STARS RESOURCES

Holding a star gazing evening at your school

ACTIVITY

This document outlines some tips and tricks for hosting a star gazing night.

GENERAL CONSIDERATIONS

Familiarity with telescopes and the sky

How familiar are you, the host, with using telescopes (or even just your own one) and finding objects in the sky? It is a good idea to spend time (in daylight!) with your instrument understanding where all of the settings are, and their purpose.

Unless you're comfortable with star gazing, spend some time with the local astronomical society to brush up on some skills, or some time practising in your own time, before the grand event.

Emergencies

Depending on the nature of your organisation, consider what precautions will need to be taken in case of emergency. Will you need a first aid kit, or a first aid officer? Will you need a defibrillator? Will you need to know how far to drive away from the site in order to get clear mobile reception in case a phone call needs to be made?

What paperwork may or may not need to be prepared? For example, risk assessments or public liability insurance? For example, 'Public & Products Liability', Local Community Insurance Services website, https://www.localcommunityinsurance.com.au/insurance/event/public-liability.aspx, or this website from Justice Connect who give legal help for commuity organisations, 'Seeking funds and holding events', https://www.nfplaw.org.au/fundraisingandevents.

Voice

You will be outside, so sound travels a long way. This means that conversations can be heard further away than might otherwise be heard in a room full of bouncing voices.

By the same token, being outside, people will be more spread out, so if you want to gain the entire group's attention you will either have to speak loudly (practise this!) or take along a megaphone or equivalent.

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DESIGN THE EVENT

Decide on the purpose of the event.

Is it to show a particular astronomical event (i.e. transits, alignments, etc.)?

Think about your audience.

Little kids are in bed earlier, so summer may exclude a large segment of the community. Remember to consult sunrise and sunset times on the Time and Date website, https://www.timeanddate.com/worldclock/sunearth.html.

What do you want to look at?

Choose the time of year that will suit the objects you're hoping to see, and the time of the month when the Moon is in the appropriate phase (dark, grey or light sky). Avoid a bright moon as it can outshine other objects in the sky. Having said this, the Moon is a 'must see' celestial object with its amazing craters, so the compromise might be quarter Moon.

Where will you go?

Pick a good site with a wide view of the sky, and free from light pollution. Also consider the availability of parking and toilets, and any accessibility issues for prams, wheelchairs, etc.

Community involvement

Consider involving your local astronomy group. They are all listed on the Australian Astronomy website for the Astronomical society of Australia, https://astronomy.org.au/amateur/amateur-societies/australia/. These groups have expertise, enthusiasm and their own telescopes, plus their own lists of interested public to increase your reach.

If there are any professional astronomers nearby (is there a University of professional observatory nearby?), you might like to invite one along to give a talk on their work (as long as they don't need access to PowerPoint or equivalent).

The other bibs and bobs

Consider whether or not you will provide food/drink, or toilet paper!

BRAND THE EVENT

Who are you?

Why would people want to attend your particular event? Do you have a catchy name for the event? Is there something special in the sky? Or is this a regular event that will happen weekly/monthly?

Publicising the event

Think about how you will publicise the event. Options include:

- email list,
- social media (this could include any of Facebook, Twitter, Eventbrite),
- a mention on community radio,
- a listing in a local events guide (online or printed), or
- old-fashioned flyers/newsletters/posters.

Will you encourage people to bring their own telescopes or binoculars?

If the local astronomy group is coming, mention this in your publicity, too, as it may add cred to your event.

GATHERING YOUR AUDIENCE

Take RSVPs

It is important that you have an idea of how many people are likely to show up. Consider using an app such as Facebook events, or Eventbrite so that you can contact everyone in case something changes at the last minute.

