

For program information contact customerconnections@gswcf.org or call the Resource Center 813-281-4475. For pricing or to purchase/order patches contact the Council Store gsstore@gswcf.org 813-262-1793. Shipping and handling charge will apply.

Discover astronomy through the Funstronomy patch program designed for all levels. Connect with the equipment available at GSWCF camps and beyond. Take Action to share astronomy with others and make the world a better place. *This program was created in collaboration with Troop 30400*

All levels should complete the required activities Discover 1 and 2, Connect 2, and any one Take Action activity. **Daisies and Brownies** choose 1 additional activity each from Discover, Connect. **Juniors** choose 3 additional activities from Discover and Connect. **Cadettes, Seniors, and Ambassadors** choose 5 additional activities from Discover and Connect.

Discover

1. Research the following: What is astronomy? What is a star and what is it made of? What is a constellation? What are 2 ways people have used astronomy?
2. What are some different night sky apps? With the help of an adult, download a night sky app to use.
3. Why does the night sky look different each month? Explain one difference you have discovered.
4. What are 3 objects you will see in the night sky today? Can you see them every night, why or why not?
5. Discover a constellation, draw a picture of it and explain what the constellation looks like. What is its name and why?
6. What is an astronomer and what do they do? What tools do they use to observe the night sky?
7. What is a lunar phase and how many times do they appear each year? Which lunar phase is in the night sky right now? What is one myth some people may believe about the moon?
8. What is light pollution and how does it effect astronomy? Name the 3 types of light pollution.
9. Find out an astronomical event that is happening this year. If there isn't one, research one that happened last year or will happen next year. What is it, what will occur, and how/why?



Connect

1. View the night sky with the naked eye and draw it from your viewpoint. Include the following if you see them: planets, North Star, a constellation, the moon. Now view the same night sky from the same place with a telescope and compare with your drawing. What is different?
2. On the app you downloaded in required activity Discover 2, find 1 planet, 1 constellation, 1 star and their names.
3. The night sky changes nightly. View it tonight and write down what you see. Tomorrow night view it again from the same spot and note any changes. Why do you think it's different?
4. Find 2 examples of light pollution you can see in your everyday life. Why do they happen?
5. Discover the magnification on a telescope. Look at the night sky with 1 magnification, then try it with another. What changed and why? Now try it with a third different magnification. How was it different each time?
6. Learn the difference between a planetarium and an observatory. Visit one.
7. Identify and learn about 2 females who contributed to the field of astronomy. Who are they, what did they do?
8. Identify one astronomy related career. Interview someone who has this career. What type of education do you need for it? What are the job duties? What is the salary range? What are the most exciting parts of the job? Why did they choose this job? Think about what other questions can you ask them. Would you like this job, why or why not?





Take Action

1. With your new knowledge of astronomy, with a buddy or as a group create something to share with others about astronomy (Examples: a trivia game, slide show presentation, flyers)
2. As a group or individually, perform 2 different actions to help prevent light pollution in your neighborhood, a local park, or other area.
3. Teach another troop to use astronomy equipment. Share with them some of the activities you did and what you learned.
4. Make a handbook of fun astronomy activities to share with other individuals and troops (Examples: Moon phases oreo activity, 3D toothpick/marshmallow constellations, etc.)
5. Start an astronomy club at your school, Service Unit, or other.
6. Take another troop or group on a night hike to observe the night sky and teach them about what you have learned. Help them work on this patch program and challenge them to help another troop work on the patch program.
7. Hold an astronomy activity fair with stations of activities to teach others about astronomy. Invite astronomers from the community and/or local college to come and share.
8. Research the science and astronomy related badges available at each Girl Scout program level. Create a document to share that will encourage them to earn science and astronomy related badges.
9. Learn a story from 2 different cultures that were used to explain what was seen in the night sky (Greek, Norse, American Indian, Chinese, etc.) and teach them to another troop/group.

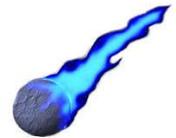
Astronomy equipment available at GSWCF properties

Camp Wildwood-3 telescopes, 2 galileoscopes, star chart

Camp Dorothy Thomas- 4 Galileoscopes

Camp Wai Lani- 1 telescope, 1 tabletop telescope, sky navigation chart, "spotting" scope

Camp Indian Echo- 3 telescopes



Resources

Hands on activities: <https://www.astrosociety.org/education/hands-on-astronomy-activities/>

NASA Kids Club: <https://www.nasa.gov/kidsclub/index.html>

STEMWorks: <http://stem-works.com/subjects/12-space/activities>

Constellation activities: <https://www.howweelearn.com/constellation-activities-for-kids/>

Stargazing: <http://redtri.com/look-up-tips-for-an-awesome-night-of-stargazing/>

MOSI, Tampa: The Saunders Planetarium <https://www.mosi.org/exhibits/planetarium/>

St. Petersburg College Planetarium and Observatory: <https://go.spcollege.edu/Planetarium/>