



## Space Science Explorer



### Badge Overview

Explore and observe the sky like a real space scientist. When you've earned this badge, you'll have explored and observed the Sun, Moon, and stars.

### Badge Components

#### 1. Explore the Sun

Make a sundial.

- Poke a pencil in the middle of an upside down paper plate.
- Put the plate outside in the sun at noon and mark where the shadow from the pencil is.
- Weigh the plate down so it doesn't blow away and come back every hour to mark where the shadow is.
- You can find more instructions on this [website](#).

Try doing this experiment to find out if different colors absorb different amounts of the sun's energy.

- Put 1 ice cube on 6 different pieces of colored paper or card and place them all outside in the sun. Make sure all the ice cubes are exposed to full sunlight.
- Which one melts the fastest? Which melts the slowest?
- Why do you think that is?
- You can find more instructions on this [website](#).

#### 2. Observe the Moon

Watch this [video](#) to learn about the moon and then go outside on a clear night to try to see the moon.

#### 3. Meet the Stars

Complete the [Constellation dot-to-dot worksheet](#).

- Use your completed dot-to-dot to make some art based on the constellations. You could do it with stones and chalk outside or stickers and paper, feel free to use your imagination!

Download one of these augmented reality star gazing apps and go outside at night and see what you can see!

- [Star Chart](#) app (Android)
- [SkyView](#) app (iPhone)
- Alternatively you can explore the night sky during the day on this [website](#).

### Materials

- Paper plate
- Plastic straw
- Sharp pencil
- Crayons
- Duct tape or stones
- Clock or watch
- [Constellation dot-to-dot Worksheet](#)

### Florida Educational Standards

The content of all Girl Scout national proficiency Badges and Journeys have been correlated by grade level to national and state learning objectives.

**Click here** for more information on how Girl Scout Badge-work supports Florida's educational standards.



We love to see Girl Scouts in action. Snap a photo and send it to [marcomm@gssef.org](mailto:marcomm@gssef.org).

Include her name, troop# and the name of the badge she's working on and we'll feature her.

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