



Girl Scouts of Eastern Oklahoma  
and IBM® present the  
**ASTRONOMY CLUB PATCH PROGRAM**  
"Discovering the Stars"  
Level: Cadettes

**STEP 1: LEARN ABOUT DISTANCE IN ASTRONOMY**

- Define each of the following:
  - Astronomical Unit.
  - Light Year.
  - Parsec.

**STEP 2: LEARN ABOUT TELESCOPES**

- Who invented the first telescope?
  - Galileo Galilei.
  - Hans Lipperhey.
- Correctly match the following telescope components to their description.

a. Eyepiece	Contains magnifying lenses you look through.
b. Optical Tube	Body of the telescope.
c. Finder Scope	Small optical scope to locate stars.
d. Tripod	Stand for the telescope.
e. Mirror	Used to reflect light into telescope.
f. Objective	First lens that collects the incoming light.
- Build a small telescope by researching and finding an affordable way.

**STEP 3: LEARN ABOUT CONSTELLATIONS**

- Answer the following questions:
  - What is a constellation?
  - What is a circumpolar constellation?
  - Name and locate four circumpolar constellations.
  - Find a story that corresponds to one of the circumpolar constellations.
  - What is a zodiacal constellation?
  - Name and locate four zodiacal constellations that are currently visible.
  - Find a story that corresponds to one of the zodiacal constellations.

**STEP 4: LEARN ABOUT GALAXIES**

- What is a galaxy?
- What is the name of our galaxy?
- How large across is our galaxy in light years?

**CONGRATULATIONS ... YOU HAVE EARNED YOUR PATCH!**

Patches can be purchased either online at [gseok.org](http://gseok.org) or in the Girl Scout Store.