



# AstroChallenge 2020

To: Teachers-in-charge and Participants

On behalf of the Organizing Committee, I would like to thank you for your keen interest in **AstroChallenge 2020**. The contents of this letter include important issues and rules to take note of:

## 1.) *Competition Dates and Format*

In view of the COVID-19 situation, we will be pushing back AstroChallenge 2020 to the second half of year. Accordingly, the dates and start time of the competition are:

**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 crash course and 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.

Further details on the instructions to access Zoom will be released closer to Day 1.

## 2.) *Mode of Communication*

Telegram will be used as the main mode of communication between participants and the AstroChallenge committee. AstroChallenge Main Channel will be set up 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. More details on the AstroChallenge Main Channel and groups will be released as part of administrative briefing materials on Day 0.

## 3.) *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



# AstroChallenge 2020

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.

#### 4.) *Schedule of Events*

Please refer to Appendix A.

#### 5.) *Rules and Regulations*

In view of the recent format changes, **the weightage of certain rounds in AstroChallenge has been modified**. Please refer to Appendix B for more information.

#### 6.) *Project Round*

In view of the changes to Project Round, an updated Project Round Infosheet is uploaded on the AstroChallenge website. The poster for the Project Round must be **submitted by 3 December**. The files may be submitted via **email** or uploaded **online** and shared with us. Please note that the files **should NOT exceed 1 GB in size**. Please refer to the updated Project Round Infosheet for more information.

#### 7.) *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**.

More details and updates on the aforementioned events will be provided on AstroChallenge website at <http://www.astrochallenge.org>.



# AstroChallenge 2020

Please contact us at [astrochallenge@gmail.com](mailto:astrochallenge@gmail.com) if you have further enquiries. We look forward to seeing you at AstroChallenge 2020. Thank you.

Yours sincerely,

Grace Huang Wei (Ms.)  
Chairperson  
AstroChallenge 2020 Committee



# AstroChallenge 2020

## Appendix A – Schedule of Events for AstroChallenge

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



# AstroChallenge 2020

## Appendix B – Rules and Regulations for AC Online

*The organizing committee reserves the right to amend any of the rules contained herein. Participants will be notified of the relevant changes.*

### **General rules**

- Handheld communication devices or devices with storage and display capabilities (other than calculators) are not to be used during all the quiz rounds.
- Only scientific calculators found in SEAB's approved list of calculators are permitted. No other calculators will be allowed in this competition.
- Any team caught cheating will be subjected to disciplinary/remedial action, including immediate disqualification. The teacher-in-charge and their respective school will be notified in the event of cheating.
- The tabulation of total points is final. No further correspondence will be entertained.
- Top 50% of Individual Round, Team Round, Observation, and Project scores will be released. Full release of results will only be made upon the teacher-in-charge's request, and each school may only view its own students' scores.

### **Rules and Regulations for Specific Rounds:**

#### **Individual Round**

Duration: 2 hours

- A maximum of 5 members per team can take part.
- The overall points for the Individual Round will be the average of the marks from the best 4 individuals in the team.
- The Individual Round Paper will be conducted on an online platform. For invigilation purposes, participants will be assigned into breakout rooms on Zoom concurrently. Participants are reminded not to use their phones during this period.
- During the paper, you are NOT allowed to alt-tab/minimize the platform window.
- Participants are reminded to ensure that they have a stable internet connection for the duration of the Round. In the scenario where participants are unable to solve their internet connection problems, they should contact the organizers before the start of the Individual Round. Any requests during/after the Round ends will not be entertained.
- There will be a total of 50 MCQs in this round. Each MCQ contains 5 options.
- Participants start off with 50 points.
  - 2 marks will be given for a correct answer.
  - 1 mark will be deducted for a wrong answer.
  - 0 marks will be given for blanks.



# AstroChallenge 2020

A maximum of 7 blank answers are allowed from each individual, after which all other blank answers are considered wrong.

