Night Sky Tour

As part of the opening week celebration at school, your principal has requested the Astronomy Club to give a night sky tour to a group of parents to generate positive publicity. Since this event would determine the funding given to your club in the future, your teacher-in-charge has requested that your team plan and execute a dry run of the night sky tour for practice.

It is the first day of school and to celebrate the start of the new year, your principal has requested for the school's Astronomy Club to give a night sky tour to the public to generate positive publicity. Despite the request being so last-minute, your teacher-in-charge agreed to it and it is up to your CCA members to plan and deliver a meaningful night sky tour to the participants. You will have access to the school's newly-purchased astronomy equipment. Before the actual night sky tour, your teacher-in-charge has asked your team to perform a dry run using the software Stellarium.

Details of the night sky tour:

Date: Tuesday, 5th January 2021
Time: 8.30pm – 9.00pm
Venue: Novena Junior College School Field (1.32°N, 103.84°E)
Target Audience: Adult participants of various backgrounds

Your Task:

With the inventory provided, plan and conduct a dry run in the form of a **video** for a night sky tour targeted at a group of adult participants. You have been informed by your teacher-in-charge that the participants will have little scientific background. As such, you are advised to refrain from using astronomical jargon without any definitions or simplifications. Any descriptions are also expected to be understood by the layperson. You will be judged on your ability to present astronomy in an interesting and easy to understand way to the participants. It is not compulsory to use all the equipment. Your video should not be longer than 8 minutes.

The settings for Stellarium are given on the next page.

Astronomy Club Inventory:

Orion SkyQuest XT8 Classic Dobsonian Telescope (203mm, f/5.9)
Celestron SkyMaster DX 8x56 Binoculars
Orion Q70 38mm Eyepiece (70° apparent FOV)
Orion 9mm Edge-On Planetary Eyepiece (55° apparent FOV)
Orion Skyline Green Laser Pointer

You are expected to describe:

- why you picked the object to look at (is it particularly bright, have interesting mythology or looks exceptionally beautiful?)
- how you located the object
- the object itself (what are the participants actually looking at?)

Examples of objects:

- M42 (nebula)
- Pegasus (constellation)
- Jewel Box (open star cluster)
- Venus (planet)
- Summer Triangle (asterism)

Note: if your team is unable to locate an object, the search function of Stellarium may be used but a small penalty will be imposed.

Stellarium settings:

- Constellation lines, names and art: OFF
- Cardinal points: OFF
- Equatorial and azimuthal grids: OFF
- Labels for planets, deep sky objects, exoplanets, satellites, and meteor showers: OFF
- Star labels and markers: OFF
- Ground (zero horizon landscape) and atmosphere: **ON**
- Projection: Stereographic
- Light pollution: 6
- Ocular settings: based on given equipment list