

Planning a School Star Party

The Primary Mission of the Stockton Astronomical Society is to introduce and advance a basic understanding of astronomy to the general public. Getting students, parents, and teachers to actually look into the eyepiece of a telescope and see Earth's Moon, our neighboring planets, star forming nebulae, and other galaxies is the best way to do this. This is why SAS volunteers are willing to bring their personal telescopes to your school and show you and your students part of the Universe we live in. The following is a primer on how to set up a School Star Party.

Step one.....

The SAS Star Party Coordinator will help you do this and you can contact him/her from the beginning or; you can do some of the preliminary work yourself. One of the first things we would like all educators to do first is to have a look at our [Striking Sparks Program](#). This program is an opportunity for deserving students interested in Astronomy to be awarded a telescope at our annual award ceremony.

Below is some info you will need to think about before you call us.

- Your contact info.
- Date/time you would like
- Address of the school
- Approx. how many students, siblings, parents, teachers might be lining up to look thru our scopes. We know this can only be an educated guess, but your educated guess is better than our "shot in the dark"
- Where on campus will we set up our telescopes; a dark spot with no trees or buildings to block the view is best
- Try best to limit ambient light in the area such as street/parking lights, etc.
- Try best to limit white/blue flashlights. Red light is okay. The eye can adapt to the darkness better after using red light.

The first thing you need is a date, Once you pick a month or day contact the Star Party Coordinator and see if that date is available. You can also contact the Star Party Coordinator and we will help. Not all dates are equal/ not all months are equal. Please do not try to schedule your event on the first or second Thursday of the month. The first Thursday of the month is the SAS Board Meeting and 5 of our telescope volunteers are usually at this meeting. The second Thursday of the Month is the SAS General Meeting, this is open to the public so please join us.....most of

our telescope volunteers are at this meeting. The Friday evening nearest the First Quarter Moon is also difficult because we have a standing commitment to have our scopes at Delta College that night.

Star Parties cannot really start until it gets dark, (Solar Astronomy excepted). In late November to early January the Sun sets about 5:00pm. It gets dark early. By late May to early August the Sun doesn't set until about 8:30pm and it doesn't get dark until almost 9pm. If your students need to be home by 8pm you will need a late Fall to early Spring date. Sunset/Moon data can be found at [USNO](#) website. Remember daylight savings time shifts the time at sunset by an hour. Most SAS Telescope Volunteers work for a living, therefore we have trouble getting our equipment to a school before 7:00pm. Scheduling a School Star Party to start before 7:00pm can be a problem.

What can we see in the night sky? The easiest, most basic, and to some most awesome object in the telescope is our Moon. Almost everyone wants to have the Moon part of their School Star Party. The Moon orbits the Earth and therefore the geometry between the Moon, Earth and the Sun changes daily. This is the reason for the [Phases of the Moon](#). This is the reason that some weeks are better for star parties than other weeks. Five days of each month has the Moon perfectly placed in the sky just after the setting Sun. Those start about 60 hours after the New Moon. When is the [New Moon](#)? As the Moon gets closer to the Full Moon phase more of the side that faces Earth is sunlit and that makes the sky brighter and that obscures the dimmer more esoteric objects we can see with our telescopes like nebulae, globular clusters and galaxies. More on the darker the better later. SAS volunteers will do School Star Parties during the Full Moon...we literally have "Sun Glasses" (Moon Filters) we can add to our eyepieces. The intense glare from looking in a 6" or larger reflector telescope at the near or Full Moon is painful...WAY TOO MUCH LIGHT. The Moon rises about 50 minutes later every day so by a few days after the Full Moon, the Moon doesn't rise above the eastern horizon until most people are in bed. This means No Moon during your Star Party.

The Planets, by definition move and that means some months we can see some, some months we can't. Earth's movement around the Sun is most of this variable. Contact the star Party Coordinator and ask, OR sign into [Heavens-Above](#), Click onto sky Chart in the menu, plug in your date and time and see what is up. IF you are lucky and the "planets align" Sorry bad joke...there are a few months during the year when Jupiter and it's four big moons (the Galilean Moons) are visible during the evening hours. The same for Saturn and his big rings, Venus very bright in the west or southwest, Mars is available for viewing in the evening sky

every other year. Mercury is very hard to catch and can only be done for a few days, a couple times a year. Uranus and Neptune extremely distant and can be seen in 8" and larger scopes only on very dark very clear skies...Not common evenings in the S.J. Valley.

Other objects visible on some dark and clear nights in the Valley are Star Clusters both Globular and Open, Nebulae both star forming and star "dying" (Planetary), and other galaxies.

Closer to home, on some evenings, we can watch the International Space Station orbit overhead and or watch communication satellites flash sunlight at us from their receiver dish...Iridium Flares and we never know when we might see space dust light up our sky as a Meteor.

When you lock in your date the SAS Star Party coordinator can give you information on the latter items.

If you have read this far and have the principal of the school's permission to schedule a School Star Party then it is time to contact us and work out the other details: such as...

The weather, is unpredictable, we have no control over clouds/rain/fog...we have to accept that. Star parties in the late Spring thru early Fall are usually clear, late Fall thru early Spring, not so much. To state the obvious, optical telescopes are useless on cloudy evenings. Our best advice is plan your date by Moon Phase and Sunset time and the rest is out of your and our hands. Let everyone know that the Star party can be cancelled due to weather. You, the Star Party Host will have to make the decision to cancel or give it a go before 3pm (or your own deadline) the day of the party, we need to notify our volunteers. SAS has never decided to cancel a school star party, we always leave that to the host. Canceling an event usually involves a phone conversation between the Host and the SAS Coordinator. One thing to keep in mind before pulling the plug, the weather can change in hours. If there is not a big system moving into the area, sometimes just after sunset the atmospheric conditions change and it can go from cloudy to clear in 20 minutes. Keep an eye on Doppler Radar, listen to the meteorologists, (although they can be wrong), talk to the SAS Coordinator and if it might clear up and if the students are prepared for it to be clouded out then do not cancel, we will show up with scopes and hope for the best.

Our volunteers need to be able to drive our vehicles to the site you or the SAS Coordinator has selected, there is WAY too much equipment to carry any distance. We usually start arriving about one half hour before sunset OR about 6:30pm or so if the sun sets before 7:00pm. We need to know what gate we are entering, GPS coordinates can be helpful if you use [Google Earth](#). If the telescope set up site is near a field (we can set up on a grass field) MAKE SURE the sprinklers have been turned OFF. If the kids will be around the site before we set up we will need a teacher or authority figure around to make sure there is NO running/ball playing in the area we are setting up scopes. Our volunteers are more than happy to answer questions while we are setting up our equipment. We just need a little bit of order as we are doing so.