

Astrochallenge 2021

Observation Round Night Sky Tour Question

13th May 2021

Instructions

You are required to submit three deliverables by Sunday the 6th of June 2021 at 1959hrs.

1. A 10 Minute MP4 Video of your Night Sky Tour
2. A Transcript of your video
3. A List of references (If required)

For the avoidance of doubt, unless specifically mentioned otherwise, all instructions and penalties relating to the project round video submission will be relevant here as well.

For reference: the instructions for the project round may be found here

[Infosheet](#) and [Info Letter](#)

You are to rename your video in the following format:

[Full School Name]_NST_Submission.mp4

For example: Lower Kent School_NST_Submission.mp4

You are required to specify your School Name within the first 30 seconds of your video. Failure to conform to this instruction may result in the judges viewing the video to be unable to identify the authors. This time will be included in the 10m time limit.

For the avoidance of doubt, while you are not encouraged to refer to other sources other than Stellarium, if you do so, you are required to submit a list of references in a word document or pdf file. You are required to submit a transcript in a similar format as well.

The Question

You and your friends are selected to go for a science and cultural school immersion trip to Malaysia during the September school holidays. As part of the programme, your school has arranged a stargazing session at Tioman Island together with students from a local high school in Malaysia. Your teacher in charge has requested you and your friends to give a night sky tour during the stargazing session to the rest of your peers and the students from the partnering high school as it has come to his knowledge that you and your friends are part of the school's Astronomy Club.

It is now up to you and your friends to plan and deliver a meaningful night sky tour to your peers and the students from the partnering high school as part of knowledge sharing and meaningful exchanges. You will have access to the school's newly-purchased astronomy equipment. Before the actual night sky tour, you and your friends have decided to perform a dry run using the software Stellarium.

Details of the night sky tour:

Date: Tuesday, 7th September 2021

Time: 9.00pm - 9.30pm

Venue: Tioman, Pahang (2,47°N, 104,10°E) 100m ASL

Target Audience: High school students of various backgrounds

Your Task:

With the inventory provided, plan and conduct a dry run in the form of **ONE video** for a night sky tour targeted at a group of high school students. You are aware that your audience will have little astronomy 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 audience. It is not compulsory to use all the equipment. Your video should **not be longer than 10 minutes**.

The **settings for Stellarium** and other **Guidelines** are given on the next page.

Stellarium Instructions

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

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
- Deep Sky Objects Background Images: OFF
- Ground (zero horizon landscape) and atmosphere: ON
- Projection: Stereographic
- Light pollution: 3
- Ocular settings: based on given equipment list

Guidelines

For each object you choose, it will be good 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 (Deep Sky Object)
- Pegasus (constellation)
- Jewel Box (open star cluster)
- Venus (planet)
- Summer Triangle (asterism)

Rubrics

For the avoidance of doubt, the same rubric as used in AC2020 will be used this year as well. You can find it here:

[AC2020 NST Rubrics](#)

Additionally, you may refer to last year's resources on what to do and what not to do for reference and guidance.