

Amateur Astronomers: Girl Scouts are Heading Your Way!

New Girl Scout Space Science badges were released at the end of 2018 for kindergarten-5th grade girls (and in 2019 for 6th-12th grade girls). Each badge includes an observing component and encourages troops to reach out to their local astronomy club. You may get contacted by troop leaders to let you know that their girls are coming to one of your events. Here's what the girls are learning in their badges and some engaging ideas to support their understanding.

For more information: bit.ly/astroall

Daisy (Grades K-1) Exploring the movement of the Sun, Moon, and stars.

At this age, the focus is on play and discovery. They may have made up a constellation or imagined a "woman in the moon." This encourages observing skills at an age-appropriate level. If they arrive early, it can be fun to see who can spot the first star of the evening. Good observing targets for this age include the Sun, Moon, star clusters like the Pleiades, and simple constellations with a laser pointer. Tell stories, and encourage their new skills with phrases like, "I like how you talked about the detail on the moon" and, "What do you see differently through the telescope?" Lightweight, low-magnification binoculars work well for the youngest visitors!

Brownie (Grades 2-3) Investigate planets, telescopes, constellations, and Moon phases.

These girls are learning about our planetary neighbors and you may be able to show them some through your telescope. Rather than drilling them on facts, find out if they have a way to remember the order of the planets or which one is their favorite. If the Moon and Sun are up during your event, hold a ball up next to the Moon and show them how it is lit up in the same way. Model other phases and be ready to talk about an eclipse as the ball enters their shadow. Show them how your telescope works - where the light comes in and how the eyepiece magnifies the image. If they are interested, try out different eyepieces on the same target and let them notice the difference – the Moon, Saturn and Jupiter are great for this.

Junior (Grades 4-5) Exploring size and distance scales and movements in the Solar System.

By late elementary school, girls are ready to begin exploring the Solar System and beyond. Help them imagine how long it would take to travel to planets they can see through your scope. Think about how old you all are in Jupiter or Mercury years. Now that they have a handle on maps, you can introduce star wheels and help them find things in the night sky. Show them the gems hidden in their favorite constellations – the Orion nebula, colorful stars, clusters, etc.

All of these badges encourage girl-led explorations of space science, highlight female astronomer role models, and focus on cooperative, hands-on learning by doing. You won't find a list of constellations they need to memorize. Rather, studies show that connecting young girls with positive science experiences is the first step in a life of engaging scientific explorations.

We support the Girl Scout goals of increasing science interest, confidence, competence, and value for the girls. Realize that these girls may have heard the message that science is not for them. Be the voice that tells them they are welcome and encouraged to reach for the stars.

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Additional astronomy activities can be found here: <http://nightsky.jpl.nasa.gov>

