



Girl Scouts of Eastern Oklahoma
and IBM® present the
ASTRONOMY CLUB PATCH PROGRAM
"Catch a Falling Star"
Level: Brownies

STEP 1: WATCH THE SKIES [Complete 1 of the 4 activities below]

- Make a cookie box Light Spectrometer.
 - Discover why the sky is blue.
- Solar System
 - Define a solar system.
 - How many planets are in our solar system?
 - What is the order of the planets in our solar system from the sun?
 - Use play dough examples to make size comparison for planets.
- Discover "How Big Is It?"
 - Make a model of the earth of clay, then make a model of the moon in correct proportion.
- Discover which planets are visible in the night sky.
 - Keep a log of the dates and times in which they were most visible.
 - Include any additional observations that you think played a role in being able to identify the planets (weather, was the sky clear or cloudy, etc.).

STEP 2: INVESTIGATE THE SCIENCE OF THE SKIES [Complete 1 of the 4 activities below]

- Label a "Map of the Sky".
- Visit your local meteorologist (News channel or Tulsa/OKC National Weather Service) and discover how they forecast weather.
- Make a "flashlight constellation" and share with your troop at a sleepover (each troop member has a different constellation).
- Phases of the Moon.
 - Define what a moon is.
 - What makes the moon shine?
 - What is the moon made of?
 - What are the phases of the moon?

STEP 3: EXPLORE THE CONNECTION BETWEEN PEOPLE AND FLIGHT [Complete both activities 1 & 2; OR one of activities 3 or 4]

- Read about a famous woman aviator and Discover some "herstory" with your troop: ex- Geraldyn (Jerri) Cobb from OK, Sally Ride, Amelia Earhart, Maria Mitchell.
- Draw a layout of an airport showing runways and locate maintenance and repair facilities, the air traffic control tower, and passenger and cargo terminals.



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OR

- What is an Air Traffic Controller?
 - Find out how they direct planes.
 - What types of radar do they use?

OR

- Visit an aircraft maintenance facility and take a tour.

STEP 4: HELP CLEAR SKY POLLUTION [Complete both activities 1 & 2; OR one of activities 3 or 4]

- Explore air pollution.
- Explore light pollution.

OR

- Chart Climate Change.

OR

- Develop and Execute a Plan.
 - Connect with your troop to help your community learn about air or light pollution and what they can do about it; Take Action in a plan to educate your community or school about air pollution, light pollution, or climate change.

STEP 5: THE SKY'S THE LIMIT [Discuss activities 1 & 2; complete activity 3]

- The Stars.
 - Define what a star is.
 - Make a star finder.
 - Learn to use a star finder.
- The Sun.
 - What is a sun?
 - How old is our sun?
 - How big is our sun?
 - Name or identify three components of our sun.
- Create Sky Art
 - Create something that will celebrate the wonders of the sky and share it in a presentation or exhibit. It can be a scale model of planets or a constellation mural. Be creative.

CONGRATULATIONS ... YOU HAVE EARNED YOUR PATCH!

Patches can be purchased either online at gseok.org or in the Girl Scout Store.