



ASTROCHALLENGE 2020

ADMINISTRATIVE GUIDE FOR PARTICIPANTS

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EVENT BACKGROUND

AstroChallenge is an annual astronomy competition jointly organised by the Astronomical Societies of National University of Singapore and Nanyang Technological University. The competition is specially tailored for students in Secondary Schools, Junior Colleges and Polytechnics. AstroChallenge aims to enhance students' interest and knowledge in astronomy, and hopes to foster closer inter-school ties through the common interest of astronomy. Students will be exposed to a comprehensive array of questions that range from theoretical to practical astronomy.

ASTROCHALLENGE 2020 DETAILS

The following shows the dates and start time of AstroChallenge 2020:

Day 0 – 5 September (materials will be released online)

Day 1 – 5 December, 10:00 (online)

Day 2 – 9 December, 09:00 (online)

AstroChallenge 2020 will be held fully **online**. For Day 0, there will not be any online live streaming. Instead, schools will be notified via email upon release of detailed administrative briefing materials on the AstroChallenge website. Participants are expected to peruse the materials before Day 1.

For Day 1 and Day 2, the competition will be conducted online using the online conferencing platform Zoom. Invitations links to join the online conference for the competition will be sent out to the emails provided by the participants in the registration form. All participants will be required to be present online on Day 1. Finalists will be required to be present online on Day 2. There will be a live stream of Day 2 set up for the remaining participants.

EVENT TIMELINE

Day 0: 5 September 2020

Administrative guides and recordings will be uploaded on AstroChallenge website. An email will be sent out to schools to notify participants and schools of the release of materials on Day 0. There will be no online live streaming.

Day 1: 5 December 2020 (Zoom)

1000 – 1100	Opening Address and talk by sponsor <i>Crimson Education</i>
1100 – 1130	Administrative Briefing and Final Attendance Check
1130 – 1330	Individual Round
1330 – 1430	Lunch
1430 – 1500	Briefing and Buffer for DRQ
1500 – 1630	Team Round
1630 – 1700	Observation Round Reminders (Senior Category)*
1700 – 1900	Observation Round – Theory Component (Senior Category)

* Students taking part in Junior Category may be dismissed at 1630H

Day 2: 9 December 2020 (Zoom)

0900 – 0930	Opening for Day 2
0930 – 1200	Finals 1 (Junior Category)
1200 – 1400	Break
1400 – 1630	Finals 2 (Senior Category)
1630 – 1730	Closing Ceremony and Prize Presentation

ENTRY REQUIREMENTS

Schools are free to send in any number of teams per category.

Senior Category

Students enrolled in local Junior Colleges, Polytechnics, and Institutes as of June 2020 are eligible to participate in AstroChallenge 2020 under Senior Category. International Schools in Singapore may also send their students in the Senior Category if the

students have not attained GCE A levels qualification or equivalent as of June 2020. **In other words, JC2 and Year 6 students are eligible to participate in AstroChallenge 2020.**

Junior Category

Students enrolled in local Secondary Schools as of June 2020 are eligible to participate in AstroChallenge 2020 under Junior Category. Schools with Integrated Programme (IP) or International Schools in Singapore may also send their students in the Junior Category if the students have not complete Year 4 End of Year Examination or equivalent as of June 2020. **In other words, Sec 4 and Year 4 students are eligible to participate in AstroChallenge 2020.**

Each team shall consist of 4 team members and an optional reserve member.

In response to participant feedback, the organisers have decided to open up AstroChallenge to mixed teams: teams comprising of participants from different schools. For the purposes of the competition, these mixed teams will be treated as coming from an entirely separate school. In other words, mixed teams in the Senior Category will be treated as separate schools during Observation Round Theory Component.

Only one team from each school can qualify for finals of the category, i.e. IP schools can have one team in the Junior Category finals and another team in Senior Category finals.

REGISTRATION AND PAYMENT

Registration for AstroChallenge 2020 can be done online through <http://www.astrochallenge.org/>. Please register before **3 December 2020**. For teams which have previously registered, a separate email will be sent out to the teacher in charge to confirm the registration details.

The registration fee for each Junior or Senior team will be **\$60**. **For groups with 3 or fewer members** at the point of registration, **\$20 per person** will be levied. We will be accepting PayNow transactions for payments with regards to the registration fee.

Detailed payment instructions will be given to the registered teams in the confirmation email sent out upon successful registration. The deadline for payment is **3 December 2020**, the same day as the registration deadline.

