire of a hogan, a Navajo home. This star never moves and thus provides stability to the cosmic home. The constellation is the central light and eternal fire that brings comfort to the home. It also represents human consciousness. This star provides the relationship that unites the two other Náhookos constellations into one.

The star gives centrality, balance and guidance to all other stars in the sky. It provides dynamic stability within the cosmic process as a star that appears stationary, not wandering.



Dilyéhé — Pinlike Sparkles — Pleiades

Dilyéhé is a constellation of timekeeping and planting for the Navajo people. The name “dilyéhé” is associated with the concept of planting seeds (k'elyéí) and sparkling dancing movement as seen in the stars themselves.

Dilyéhé is a regulator for planting. It is said “don't let Dilyéhé see you plant your seeds.” This comment refers to the phenomenon of the Pleiades disappearing in early May and reappearing in late June or early July. The Pleiades disappears in the western horizon in the evening in May and reappears as the helical rise in the morning in the latter part of June or the first part of July.

This is the preferred planting time for corn in Navajo country. Along with the disappearance of the Pleiades are other local and seasonal process indicators such as the emergence of certain plants and the runoff of streams from the mountains, as waterfalls. Navajos have lived with seasonal change for centuries and say that if you plant your corn seeds too early they will be destroyed in a late frost. If you plant your seeds too



late, the corn will not ripen before the first frost of autumn. Thus the seasonal cycle of Pleiades was of vital importance.

Other Navajo stories of Dilyéhé tell of seven mischievous young boys who follow the ones who plant too late and snatch the seeds out of the ground. Another story refers to a group of boys followed by a woman with a buckskin slung over her back. When the group goes over a hill, they are no longer seen in the night sky. This is when the Pleiades disappear in early May.

Another story talks of the Hard Flint Boys (Béesh Ashiké) who represent young warriors who are also healers in one of the traditional cultural summer ceremonies.

Other stories refer to the stars as a family: grandparents, parents, kids, and grandchildren, representative of the seeds of generations and regeneration. Incorporated in these stories are principles and values of traditional child rearing.

Átsé Ets'ózí — First Slender One — Orion

This constellation is depicted as a young man in the prime of life. He carries a bow and arrow and is a warrior protecting his people. Like Dilyéhé, this constellation is related to planting and is seen every season except for part of the summer. Átsé Ets'ózí is often spoken of as the son-in-law to Átsé Etsoh, which includes part of the constellation of Scorpius. In accordance with Navajo tradition of mother-in-laws and son-in-laws not meeting or speaking, Átsé Ets'ózí and Átsé Etsoh are never seen in the sky at the same time.



Hastiin Sik'aí'í — Man with a Firm Stance with Legs Ajar — Corvus

The constellation is representative of solidarity, strength and the continuity of cycles. At the same time it stands for the parting of the seasons between summer and winter. The constellation emerges in early October as Ghaají, the parting of seasons between hot and cold, and is fully manifest in November.

This constellation includes the Greek constellation Corvus, but in Navajo cosmology it is much larger, containing a total of 32 stars. Hastiin Sik'aí'í is an indicator that the major winter ceremonies can begin.

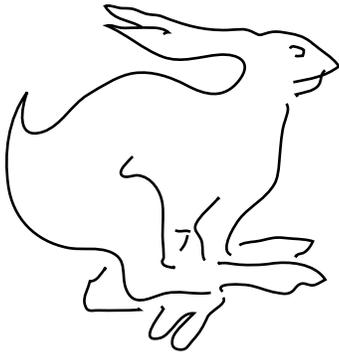


Átsé Etsoh — First Big One — Scorpius (upper)

This constellation depicts an elderly man with a cane and a basket of seeds. He represents the wisdom of the elders with a cane that provides strength and stability. The basket signifies the entire cosmos and regeneration.

Átsé Etsoh represents the wisdom and knowledge that come with old age. He is depicted as an elder, strong in assurance and the stability of life. He is located in the upper part of the Greek constellation Scorpius and includes other stars adjacent to Scorpius.