Event start and end times

Invite people to arrive at the site before sunset, for:

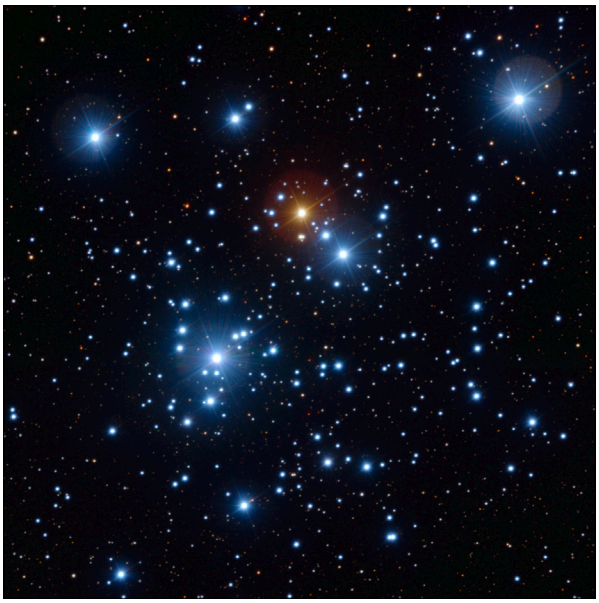
- safety reasons, and
- for an opportunity for everyone to socialise a little before spending hours in the dark.

And of course, let people know what time you're planning on packing up and leaving. Usually people start heading home by 10pm, especially if it's a longish drive home.

What to tell your audience?

In the communication prior to the event:

- encourage your participants to dress appropriately for the weather and terrain. Covered shoes, jackets, beanies, etc.
- inform them of availability of amenities (food, drink, toilets, seating, etc.)
- ask people to bring torches for their return trek to the carpark afterwards, NOTE: Supply red cellophane, rubber bands and sticky tape to cover the torch lights. This will ensure that everyone's eyes remain dark-adapted.



- let people know whether or not there will be good internet or phone coverage (for some, this can be more important than for others, particularly if people want to rely on apps for navigating to the venue, or navigating the night sky).

ON THE NIGHT

Observing

First of all, never underestimate the joy of looking at the night sky with the naked eye. Encourage people to find the Moon and other bright objects such as planets and artificial satellites (if they're passing overhead).

Orient your audience to the sky. Point out the Milky Way, well-known constellations (e.g. Southern Cross, Orion the Hunter), and perhaps explain how to find south. Helpful video: 'What to look at in the night sky with a Dobsonian telescope', YouTube (6:25 mins), https://youtu.be/DaLSA9rqy7Q.

Make sure you are already acquainted with how to set up your telescope, and know how to find a few of the standard objects in the sky. This may include constellations, a planet or two, globular clusters, open clusters such as such as the Jewel Box or Pleiades, nebulae.

If you're not hugely familiar with the night sky, there are a few aides around. The app Stellarium is excellent (https://stellarium.org/), as is the interactive sky chart at Sky & Telescope website, https://skyandtelescope.org/interactive-sky-chart/ or Time and Date, https://www.timeanddate.com/worldclock/sunearth.html.

If you have brought along a fancy telescope, keep an eye on your instrument (or post a helper to do so), as people can be a bit rough with the settings, or want to touch parts that should remain pristine such as eyepieces and lenses.

Consider bringing along a (sturdy) step stool for shorter participants to use.

If you plan on pointing out celestial objects on the sky, laser pointers are useful. NOTE: The law surrounding the use of lasers varies around the country. Thoroughly research this BEFORE the night. We recommend reading the attached resource from Science ASSIST.

Participants

Roam around to make sure you make people feel welcome and noticed. Being attentive to your audience, or noticing when people want to be left on their own, can seriously affect the success of the night.

Be prepared to help novices with their telescopes, or to have helpers around who can do this for you.

When you move to a new object in the sky, make an announcement so that people know.

Perhaps have a means by which people can join an email list to hear about future events (e.g. a tablet, a SurveyMonkey form, a clipboard and pencil).

FURTHER READING

Here are some suggested sites for further information.

'How to throw a star party: A stargazing Guide' Space.com website, https://www.space.com/33031-how-to-throw-a-star-party.html (1 June 2016)

'Tips for a successful star party', Sky and Telescope website, https://skyandtelescope.org/observing/recipe-for-a-happy-public-star-party/ (27 April 2016).

'Beginner's Guide to the Night Sky', ABC Science website, https://www.abc.net.au/science/starhunt/tips-and-tools/ (2019).

'Tips for Holding a Viewing Night', CSIRO Australia Telescope National Facility website, https://www.atnf.csiro.au/outreach/education/teachers/viewing/index.html.

All websites accessed 15/03/2022.