

Junior Girl Scout Sky Search Badge

2001 requirements

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This is an adjunct to the guide "Junior Girl Scout Badge Book". That guide has guidance for some of these activities.

Do 6 of the activities from the badge book.

1. Mapping the Skies

Learn how to use a star map. Obtain or make such a map for your stargazing location that adjusts to the time and season when you are observing stars.

Introduce: Show a star map. Show a planisphere. We will not construct one, but you can do this on your own.

2. Constellations

Constellations are stars that appear to be in groups when looked at from Earth. If you were to travel in a spaceship, you would find that most stars that look close together are actually billions of miles apart. Learn to identify at least five of the constellations seen from Earth.

Observe. Look at the most familiar constellations first (probably the Big Dipper).

Use a sky map to find large, easy constellations.

Only try to learn a few constellations at a time. It will take most youth several nights to learn 5 constellations well.

Tell stories about the constellations you see.

A green laser pointer can help to show youth what is what in the sky. But use care. These can be dangerous if pointed at a person. Only permit responsible adults to handle a laser pointer. Check there are no aircraft in the place you want to point before you shine the laser at the sky.

Consider taking your Troop to a star party. Rappahannock Astronomy Club has information about doing this at <http://raclub.org/>.

3. Direction, Please

Learn about the North Star and why it has been used for navigation throughout history. Help others locate the North Star. Use the North Star to find two constellations or asterisms (part of a constellation).

During the daytime:

Tell: Iroquois story of Rotating Man and Rotating Woman

Introduce: Tell the history of the North Star.

During the daytime:

Observe: Locate Polaris and the Dippers. Use the North Star to locate the constellations and asterisms around it (Big Dipper, Draco, Cassiopeia, Cephus). Use the Big Dipper to locate the Little Dipper.

4. Planets

Learn which of the nine planets are visible to the naked eye. Try to locate at least one of these during a stargazing adventure. If possible, use a telescope to help you see better detail. Write down what you discover.

During the daytime:

Introduce: Tell about the naked-eye planets.

Do: Toilet paper model of size of solar system

During the nighttime:

Observe. Planets are often visible early, during twilight. Include in observing plan for the event which planets will be visible at which times.

5. Connect the Dots

Learn stories from two or more ancient cultures - such as Greek, Norse, American Indian, Pacific Islander, or Chinese - that were used to explain what was seen in the sky.

During the daytime:

Tell: Mohican story of the Pleiades

During the nighttime:

Tell: Stories of constellations as we look at them.

6. Tools of the Trade

Learn the parts of a telescope and how to use one. If possible, use a tracking telescope or look through telescopes with different magnifications.

OR

Visit a large observatory and learn what kinds of telescopes are used there. What do astronomers learn by using telescopes?

Show: Set up telescope. Give turns looking through it. We will use this during the nighttime observing.

7. Time for the Moon

Learn more about the moon - its phases, age, names of features - and then take a closer look. The best time to observe the moon is when the moon is partially lit, around the "quarter" phases of the moon. Use binoculars or a small telescope to help you see the valleys, ridges, mountain ranges, and craters on the moon.

During the daytime:

Introduce: Tell about the features on the moon.

Tell: Norse story of the children in the moon

Do: Phases of moon activity.

During the nighttime:

Observe: Pick an evening soon after New Moon to observe the thin crescent in early evening with binoculars or telescope. Or pick an evening around Full Moon to observe with naked eyes.

8. The Sky Is Falling!

Learn about meteors, meteorites, meteor showers, and comets. Find out when meteor showers may be visible in your area. With an adult, arrange a meteor-watching party and count the number you see in an hour.

During the daytime:

Introduce: Tell about meteors, meteorites, showers, and comets.

Tell: If I get to do this badge with your group, I have a personal story of observing a beautiful meteor storm.

During the nighttime:

Observe. Count the meteors we see in an hour.

9. Star Stamps

Address an envelope to yourself or a friend, including your solar system and galaxy address. Draw

a stamp on your envelope that celebrates an event in space exploration. Write a letter and include a map to your favorite planet.

Do: Do this activity as the requirement describes.

10. Mission: Space

Learn about a current mission in space. What is the purpose of the mission, and how is information recorded and sent back to Earth? If possible, follow the mission over a period of time and visit a Web site that describes the mission and shares pictures or data.

Discover: NASA describes many wonderful space missions, those historic and those going on now, at <http://nasa.gov/>

11. Solar observing

Observe: Explain eye safety, then observe the Sun. This is extra, not an activity in the badge book.

Resources

NASA resources to help with each requirement of the Junior Sky Search badge

<http://spaceplace.nasa.gov/girl-scouts-jr/en/>

A Council's helps for the Junior Sky Search badge

<http://www.phgsc.org/skysearc.htm>

Eclipses Through the Ages

<http://www.earthview.com/ages/ages.htm>

Rappahannock Astronomy Club

<http://raclub.org/>

Schedule to Present the Sky Search Badge (in a suggested order to present the materials)

Requirement #	Topic	Time Needed
Daytime Session		
11	Solar observing	30 minutes
1	Mapping the Skies	20 minutes
3	Direction, Please	15 minutes
4	Planets	20 minutes
5	Connect the Dots	20 minutes
7	Time for the Moon	20 minutes
8	The Sky Is Falling!	20 minutes
6	Tools of the Trade	30 minutes
9	Star Stamps	40 – 60 minutes
10	Mission: Space	30 minutes
Nighttime Observing		
4	Planets	30 minutes
7	Time for the Moon	30 minutes
3	Direction, Please	20 minutes
2	Constellations	30 minutes
5	Connect the Dots	20 minutes

Requirement #	Topic	Time Needed
8	The Sky Is Falling!	20 minutes