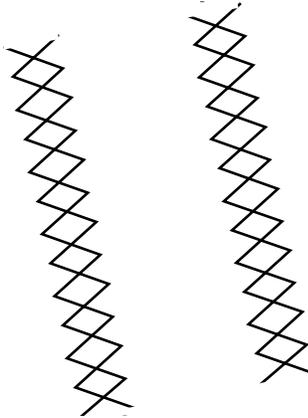




Gah Hahat'ee — Rabbit Tracks — Scorpius (lower curve)

This constellation depicts the tracks of a rabbit running and leaping out. When Rabbit Tracks turns on its side in the early fall, it signifies that deer are old enough to survive without their mothers, and people can begin to hunt them. The constellation thus heralds the beginning of deer hunting season.

This constellation is located in the lower curved tail of Scorpius. It is found in the southwest sky in the fall and slowly tilts to the west as the months progress.



Yikáisdáhá — That Which Awaits the Dawn — Milky Way

Yikáisdáhá, That Which Awaits the Dawn, is related to the annual Milky Way process. The emergence of pre-dawn is determined by the position of the Milky Way that changes with the nights, months and seasons.

Yikáisdáhá can be experienced by the full cyclical emergence of the Milky Way in the early pre-dawn hours of mid January. It is during this time the full circle of the Milky Way aligns with the horizon. Thus, a person can observe the full Milky Way in every direction, as it lays on the horizon in a circle. The Milky Way is depicted in Navajo sandpaintings as a crosshatched line, indicating the changes of its position in the night sky, from one side to another. Yikáisdáhá is the last of the eight main constellations and signifies completeness and wholeness.



Ma'ii Bizo' — Coyote — Canopus

Ma'ii or Coyote took part in the naming and placing of the star constellations during the Creation. He placed one star directly south, naming it after himself, Ma'ii Bizo', the Coyote Star. This star is Canopus, which from Navajo land appears to be directly south on the horizon.

The visible path of Canopus is of very short duration because its position is due south. It comes out and goes down in a semicircular path, as observed from Navajo country. It can be seen from Navajo land in late December near the date of the winter solstice, around midnight. The star is really a supergiant star with a sparkling movement, which Navajos say is a red-orange color. It is the second brightest star in the night sky after Sirius, when it can be seen.



Dahsani — Porcupine

Dahsani is located in the northeastern part of the sky. He provides leadership to the animals of the mountains. He is featured in the Mountainway ceremony of the Diné. Mental illness and physical stomach ailments are associated with the porcupine.

The porcupine is said to have helped the Navajo find food. Long ago during a very cold winter a group of Navajos were running out of food. They had used up all their supplies and they were in danger of starvation. The porcupine appeared and showed them how to consume the inner bark of certain trees that grow in the mountains, the pine tree and fir tree.

Sq' Ahóts'íí — Pinching or Doubtful Stars — Twin Stars in Hyades

This constellation is associated with Dilyéhé and Átsé Ets'ózi. The name Sq' Ahóts'íí refers to doubtful or pinching stars. Pinching may allude to the closeness of the twin stars, while doubtful may refer to their parentage. Another story relating to the pinching concept refers to two women fighting, with their hands pulling each other's hands, arms, and hair. The bright star of Aldebaran is the fire of the Twin Stars.

There is an interesting story about Sq' Ahóts'íí which is part of a larger, more comprehensive story. According to the storytellers, Átsé Ets'ózi and Dilyéhé were arguing over which of them were the rightful parents of two beautiful twin girls. In Navajo the names of the girls are Sà'ah Naaghái and Bik'eh Hózhóón, loosely translated as Long Life and Happiness. These two terms embody the whole of life, in terms of complementarity.

When the girls attained maturity the Sun visited them and in time they gave birth to children. Sà'ah Naaghái, gave birth to a son, Yé'itsoh, who became one of the monsters who terrorized people on earth. Bik'eh Hózhóón gave birth to twin sons, who became the Hero Twins in Navajo oral histories: Naayéé Neizgháni and Tóbájishchíní (Monster Slayer and Born For Water). These twin boys eventually visited their father the Sun, and received weapons with which they slayed most of the monsters on earth. The Hero Twins have their own stars, close to Sq' Ahóts'íí.

