

# Daytime Constellations

**Theme:** Teach participants about constellations during the day instead and tell a few Native American Stories.

## Background

Learn the basics of constellations. Even though the program is during the day we will still cover the basic facts about constellations with a few activities to get them started. Then we will go into the zodiac signs and a small history behind them. We will then tell a few Native American tales that were found in *They Dance in the Sky*. We will then finish off with teaching about mapping and measuring constellations.

**Age**

All ages

**Time**

1 hour

**Outline**

Set up

Staff/EA Meeting

Arrival

-Introduction (10 minutes)

-What is a

Constellation (5 minutes)

-Zodiac Signs (10 minutes)

-Native American Tales (10 minutes)

-Mapping

Constellations. (10 minutes)

-Wrap Up

## Program Activities

### Introduction (10 minutes)

Objective: To inform the participants of what the class will be about

1. Talk about the schedule of the class
2. Introduction of presenters
3. Have participants look up into the sky and describe what they see. Then ask them to close their eyes and imagine that it is dark out, now what would they see in the sky?

### What is a Constellation (5 minutes)

Objective: To teach the participants about constellations

1. Activity: Print off page 19 from *Find the Constellations* and have the kids try to find and connect the stars to form a constellation. Check and tell them what it is actually supposed to be when done.
2. A constellation is a group of stars that form a pattern in the night sky
3. 88 official constellations
4. Some constellations can only be seen in the Northern Hemisphere while others can only be seen in the Southern Hemisphere.
5. Few can be seen all year round



6. The constellations you see during the summer will for the most part be different than the ones you are seeing during the winter. Every night, each star rises into the sky about four minutes earlier than it did the night before. If you go outside two days in a row at the same time and note the position of the constellations you will notice they have slightly changed from one night to the other.
7. The Sun is the only known star that is known not to be in any constellation.
8. Activity: Possibly make our own star charts.

## Zodiac Signs (10 minutes)

**Objective:** To teach the participants about the zodiac signs and how they relate to constellations.

An astronomer noticed that the Sun and planets move across the sky and appear to travel along a set course that passed through a small belt of stars. The constellations in the band are known as constellations of the zodiac. On any night you can see from 5-6 of the constellations lined up after one another. Zodiac is a Greek word for "belt of living things." When people saw a trend in the weather during a certain time of year they began to relate it back to the constellation.

1. Capricorn the goat: December 22-January 19; Ambitious, cautious, practical
2. Aquarius the water carrier: January 20-February 18; Curious, outgoing, independent
3. Pisces the fishes: February 19-March 20; Artistic, caring, sensitive
4. Aries the ram: March 21-April 19; Bold, courageous, energetic
5. Taurus the bull: April 20-May 20; Conservative, stubborn, loyal
6. Gemini the twins: May 21-June 20; Lively, talkative, intelligent
7. Cancer the crab: June 21-July 22; Thoughtful, patriotic, emotional
8. Leo the lion: July 23-August 22; Cheerful, proud, powerful
9. Virgo the virgin: August 23-September 22; Modest, practical, tidy
10. Libra the scales: September 23-October 22; Friendly, cooperative, nice
11. Scorpio the scorpion: October 23-November 21; Secretive, passionate, intense
12. Sagittarius the archer: November 22-December 21; Happy, generous, restless



## Native American Tales (15 minutes)

Objective: To teach the participants about some of the tales the Native American's about constellations.

1. Bear Hunt <https://www.aavso.org/myths-uma>
2. The Seven Sisters  
[https://www.naic.edu/~gibson/pleiades/pleiades\\_myth.html](https://www.naic.edu/~gibson/pleiades/pleiades_myth.html)
3. The Fixed Star <https://universe2go.com/en/fixed-star-sky/>
4. Activity: Have the participants create their own constellation using black paper. They poke holes where the stars would be and using a white crayon they can draw they actual shape. Then on the back of the paper they have to create their own story for the constellation.

## Mapping Constellations (5 minutes)

Objective: To teach participants about measuring and mapping constellations.

1. Astronomers have a way of mapping out constellations by using their hands. Pinky Finger is about 1degree, three fingers pressed together is about 3degrees, from your pinky to your index finger it is about 15 degrees. Try making a fist and finding the Big Dipper, you hand should fit into the cup which is about 10degrees.
2. When measuring make sure to have your arm a fully arm's length away from you.
3. This is not fully accurate because people have bigger and smaller sized hands but this is just a rough estimate.

## Wrap Up (5 minutes)

Objective: To review what the participants have learned.



## ***Backup Activities***

All activities and lessons can be performed either inside or outside depending on the weather and other interfering engagements

## REFERENCES

Monroe, Jean and Williamson, Ray. *They Dance in the Sky Native American Star Myths*. New York. Jean Guard Monroe and Ray A. Williamson. 1987

Driscoll, Michael. *The Night Sky*. New York. Black Dog & Leventhal Publishers, Inc. 2004

