AstroChallenge 2016

Project Round Details

Explain Like I'm Five!

Your team is to **choose and answer one challenging question in the field of astronomy, cosmology and/or astrophysics**. However, you are to convey the answer using a simple video format, aimed at educating a **typical 5-year-old human child**. As such, ensure that your explanation is as concise and accurate as possible, while being extremely easy to understand.

You will find the list of questions in **Appendix I**, of which your team is to **select 1 out of the 30 questions**.

Instructions

1. Your task is to explain an astronomy/astrophysics concept simply. (*Imagining yourself as a school teacher or a parent talking to a 5-year-old child will help*).
2. There are two segments to this challenge:
3. You will first choose **1 out of the 30** questions to **explain in a video** of **no more than 5 minutes in duration**. For every additional 30s, you will be penalised up to a total 50% of your total score in this segment.
4. There should be **no replication of question** within teams from the same school and category.
5. Manuscripts are to be sent in to astrochallenge@gmail.com along with the video for **plagiarism check**.
6. References are to be included as required.
7. You will then submit this video for assessment to be review by the organisers of AC2016. The deadline of submission is on **1st June 2016, 1800h** (Day 0). Your video could be shown to students from a Primary school for educational purposes, and thus should be in an appropriate tone and mode of presentation.
8. Please ensure that everyone from your team of 5 has **sufficient participation/ screen-time** in the video. Penalties for lack of teamwork could be incurred should it end up as a one-man show.
9. On AC2016 Day 1, your video may be screened in front of the LT in front of everyone, so be mentally prepared.
10. Your rankings for this segment will be released anonymously.
11. **On AC2016 Day 2**, you will **set-up a booth and present a discussion of the question** to judges. In this segment, you are to set-up an exhibition to **elaborate more** about your topic **in deeper depth**, which your team might not have conveyed in the video.
12. The presentation should be **no longer than 8 minutes** and should be a **supplementary component**, not a re-screening of your original video.
13. In both segments, you may wish to use **any form of visual and audio aids** that you deem appropriate for the discussion.

14. Assessment rubrics are attached below in **Appendix II**.

Instructions for Video Submission

- The video may be submitted in the following manner:
    - Uploaded onto **YouTube** and **shared privately** with astrochallenge@gmail.com
    - Sent in **mp4 format only** to astrochallenge@gmail.com
    - **File transfer** via the thumbdrive during **Day 0**, also in **mp4 format only**
- You are to ensure that these instructions are adhered. Should the video received be unreadable, the organisers may attempt file conversion to an appropriate format or use alternative video players. However, the organisers reserves the rights to reject any video submission should they not comply to the instructions given.

Should you wish to seek any clarifications you may contact Clarence @ clarenceliuhh@hotmail.sg or write in to astrochallenge@gmail.com

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Appendix I

No.	*Question*
1.	Why is Carbon important to life?
2.	Is Earth unique?
3.	What are the problems of living in space?
4.	How do you detect exoplanets?
5.	What is the cause of seasons?
6.	What is the celestial sphere?
7.	What is an eclipse?
8.	Why do lunar eclipses not occur every month?
9.	How were the first elements formed?
10.	What is the fate of the Universe?
11.	What is the Big Bang?
12.	How do we know there is dark energy and dark matter?
13.	Is there a limit to how far you can see?
14.	Is Earth at the centre of the universe?
15.	What are some tests for General Relativity in space?
16.	Can you see a black hole?
17.	How do you know if a group of stars are from a cluster?
18.	Why do astronomers observe in different wavelengths of light?
19.	How do you measure distances to a galaxy?
20.	Are colours in Astrophotography real?
21.	How can I use the constellations to determine my location and/or date?
22.	Why are there so many types of telescopes?
23.	Should Pluto be a planet?
24.	What are Trojans and Centaurs in space?
25.	How was the solar system formed?
26.	What are comets?
27.	Explain the life and death of stars.
28.	What are nebulae?
29.	Why do stars have different colours?
30.	Why do stars spin?

Appendix II

Video Segment (40%)

Communication (Language and Ease of understanding)	30%
Content	40%
Visual Aid/Presentation	20%
Teamwork	10%

Live Presentation Segment (60%)

Communication (Language and Ease of understanding)	30%
Content (includes Q&A, up to 10% deduction)	40%
Visual Aid/Presentation	20%
Teamwork	10%

Updated: Monday, 18 April 2016