Changing Woman is a beloved deity of the Navajo. She represents the cyclical processes of growth and regeneration of all life. In the Navajo oral histories, she was found on the top of a mountain by Talking God and raised by First Man and First Woman. The Sun was the father of her twin sons, Monster Slayer and Born For Water. She is thus one and the same with Bik'eh Hózhóón, one of the two twin girls, in the Sq' Ahóts'íí constellation.

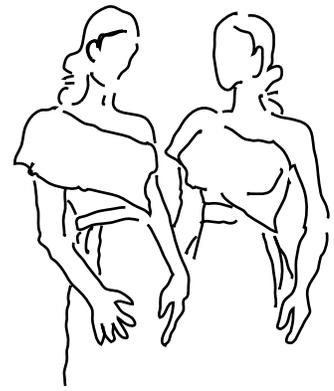
White Bead Woman is a form of Changing Woman. In some stories they are separate female energies and in some stories they are one and the same. White Bead Woman is a beautiful female who gives birth to Yé'itsoh, one of the monsters. The father of her son is the Sun. She is identified with Sà'ah Naaghái in the constellation Sq' Ahóts'íí.

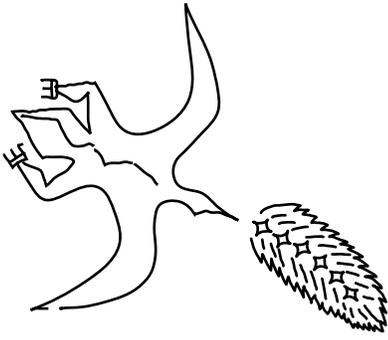
Naayéé' Neizgháni dóó Tóbájishchíní — Monster Slayer and Born For Water

This constellation includes two stars that depict the Hero Twins, who slay the monsters and make earth safe for humans. There are many stories of their exploits, which are well known to most Navajos. Major Enemyway ceremonies that take place in the summer months feature the healing energies of Monster Slayer and Born For Water. In many versions of the stories Monster Slayer is the warrior who kills enemies, and Born For Water is the gentler side of man, who provides assistance and healing.

Yé'itsoh — Giant

Many Navajo stories tell of a long ago time when monsters roamed the earth. Yé'itsoh was one of the monsters who walked on the earth's surface and terrorized children and their parents. Yé'itsoh was said to be the son of Sà'ah Naaghái. Yé'itsoh was slain by Monster Slayer, his cousin brother. They shared the same father, the Sun. After most of the monsters were slain, the Hero Twins allowed a few monsters to live, such as Poverty and Lice, to remind the Navajo that life holds both perfections and imperfections and that we should appreciate life's gifts.

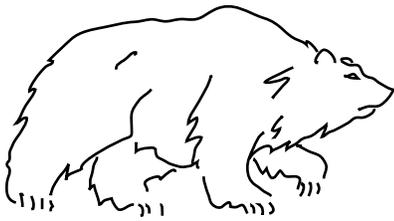




Ii'ni - Thunderbird — Pegasus and Various Stars

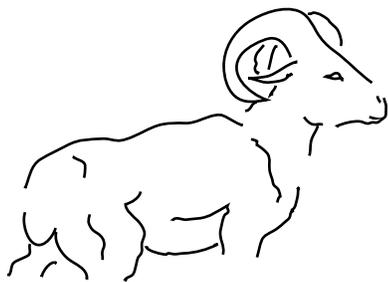
The Thunder constellation is similar to the Bear constellation. It is considered a spring and summer constellation and will first appear with the heliacal rise in the pre-dawn hours of early spring. This occurs about the same time that the First Thunder of spring sounds on earth signifying the coming of spring. The emergence of the First Thunder and the appearance of the Thunder constellation in the sky awake the life processes and emergence of spring and moreover signals the rejuvenation of seasonal life cycles on earth. The Thunder constellation manifests the intricate interconnection of all life in the universe, animals, plants, humans, thunder and lightning.

