

Starry Nights Council Patch Program



Do you know all the planets in our solar system? Do you adventure outside at night to look at the sky? Do you want to go to space someday? Start with earning this patch.

**If the requirement is starred (*) then it is a mandatory activity for all age levels.*

Discover:

Daisies complete 2; Brownies complete 3; Juniors complete 4; Cadettes, Seniors and Ambassadors complete 5

- A. Find the names of three constellations and research the names of those constellations. How do you think ancient people picked shapes out of the sky? How did they pick the names? Do you think the constellations really look like what they were named (for example the Great Bear, Orion-The Hunter, Maui's Big Fishhook, or the Seven Dancers)? *
- B. What are the educational requirements for three of these careers: Astronomer, Meteorologist, Engineer (Biomedical, Industrial, Optical), Chemist, Metallurgist, Photographer, Ceramist, Astronaut, Educational Outreach Specialist. How are they linked to the space program?
- C. Design a postage stamp that celebrates the night sky.
- D. Find out about three women astronomers, such as Annie Jump Cannon, Caroline Herschel, or Mae Jemison. Who are they and what do they do? Find out three interesting facts about each of them. *
- E. Learn about light pollution and how it affects astronomy. Find an area around you that has high light pollution and an area of low light pollution. For extra fun, check out Globe at Night's Citizen Science activities. *
- F. Make a flip book of the moon's cycle. See the link below or other websites to help you: bit.ly/3hSbyqM. *
- G. When you work on the Connect #1 requirement, use your flip book to determine which phase the moon is in. *
- H. Some of the stars you see at night are different colors, sizes, and intensities. Research a Hertzsprung-Russell Diagram and see how it is used to learn about stars.

Connect:

Daisies complete 1; Brownies complete 2; Juniors complete 3; Cadettes, Seniors and Ambassadors complete 4

- A. Moon gazing: Look at the moon through a telescope or binoculars. Describe, draw, or write about what you can see. Show your work to a friend or invite a friend to look with you. *
- B. Your constellation: Look at a star map and find a constellation that could be seen on your birthday. Find constellations that could be seen on your friends or family member's birthdays.

Starry Nights Council Patch Program



- C. Watching the sky: What heavenly bodies can be seen in the night sky? Can you identify any planets? Satellites? Comets? Meteors? The Northern Lights? Keep a log of everything you see or go on a scavenger hunt. *
- D. What is the difference between a telescope and binoculars? Create a model of each and showing how the light travels and changes inside.
- E. Find the North Star. What is the scientific name for the North Star? Why is it always pointing north? If you were lost in the wilderness, how could you use the North Star to help you? Draw and explain how you can find the North Star.

Take Action:

Daisies complete 1; Brownies complete 1; Juniors complete 2; Cadettes, Seniors and Ambassadors complete 2

- A. Find the closest planetarium or observatory and go for a visit. What is the difference between a planetarium and an observatory? Learn at least 5 things you didn't know before, and then teach them to a younger sibling or Girl Scout.
- B. Visit NASA's website (www.NASA.gov) to learn about one of the current missions. Be sure to visit your age range under NASA Audiences. Find out if your school or anyone at your school has had a project on a NASA mission. What are the procedures for school experiments to be included on future missions? *
- C. Make a list of at least five ways that you can maintain your interest in space and/or astronomy. Make a similar list of related places to visit or activities you might like to do in your community. Make a similar list of Internet sites to visit or check out the resources on GSU's website.
- D. Different cultures throughout time, such as Greek, Norse, Oneida, and Chinese, explained the night sky through stories. Find and read one story to a younger sibling or Girl Scout.

*This requirement also fulfills one or more requirements of a Space Science badge.

