

FAIRBANKS



MUSEUM & *planetarium*

Space Science Investigator Badge for the Junior Group

Constellations and their Stars

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The following instructions represent additional resources for continued study of the topics covered in our “Space Science Adventurer Badge for the Junior Group” online class. All materials are the property of Planetarium Educator Hannah Buckner who created them. Any websites included are the property of the individual website owners and have been reviewed by a Fairbanks Museum & Planetarium educator.

Overview & Purpose

Students will be able to describe some, if not all, of the constellations that appear in the night sky.

Objectives

- Know that constellations are formed by stars that are nowhere near each other and the shapes that they form are our perception of images.
- Recognize and be able to describe some constellations, and be able to talk about some of the significant stars in the night sky

Highlights of this Lesson

1. Tracing Merak through Dubhe in Ursa Major will point you towards Polaris, the North Star
2. Sirius, the Dog Star, is a bright star that leads you directly to Canis Major as it can be interpreted as the nose or the collar of the Big Dog.
3. The constellation Orion is home to many famous stars: Betelgeuse, Bellatrix, and Rigel
4. In Orion’s Belt, if you trace Alnitak through Alnilam and Mintaka it will take you through Orion’s bow and find the Pleiades, which are a part of the constellation Taurus, The Bull.

Lesson Vocabulary

There is no vocabulary this week.

Materials

For Activity 1: Pick one of the following:

- Google SkyMap
- SkyView
- SkyGuide (This costs \$. Ask a parent first before buying)

For Activity 2: If doing a poster, you will need

- Poster board or a big sheet of paper
- Color paper
- Scissors (1)
- Markers, pens, pencils, and/or crayons

Homework

Homework material and action description.

Activity 1: Go on a Constellation Scavenger Hunt

If the weather is cooperative and the stars are out, see if you can find everything on this list. If the weather is not cooperating, please use <https://stellarium-web.org/>

- ★ **Ursa Major** (the Big Bear; the Big Dipper is in this)
- ★ The **Brightest Star** in the sky and the constellation it's in
- ★ **Taurus** (the Bull)
- ★ The Red Giant **Aldebaran**
- ★ **The Moon** → Draw the phase it's in now
- ★ **Canis Major** (the Big Dog)
- ★ **Cygnus** (the Swan)
- ★ **Pegasus** (the Flying Horse)
- ★ **Orion** (the Hunter)
- ★ **Leo** (the Lion)
- ★ **Scorpius** (the Scorpion)
- ★ **A planet** → What planet is it and what is it's color?

Activity 2: Telling Stories through the Stars

1. Choose a constellation from this list: <https://stardate.org/nightsky/constellations>
2. Looking up on various websites, find:
 - a. The story/mythology behind that constellation
 - b. The stars in the constellation
 - c. Where you can find it in the night sky
3. Either write a report and make a PowerPoint/Poster about that Constellation

Have Any Questions?

If you have any questions, concerns, or comments please feel free to reach AmeriCorps Educator Hannah Buckner at hbuckner@fairbanksmuseum.org.

