



CENTRAL VALLEY ASTRONOMERS

Young Astronomers Program

2019 PROGRAM SUMMARY

Thank you for your interest in the Young Astronomers Program of the Central Valley Astronomers! This document serves as your introduction to the Young Astronomers Program, including the requirements for applying, the competencies (skills) that they will learn, and the expectations that must be met in order to complete the program.

NOTE: Due to budgetary constraints as well as mentor availability, we are only able to approve applications for a limited number of students during each program year.

APPLICATION PROCESS AND TIMELINE

In order to apply to participate in the 2019 program year, applicants must be at least 13 and not more than 23 years of age **as of September 1, 2018**.

Please note that minors (persons under the age of 18) must be accompanied by a parent or guardian for all Young Astronomers Program events, even if the student has a license to drive.

To download the program application, visit our website at **www.cvafresno.org**, highlight Young Astronomers Program in the menu, and choose Program Application. Download, print, and fill out the two-page application completely. Mail it to the address shown on the first page of the application.

For the 2019 program year we will be accepting 3 students into the program; be sure to fill out your application form completely as we expect our application process to be very competitive!

Your completed form must be **received** no later than October 31, 2018!!!

The application timeline is as follows:

September 1, 2018	Application Period Opens
October 31, 2018	Application Period Closes
November 1 – 15, 2018	Applications Reviewed by Education Committee
November 30, 2018	All Applicants Notified (Successful or Unsuccessful)

Successful applicants will be notified by phone and E-Mail.

Unsuccessful applicants will be notified by E-Mail.

Students that are accepted into the program are required to sign up for a student membership (\$15.00). This membership fee covers the student and a parent/guardian (if required) for the entire year.

Student membership fees must be **received no later than December 31, 2018**. You may mail a check or use the membership signup form on our website.



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2019 PROGRAM ATTENDANCE REQUIREMENTS

In addition to the competencies discussed on the next page of this document, students are required to attend and participate in a minimum number of club events. These requirements are:

MANDATORY ORIENTATION

The mandatory orientation will be your opportunity to meet your program mentor and the other club members and will take place at the January club meeting. The meeting will take place on Saturday, January 19, 2019. Attending this orientation does *not* count toward your club meeting attendance requirements (next section).

CLUB MEETINGS – 4 TOTAL, MINIMUM 1 PER TRIMESTER

Spring Trimester: February 16, March 23, April 27
Summer Trimester: May 18, June 15
Fall Trimester: September 14, October 12
Final Presentation: November 9, December 7

For each club meeting, you are required to be on time for the start of the meeting (7:00pm) and stay through the entire public portion of the meeting. You are encouraged, but are not required, to stay for the club business portion of the meeting.

PUBLIC-CENTERED STAR PARTIES – 3 TOTAL, MINIMUM 1 PER TRIMESTER

Spring Trimester: March 16 (River Park), April 13 (River Park), April 27 (Vintage Days)
Summer Trimester: May 11 (River Park), June 8 (River Park), July 6 (River Park)
June 22 (Millerton Lake), July 20 (Millerton Lake)
Fall Trimester: August 10 (River Park), September 7 (River Park), October 5 (River Park)
August 24 (Millerton Lake)

Additional public-centered events are set up throughout the year and are typically announced during the club business portion of our monthly club meetings. For each event, you are required to stay for a minimum of 90 minutes, starting at the beginning of the observing time.

DARK SKY STAR PARTIES – 4 TOTAL, MINIMUM 1 PER TRIMESTER

Spring Trimester: February 2, March 2, March 9, April 6
Summer Trimester: May 4, June 1, June 29, July 27
Fall Trimester: August 3, August 31, September 28, October 26

For each event, you are required to stay for a minimum of 90 minutes, starting at the beginning of the observing time.



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2019 PROGRAM COMPETENCIES

The Young Astronomers Program was carefully crafted to introduce you to the knowledge and skills needed to be an effective amateur astronomer. Each trimester has both knowledge and skill competencies. Knowledge competencies will require outside research and will be verified through conversation with your mentor. Skill competencies will be learned and demonstrated at star parties through collaboration between student and mentor.

Spring Trimester

- [Knowledge] Accessing and interpreting the Clear Sky Charts
- [Knowledge] Identifying and understand the three most common telescope types
- [Knowledge] Identifying and understand the two most common telescope mount types
- [Knowledge] Studying and learning about the French astronomer Charles Messier
- [Knowledge] Learning about the star life cycle, double stars, pulsars, supernovae, and black holes
- [Knowledge] Learning about the good and bad of green laser pointers
- [Skill] Learn about the optical properties of telescopes and their relationships
- [Skill] Identify four spring constellations
- [Skill] Learn to assemble and point a Dobsonian telescope

Summer Trimester

- [Knowledge] Understand the Bortle scale of night sky brightness
- [Knowledge] Understand and test a variety of finder scope types
- [Knowledge] Learn about two additional astronomers
- [Knowledge] Learn about the five naked eye planets and features of the moon
- [Knowledge] Learn about several types of deep sky objects
- [Skill] Identify five summer constellations
- [Skill] Assemble a Dobsonian telescope
- [Skill] Learn how to find objects by star hopping
- [Skill] Observe four deep sky objects using a Dobsonian telescope

Fall Trimester

- [Knowledge] Understand the difference between astronomy and astrology
- [Knowledge] Learn about two additional astronomers
- [Knowledge] Learn about lunar phases as well as lunar and solar eclipses
- [Knowledge] Learn the celestial coordinate system and how latitude affects astronomical observing
- [Skill] Identify six fall constellations
- [Skill] Assemble a Dobsonian telescope
- [Skill] Observe five deep sky objects using a Dobsonian telescope

Final Project - For a final project, student will choose a topic from an approved list and present a 15-20 minute presentation to the club members at the November or December club meeting.