The essence of the Thunder constellation is depicted as a feather containing six stars. Each star represents a month and can be identified with the morning heliacal rise of the first bright star in the East, following the new crescent moon, for each of the six months. Unlike most Navajo constellations, the Thunder constellation covers a major portion of the sky and appears over many months. The first indication of its feather comes in the early morning hours in September/October (Denebola in Leo) and is completed in February/March (tip of Pegasus). The body takes an additional three months to completely appear, March, April and May, and remains visible during the rest of the summer.



Shash — Bear — Sagittarius

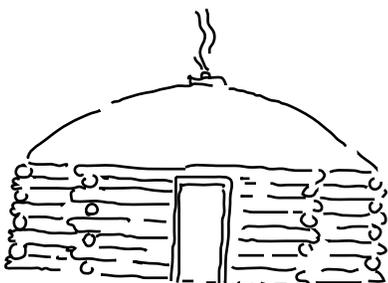
The Bear constellation is considered a spring and summer constellation. It will first appear with the heliacal rise in the pre-dawn hours of early spring and signifies the coming of spring. The Bear constellation will emerge in the eastern horizon with the ears and nose appearing first. When the nose appears on the horizon in conjunction with the last star of the Thunder's feather, it is said that the First Thunder sounds, heralding the onset of spring on earth. This is about the same time that bears emerge out of their caves after winter hibernation.



Tsetah Dibé — Mountain Sheep — Beehive Cluster near Cancer

The Mountain Sheep constellation is considered a winter constellation, primarily because of its association with the Navajo winter Nightway ceremony. The constellation is thus visible in the winter months to the naked eye when it is very cold outside and when the moon is not too bright. The constellation will appear over the evening eastern sky in early winter and will be overhead at dawn. It corresponds to the Beehive Cluster in Cancer. During this time the winter nine-night ceremonies are being conducted and the sparkling constellation overhead is an indicator of dawn coming, signaling the completion of the night ceremonies.

The Mountain Sheep constellation is connected with healing. In accordance with Navajo oral stories the ceremony of Nightway is associated with the mountain sheep.



Hooghan — Hogan, home

The Navajo hogan, or traditional home, is a replica of Mother Earth and Father Sky as shown in the illustration. The hogan floor is shaped like a circle, as one would observe the sky from the earth, encircled by the horizon. The upper dome shaped roof of the hogan is a replica of the sky, or Yadiłhił, Upper Darkness, as Navajos would call it. Traditional hogans are constructed in accordance with the four cardinal directions, with the door always facing east, in alignment with the spring and fall equinoxes.

Tachééh — Sweat Lodge

The circular shape of the Sweat Lodge is similar to that of the Navajo hogan and, like the hogan, the Sweat Lodge is structured with the Navajo observation of the cosmos. The Sweat Lodge is used by the Navajos for cleansing of body, mind and spirit. Historically, the transmission of valuable star knowledge and healing occurred in the Sweat Lodge.



Tl'ish Tsoh — Big Snake — Puppis and Canis Major

The Big Snake constellation is located in the southern sky. By comparison with the Greek constellations, the Big Snake is located in part in the constellation of Puppis and partly in the constellation of Canis Major. Historically Navajos used this constellation to indicate the coming and going of winter. This constellation is thus visible when the snakes on earth are hibernating in the ground. Navajos use this star constellation for healing purposes in traditional healing ceremonies.



Haashch'ëshzhiní — Black God — Near Pleiades

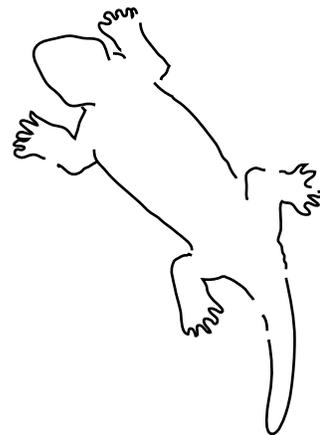
Haashch'ëshzhiní is one of the Navajo spirits, often referred to as Black God or the Spirit of Darkness. The constellation embodies the Upper Darkness, the night sky, fire and light (which can be the stars). The constellation is one of the important Yei beings in the nine-night Navajo Nightway healing ceremony. The mask worn by Haashch'ëshzhiní is made of night sky, all dark, with the Pleiades on the left forehead. The crescent and full moon are also depicted on the mask, with a line drawn to interconnect them, representing the monthly lunar cycle.