This registration fee serves to defray the costs of the competition (e.g. prizes, certificates and the cost of online examination platforms). Please also note that an **additional administrative fee of \$10 may be charged** if there is any change in team composition *after* the registration deadline.

MODES OF COMMUNICATION

AstroChallenge Committee will keep schools and participants updated via email and Telegram throughout AstroChallenge 2020.

i. Emails

These emails contain important updates on AstroChallenge 2020. These include administrative updates, registration and payment confirmation, submissions made by teams.

ii. Telegram

AstroChallenge 2020 Main Channel will be set up on Telegram to convey key information before and during the competition. Every team will also be paired with an AC Committee Member and added into a separate group. This is to facilitate communication between participants and the AC committee before and during the competition.

See [Telegram Guide](#) for details.

All participants are required to download Telegram with the contact number provided in the registration form and join the AstroChallenge 2020 Main Channel before Day 1.

COMPETITION PLATFORM

AstroChallenge 2020 will be conducted online via Zoom on Day 1 and Day 2. All participants will receive the invitation link with Meeting ID and Passcode via their email provided in the registration form few days prior to Day 1.

All participants are required to join the meeting **20 minutes** before the Opening Ceremony on Day 1 to facilitate attendance taking and breakout rooms assignment for later parts of the competition.

Participants are to rename themselves upon joining the Zoom meeting according to the following format:

<Initials of School Name> <J/S*>T<Team number> <Full name of Participant>

***Junior (J) or Senior(S) Category**

e.g. Junior participant named Tan Ah Mao from Admiralty Secondary School Team 1 will rename himself as: ADSS JT1 Tan Ah Mao

This is to verify participants' status. Participants who fail to prove their participant status will be denied entry into the competition platform.

Participants are required to turn on their webcam throughout the competition. Participants will be muted upon entry and be allowed to unmute themselves during specific components of the competition such as Teams Round and Observation Round. Instructions will be given during the competition.

Please ensure that you have a working webcam, audio and microphone system in your device. Please also ensure that you have a stable internet connection and are in a quiet environment throughout the competition. Participants who face issues obtaining the technical requirements are to inform the AstroChallenge Organising Team in advance to the competition for alternative arrangements.

Finalists will be notified few days before Day 2. Finalists will receive the invitation link with Meeting ID and Passcode via their email provided in the registration form few days prior to Day 2. Similar to Day 1, finalists are to rename themselves with the same format as above.

Junior finalists are required to join the meeting **20 minutes** before the Opening Ceremony on Day 2. Senior finalists are required to join the meeting **20 minutes** before Senior Finals on Day 2. All remaining participants are welcomed to view the live stream of Day 2 on YouTube. A link will be announced on AstroChallenge 2020 Main Channel on Telegram before the Day 2 Opening.

See [Zoom Guide](#) for details.

THINGS TO POSSESS FOR THE COMPETITION

a. Writing materials and scientific calculator (graphic calculators are NOT allowed).

We will be following the list of approved (scientific) calculators for national examinations which is available on the SEAB website.

b. Completed Project on 3 December.

c. For Seniors Teams, Completed Night Sky Tour and DAQ on Day 1

d. A computer with stable internet connection, working webcam, audio and microphone

SYLLABUS OF THE COMPETITION

Please refer to Appendix D of the [Invitation Letter](#) uploaded on AstroChallenge website for the complete syllabus.

BRIEFING GUIDES

Please refer to Appendix B of the [Updated Information Letter](#) on the rules and regulations of the individual components in AstroChallenge 2020.

Please also refer to **AC2020 Content Guide** uploaded on AstroChallenge website for more details of content changes and tips for various components of AC2020.

I. Individual Round

Participants may be split into breakout rooms to facilitate invigilation. Participants will be attempting the MCQs via an online examination platform. Participants are to turn on their webcam and mute themselves throughout the entire round. Discussion and reference to materials are strictly not allowed. More instructions are to be given during Day 1 Individual Round Briefing.

II. Teams Round

This will be an open book component. Participants may be split into breakout rounds in teams to facilitate discussion. Teams Round papers will be released to the participants at the start of the round either through a link/email or on AstroChallenge website. Participants will discuss in teams on Zoom and submit a scanned copy of their answers in pdf file and email to astrochallenge@gmail.com before the end of the Teams Round. More details are to be given on Day 1 during Teams Round Briefing.

