

NATIVE AMERICAN EDUCATION FOR ALL RESOURCES

Partnership of IllumiNative and the National Indian Education Association



ILLUMINATIVE



Grade Level

6-8

Subject

Social Studies
& Science

Lesson Title

Archeoastronomy: The
Skidi Pawnee Star Chart

Activity Description: This activity introduces the study of archeoastronomy through the lens of North American tribes. The sources include ancient star maps, methods of navigation, and explanations of constellation naming. Explore how tribal ancestors valued the stars not only for origin stories but also for direction and tracking time. Then, practice ancient astronomy with friends or family.

MATERIALS NEEDED

- WiFi access (recommended)
- Paper and pen/pencil (flashlight optional)
- Print or digital version of "[Native American Astronomy](#)" article by Vassar College
- Print or digital version of "[Seeing Stars the Native American Way](#)" by *Astro Bob*
- Print or digital version of "[Hunter, Canoe, Chief or Bison: Constellation Orion in Native American Astronomy](#)" from *Indian Country Today*

STEPS

Archeology is the study of ancient history through artifacts left behind. *Astronomy* is the study of the universe. Together, they form an area of study called *archeoastronomy* that looks at how ancient cultures used the sky. Follow these links to learn more about the traditional relationship between Native American tribes and the stars.

Activity Steps:

1. As an introduction to ancient Native astronomy, read this [article "Native American Astronomy"](#)
 - a. How does this article explain the close relationship between tribes and stars?
2. The first article mentions the Skidi Pawnee star chart on a piece of elk skin. Read this [article "Seeing Stars the Native American Way"](#) by *Astro Bob* to learn more about this chart and how accurate it was considering the tribes did not use technology like we do today.
 - a. What constellations are represented? How does this show the advanced intelligence of our ancestors?
3. Now, read the article "[Hunter, Canoe, Chief or Bison: Constellation Orion in Native American Astronomy](#)" from *Indian Country Today*. As you read, focus on how ancient civilizations around the world had similar beliefs about the stars.
 - a. How did tribes see the stars and constellations differently from other tribes?
 - b. How does this article explain how the stars connect humanity?

Astronomy Activity:

1. Now that you have more knowledge of archeoastronomy, try this night-sky activity. Take a piece of paper and pencil. You may want a flashlight as well. Choose a clear night to look at the stars from your location.
2. Using your eyes, try to chart the stars that you see. To make this more accurate, you can use a compass (or ask an elder) if you have one to determine which direction is north. Face north and then complete your chart.
3. After you are done, compare your chart to the Skidi Pawnee chart. Are any of your star patterns similar?
4. You can also use the [Sky Map link](#) in the "Helpful Tips" section to look at the star map of your location. Compare your map to the Sky Map.

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HELPFUL TIPS

Parents and caregivers: This activity is not only a way to understand traditional ways of knowing but it can also interest your child in studying the stars and constellations. To further share in the activity with your child try these recommendations:

This website *In-The-Sky* features a [Star Wheel- Sky Map](#) that calculates what the night sky should look like from your location. Gather your family outside at night and see if you can spot the constellations. If your tribe or community has star stories or origin stories of the sky, share these with your child.

The Smithsonian's National Museum of the American Indian (NMAI) also features animated star stories on YouTube. Watch the Mohawk story about the formation of the handle on the Big Dipper constellation: "[Star Stories: The Never-ending Bear Hunt](#)" from Smithsonian NMAI. Then, follow the additional links for more tribal stories. These are great for the whole family.

WANT TO LEARN MORE?

Families and educators: This topic is a way to connect multiple subject areas especially science and social studies. These resources can easily be built into a unit of study on how ancient cultures built their civilization valuing the universe much like we do today but with advanced technology.

- For an interactive experience about how the North American Maya used the sky for agriculture and tracking time visit [NMAI's Living Maya Time](#). This site is very engaging and informational for children at any grade level with additional support for PK-2.
- For a more in-depth look at archeoastronomy visit, this [webpage by Windows To The Universe](#)

Activity Resources:

- "Native American Astronomy" from *Real Archeology* by Vassar College <https://pages.vassar.edu/realarchaeology/2019/11/24/native-american-astronomy-skidi-pawnee/>
- "Seeing Stars the native American Way" by *Astro Bob* <https://astrobob.areavoices.com/2012/02/01/seeing-stars-the-american-indian-way/>
- "Hunter, Canoe, Chief or Bison: Constellation Orion in Native American Astronomy" from *Indian Country Today* <https://indiancountrytoday.com/archive/hunter-canoe-chief-or-bison-constellation-orion-in-native-american-astronomy-DaCiJOMdMU-Fue8ecdgpEw>

Additional Resources:

- "Sky Map" from *In-The-Sky* <https://in-the-sky.org/skymap2.php>
- "Star Stories: The Never-ending Bear Hunt" by the Smithsonian's National Museum of the American Indian <https://www.youtube.com/watch?v=bH2mCcivliQ>
- *Living Maya Time* by Smithsonian's National Museum of the American Indian <http://maya.nmai.si.edu/>
- "Archeoastronomy" by *Windows2Universe* https://www.windows2universe.org/the_universe/uts/archeoastronomy.html