There is a traditional story that is usually told in the winter, set at the time of creation. Black God is showing the other Yei's his power in relation to the cosmic energies. He stamps his foot once and the Pleiades jump to his knee. He stamps his foot again and they jump to his hip. Finally he stamps his foot one last time and the Pleiades jump to his left temple, where they remain.

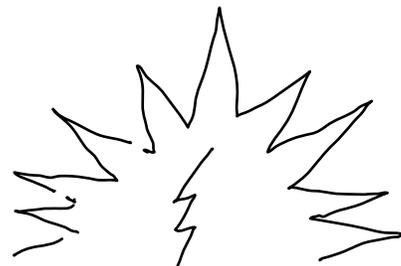
Tiníléí — Gila Monster — Andromeda

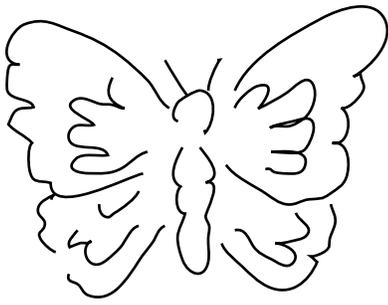
This constellation is situated in the northern sky, in Andromeda, close to Cassiopeia. In Navajo culture the Gila Monster is a respected reptile. The Gila Monster constellation carries the same connotations and respect as the earthly Gila Monster. Some Navajo diagnosticians, referred to as Hand Tremblers, use the Gila Monster vibration energies and forces to diagnose for healing purposes.



Jhil Gish — Flash Lightning

The Flash Lightning as observed on earth is also observed in the Navajo night sky. The word Jhil Gish, lightning, describes the flash lightning that comes from the thunderclouds, during the thunder season. When Jhil Gish appears in the sky, an entire area of the sky lights up and thunder sounds roll across the sky. This has been known to occur in the fall in Navajo land.





Kaalogi — Butterfly — Southern Sky

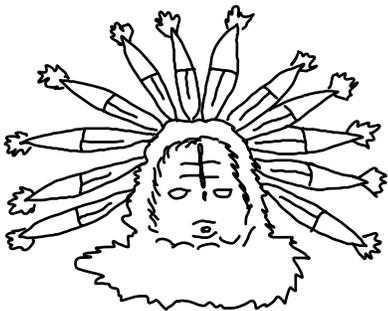
Kaalogi is considered to be a southern constellation. It is adjacent to the First Big One, Átse' Etsoh, a part of the Greek constellation Scorpius. It is considered a summer constellation. It is visible during the time when butterflies are migrating through the Navajo Nation. Navajos, like other southwestern tribes, respect the butterfly as a symbol of the process of change, growth and regeneration.



Ma'ii — Coyote Tossing the Stars

The trickster, Ma'ii, or Coyote, is often credited with creating chaos, thus creating a larger order in the universe. One story goes this way. Long ago the Holy Beings were creating precise constellation forms out of crystals, which were stars. Hashch'éshjhiní, Black God, was carefully placing each star with a purpose and location in the Upper Darkness, which we call sky. He created Náhookqos Bi'ka' and Náhookqos Bi'áád and placed them in the Upper Darkness. He then placed Dilyéhé and Átse' Ets'ózi, then others.