III. [For Senior Only] Data Analysis Question

All Seniors Teams are to complete the [DAQ question](#) and submit by **12 noon on Day 1 (5 December)**. This component is part of Teams Round for Seniors and is **compulsory**. Teams are to submit the following deliverables:

- a) Two .csv files after you have completed question 1;
- b) A type-written report in .pdf format, which should include:
 - I. Your team's attempts for all questions;
 - II. A bibliography, if any external sources were used and cited;
 - III. An appendix, with all your graphs and images.

Everything in the above list is to be submitted—any omissions will lead to your team losing marks. Please also refer to the DAQ question for detailed submission guidelines.

A briefing on the DAQ will released in due course.

Submission

Submissions are to be made via email to astrochallenge@gmail.com. Please specify your school name, team number, Junior or Senior category and the component(s) the submission is for in the email subject and body.

IV. Finals Round

Participants will be notified should they be qualified for Finals. More information will be provided on Day 2 itself. Remaining participants are encouraged to watch the live stream of Finals on YouTube.

Note that due to the pandemic situation, there will NOT be a Team 6 for Finals in AC2020.

V. Project Round

Please refer to the [Updated Project Round Infosheet](#) for details on Project Round. All teams are to complete the Project Round Poster and submit by **2359 on 3 December 2020**.

All files MUST be in image files (jpeg, png) or pdf or ppt format and submitted with the following filename format:

<school initial>_<J/S*>T<team number>_Project

**Junior (J) or Senior (S) Category*

e.g. Team 1 from AstroChallenge Junior College

ASCJC_ST1_Project

Submission

The files may be submitted via email or uploaded online and share the URL with us. Please note that the files should NOT exceed 1 GB in size.

Submissions are to be made via email to astrochallenge@gmail.com. Please specify your school name, team number, Junior or Senior category and the component(s) the submission is for in the email subject and body.

VI. Observation Round

Please refer to the Observation Round Briefing Guide uploaded on AstroChallenge website for more details. A video briefing can be viewed [here](#). Do note that as

AstroChallenge 2020 is fully online, the physical AC component briefed in the video will not be applicable.

Please let the AstroChallenge Committee member assigned to you know if you are representing your school for the Observation Theory Round during Observation Round Briefing on Day 1. This is to facilitate the assignment of breakout room for Observation Round. More details will be given during the Observation Round Briefing on Day 1.

Submission Guidelines for Night Sky Tour

A copy of the Night Sky Tour Question, Rubrics and What not to do for a Night Sky Tour can be found on the AstroChallenge website.

Teams are required to submit a video of the Night Sky Tour by **2359 on Day 1 (5 December 2020)**. Video should NOT be larger than 1GB in size. Should the file size exceed 1GB, please upload it online and provide an URL of the video in your submission.

Please name your submission in the following format:

<school name>_NST

e.g. AstroChallenge Junior College

ASCJC_NST

Submissions are to be made via email to astrochallenge@gmail.com. Please specify your school name, team number, Junior or Senior category and the component(s) the submission is for in the email subject and body.

SUBMISSION GUIDELINES

Below shows a summary of submissions to be made for AstroChallenge 2020.

Date	Who it concerns	Item to submit	Submission Format
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3 December 2020	All	Registration + Payment	Registration form on AC website. Payment via Paynow.
3 December 2020 (2359)	All	Project Round Poster	Image files/pdf/ppt Upload online and share URL with us or email the files directly to AC committee. Please refer to above briefing guides for detailed submission format.
5 December 2020 (Day 1, 12 noon)	Seniors	DAQ	2 csv files and 1 pdf report Email the files directly to AC committee. Please refer to above briefing guides for detailed submission format.
5 December 2020 (Day 1, 2359)	Seniors	Night Sky Tour	Video Upload online and share URL with us or email the files directly to AC committee. Please refer to above

			briefing guides for detailed submission format.
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Submissions are to be made via email to astrochallenge@gmail.com. Please specify your school name, team number, Junior or Senior category and the component(s) the submission is for in the email subject and body. Teams can submit multiple components in a single email.

POST COMPETITION

Post Mortem will be released on AstroChallenge website after the competition. Prize Presentation on Day 2 will include announcement of all winners. Participants are highly encouraged to join the live stream for this segment during Closing Ceremony on Day 2. Certificates of participation, trophies and prizes will be given to participants after the competition. The AstroChallenge committee will contact the participants directly to make separate arrangements in December.

CONTACT US

Participants may contact astrochallenge@gmail.com should they have any query regarding the competition.