

# NATIVE AMERICAN EDUCATION FOR ALL RESOURCES

Partnership of IllumiNative and the National Indian Education Association



ILLUMINATIVE



Grade Level

**3-5**

Subject

**Science**

Lesson Title

**Ancient Astronomy: Native American Star Stories**

**Activity Description:** Since ancient times, Native American tribes have used traditional methods of astronomy to understand time and seasons as well as create origin stories based on the stars. This activity features several star stories from different tribes as well as a map to study the stars in the night sky. After completing the activity, young people can practice being their own traditional astronomer

## MATERIALS NEEDED

- WiFi Access recommended
- Smithsonian Star Stories on YouTube (Optional: Wifi required)
  - [Mohawk: The Never Ending Bear Hunt](#)
  - [Cheyenne: Quillwork Girl and Her New Seven Brothers](#)
  - [Piaute: The Star that Does not Move](#)
- Digital or Print Version of ["Bears in the Sky" Lesson guide](#)

## STEPS

Astronomy is the science that studies the bodies in the universe such as the stars and the sun. Before the invention of modern tools like the telescope, tribes used the stars that they could see to help them follow the seasons and create knowledge of their world. Many tribes have origin stories of how they began from the stars or even how the stars were placed in the sky. Modern science calls these collections of stars, constellations. This activity will take a closer look at the Bear constellations (Ursa Major and Ursa Minor) and several traditional star stories.

### Activity Steps:

1. Read the Background section of page 1 on the digital or print version of the ["Bears in the Sky" activity](#).
2. You can follow the lesson plan steps on page 1 & 2 or skip to page 3 and look at how the Bear constellations Ursa Major and Ursa Minor are found in the night sky.
3. Next, read the "Roman Legend of Ursa Major and Ursa Minor" on page 4 and "The Iroquois Legend of the Three Braves" on page 5.
  - a. How do both of these legends use bears to explain why the star constellations are in the sky?
  - b. How do the legends explain the shape of the constellations?
  - c. Does your community or tribe have any star stories to share?
4. After reading these stories, watch the following star stories from the Smithsonian (WiFi required).
  - a. [Mohawk: The Never Ending Bear Hunt](#)
  - b. [Cheyenne: Quillwork Girl and Her New Seven Brothers](#)
  - c. [Piaute: The Star that Does not Move](#)
5. Why do you think there are so many different star stories? How do we still know many of these ancient star stories today? Share the stories from this activity with your family or friends.
6. On a clear night, use the constellation chart on Page 3 to look for the bear constellations in the sky with your family. Then, ask you family or elders to share any local star stories.

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## HELPFUL TIPS

**Parents and caregivers:** This activity not only encourages young people to explore the night sky but to also think about how ancient knowledge depended on observations in nature. Modern science is very similar but with more sophisticated instruments and tools. Many times scientists do not recognize the importance of traditional Native science knowledge. This is why careers in science are very important for Native students to pursue. Use this activity as a way to interest your child not only in cultural knowledge but in conversations about his or her career interests. For more details about an astronomy career to share with your child, visit this website with him or her: [Easy Science for Kids: How Do I Become an Astronomer?](#)

**Family star gazing:** On a night when the skies are clear, use the print or digital version of page 3 of the ["Bears in the Sky" activity](#). This page shows where Ursa Major and Ursa Minor are found in the sky. Invite your family to join you outside to search the sky for the Bears (Ursa Major and Ursa Minor).

## WANT TO LEARN MORE?

**Families and educators:** This activity can open up a lot curiosity about constellations and the way that tribes studied the stars for traditional knowledge. To learn more, visit the sites below:

- For more in-depth learning about Native astronomy, read this informational article ["Seeing Stars the American Indian Way."](#) It features the Skidi Pawnee buckskin Star Chart and additional links. The reading level is higher than grades 3-5 so children may need assistance with this website.
- To learn how more about Ursa Major or Ursa Minor and other constellations, visit the [interactive Constellations page](#) on the DK Findout! website for young people

### Activity Resources:

- Digital or Print Version of "Bears in the Sky" Lesson [https://nieonline.com/downloads/national\\_wildlife/13wlv/bears\\_in\\_the\\_sky.pdf](https://nieonline.com/downloads/national_wildlife/13wlv/bears_in_the_sky.pdf)
- Smithsonian Star Stories on YouTube
  - *Mohawk: The Never Ending Bear Hunt* <https://www.youtube.com/watch?v=bH2mCcivlIQ>
  - *Cheyenne: Quillwork Girl and Her New Seven Brothers* <https://www.youtube.com/watch?v=5x-Ltq02avY>
  - *Piaute: The Star that Does not Move* <https://www.youtube.com/watch?v=dtBqbMfuq1l&t=41s>

### Additional Resources:

- How Do I Become an Astronomer? from *Easy Science for Kids* <https://easyscienceforkids.com/astronomers/>
- "Seeing Stars the American Indian Way" by *Astro Bob*. <https://astrobob.areavoices.com/2012/02/01/seeing-stars-the-american-indian-way/>
- "Constellations" an interactive webpage from *DK findout!* <https://www.dkfindout.com/us/space/constellations/ursa-major/>