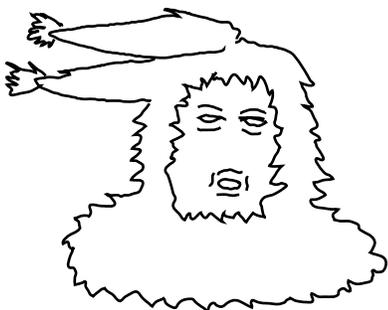
Pretty soon, Coyote came along and asked what they were doing. In many stories the Coyote's curiosity leads him into trouble. The Holy Beings replied that they were creating order and light in the sky. Coyote was immediately enthusiastic and asked to help. He was allowed to participate and he began to take crystals off the buckskin and place them in the sky. He placed one star in the south and exclaimed, "that will be my star, the coyote star." He placed a few other stars, claiming them for himself, including the red North Star, thus separating north and south. He soon grew impatient. When no one was looking, he grabbed the buckskin and tossed it high into the sky. All the remaining crystals flew out of the buckskin in all directions. There was no more precision in the placing and naming of the stars. This, Navajos say, is why there are so many stars without names or constellation forms.



Haashch'ééh Yálti' — Talking God

Haashch'ééh Yálti' is loosely glossed as Talking God. This is somewhat surprising since Haashch'ééh Yálti' is really a spiritual being that does not speak in a human sense. The constellation is one of the main Navajo Yeis (holy beings) and is associated with the eastern daily predawn cosmic process. The twelve eagle feathers of his headdress can often be seen in the predawn, just before sunrise. His black and white eagle feathers represent the dawning process, as the upper part of the night sky is dark, and the lower part of the dawn sky, as observed from earth, is light.

Haashch'ééh Yálti' is considered to be a prominent leader in Navajo culture. He is one of the leaders that took part in the creation of the Navajo constellations.



Haashch'ée'ooghan — Hogan God or Second Talking God

Haashch'ée'ooghan or Second Talking God, is one of the main Navajo Yeis and is associated with the western daily evening twilight cosmic process. Haashch'ée'ooghan is considered to be a prominent leader in Navajo culture. He too took part in the creation of the Navajo constellations.

Haashch'ée'ooghan follows Haashch'ééh Yálti' through the cosmic process of dawn and evening twilight. They are a pair, a complementarity, creating wholeness through a cyclical process.

Jo'hannaa'éí — Sun

The Sun and the Moon are usually paired together. Together their cycles determine the times of the months and the years. There are usually twelve full moons in a year, but occasionally, every few years, Navajos acknowledge a thirteenth moon around the time of October, according to old Navajo teachings. This resets the calendar system so that the Sun and Moon cycles are harmoniously balanced.

There are many stories about the Sun, including the stories we have referenced about the Twin Girls, the monsters and the Hero Twins. It is said that the Sun built a beautiful home for his wife, Changing Woman, in the waters of the West. She lived there with him for a long time and raised children who became the foundations of the Navajo clan system.

The Sun is said to be a male energy, depicted by a perfectly round turquoise disc. It is said to be carried by a Sun Carrier as it makes its daily rounds across the sky. It is often shown being carried by a humanlike person riding a horse.

The energies of the sun are used in healing ceremonies. People are reminded to not look at the Sun during an eclipse. If they forget and look at the sun, they will have eye troubles. These can be healed by the sun's energies.

T'éhonaa'éí — Moon

The moon is considered to be a female energy in relation to the male energy of the Sun. There are many stories about the moon, often passed down through the female side of a family.

The moon is usually depicted as a perfect white shell disc, carried by the Moon Carrier as he rides his horse across the sky. The phases of the moon are considered to be very important and there is a Navajo name for each of the 29 nights of the lunar cycle.

Navajos begin the first day of the lunar cycle with Dah hiitá, the first crescent moon visible after the new (dark) moon. The meaning of the moon is life itself, intrinsically connected with the life cycles of all organisms. The moon is a regulator of many things: birth, weather, ocean tides, calendar, life cycles of women, birth control, ceremonial functions and behavioral influences.

Ts'aa — Basket

The Navajo basket enfolds both Mother Earth and Father Sky. The basket weaves both earthly and celestial physical essences (mountain, rainbow, clouds, zigzag lightning and stars). Náhookos Bikó', the North Star, is woven into the center of the basket. From this center emerges a spiral anti-sunwise (counterclockwise) process, moving in accordance with the nightly counterclockwise cycle of the circumpolar stars.