- The first 5/10 questions in the Senior/Junior Individual Round will exclusively focus on testing astronomical basics and recall of fundamental astronomy facts.
- A “*Best Astronomer*” from each category will be selected based on the individual scores for this round. In the event of a tie, several tiebreakers (e.g. most correct answers) will be used to break the tie.
- The Junior Category Individual Round paper will not be the same as the Senior Category Individual Round paper.

## Team Round

Duration: 1.5 hours

- Most of the questions are on applications in astronomy.
- This will be an open book paper. However, the time provided for the Team Round will be **reduced by 30 minutes** compared to the usual physical format.
- The team reserve may take part for the AC Online version of the Team Round
- The points awarded to the team for this round is the total sum of marks awarded across all questions, up to a maximum of 80 marks.
- There will be a total of 5 structured questions. Each structured question will contain around 20 marks, up to a total of 100 marks.
- The first structured question will contain short open-ended questions that focus on testing factual understanding and recall of astronomical basics.
- In addition, for the Senior Category, 1 structured question (the Data Analysis Question) will be released on Day 0, and will be due for submission by 12 noon on Day 1 (5 December)
- Thus, the Junior Team Round Paper will contain 5 structured questions. The Senior Team Round Paper will contain 4 structured questions – the Data Analysis Question will have already been released on Day 0.

## Observation Round (Senior Category only)

Duration: 2 Hours (Theoretical only)

- This is an inter-school round.
- Each school may send only 3 people to participate in this round. The school can choose these 3 people out of all its participating teams. The score obtained by these 3 people will be the score awarded to all teams for that school.



# AstroChallenge 2020

- There will be only one component, namely the Theory component.

## Theory Component

- The Theory Component will be held after the Team Round. This comprises a written test.
- The Theory Component comprises a test administered through Zoom or similar software. AC Committee members will be paired with each school to administer the test online at the same time.
- Questions will be displayed by the AC personnel. Other parts of the paper may be sent to all schools beforehand if deemed necessary.
- Personal stargazing software and applications (e.g. Google Sky maps) are NOT permitted during the Theory Component.
- The questions will be displayed section by section. The AC personnel will only proceed to the next section if all 3 observation team members from the school agree.
- Some sections may require participants to scan (by printer or by smartphone) their answers and submit. Further instructions will be given during the competition.

## **Project Round**

Please refer to Project Round Infosheet for AstroChallenge 2020 Project Round Entry Rules and Regulations.

## **Final Round**

Duration: 2.5 hours (projected)

The **top five teams per category** (based on all preceding rounds) will take part in this round. Only 1 team from each school per category can qualify for the Final Round.

- Only 4 participants are allowed for each team. The reserve member is not allowed to take part.
- In the event that 2 or more teams from a school qualify for the Final Round, only the top team will participate in the Final Round.

## Round 1: Practical Jeopardy Round

- Each member of the team is to select a category, and then answer questions without help from the other members.
- Questions in this round largely revolve around practical astronomy.
- Each question is worth 20 points. The full score in this round will be 80 points.



# AstroChallenge 2020

## Round 2: Game Round

- The Game Round will comprise of 20 questions done via the Kahoot format. All members will individually take part in this round. Their scores will then be summed up at the end of the round to form the team score.
- The full score in this round will be the top scoring final team's score.

## Round 3: Theory Jeopardy Round

- Each member of the team is to select a category, and then answer questions without help from the other members.
- Questions in this round largely revolve around theoretical astronomy.
- Each question is worth 20 points. The full score in this round will be 80 points.

## Score Weighting for Preliminary Rounds

	Junior	Senior
Round 1 – Individual	35%	30%
Round 2 – Team	30%	25%
Round 3 – Observation	-	15%
Round 4 – Project	35%	30%
Total	100%	100%

## Score Weighting for Grand Total (for both Juniors and Seniors)

35% Preliminary Rounds

20% Practical Jeopardy Round

25% Game Round (Kahoot)

20% Theoretical Jeopardy Round

The weighting for AstroChallenge 2020 is provided to serve as a strategic guide for participants. The organizers reserve the right to amend the weighting pursuant to its discretion.





# AstroChallenge 2020