PORTRAIT OF A RAFFLESIAN

THE SCIENCE OF PASSION

In this golden age of YouTube, vlogs (or video logs) are a dime a dozen, and most get lost in the sea of obscurity, but not this video. Produced entirely by RGS alumna Deanna See Xuhui (class of 2015), this video made headlines, both locally and internationally. Deanna's animated and endearing antics in the video and the use of simple 'old-school' props to engage the audience in a tale of antibiotic resistance was a hit. The video, which was one of more than 6,000 entries from 146 countries for the Breakthrough Junior Challenge, also won her a US$250,000 scholarship from a foundation funded by Facebook founder Mark Zuckerberg as she was named one of two winners for the challenge.

While Deanna credits her Biology teacher Mrs Wong Seok Hui for inspiring her award-winning video, it is evident that her innate passion for the life sciences shines through not only from the video, but also from her interest in the subject since young. Not surprisingly, she has plans to pursue a future career in STEM (Science, Technology, Engineering and Mathematics). We speak to Deanna to find out what went on behind-the-scenes during the making of her award-winning video, and she also shares more about her RGS experience.

Receiving News of Her Win

"I received the news weeks in advance; it was an early morning phone call from California asking, "Deanna, can you keep a secret?" The first thing that came to my mind was utter disbelief. In the first few minutes after that phone call, I thought about the possible identity of the other winner, the fact that we both just won a scholarship, and how I was going to keep this piece of wonderful news a secret for two long weeks!"

Idea for the Video

"It was difficult picking just one concept out of so many in the life sciences - I couldn't decide for days leading up to the deadline. I eventually chose antibiotic resistance as it not only illustrates two major biological concepts (genetics and evolution), but is also a pressing health issue we face today. I was also inspired by an article that I'd just read a week before entering the competition, which was about a 25-year-old PhD student who developed a potential way of killing superbugs without antibiotics."

Deanna with all the laureates during the prize presentation ceremony.

Deanna accepting her award for the Breakthrough Junior Challenge at San Francisco's Silicon Valley last December.

Behind-the-Scenes

"I joined the challenge right after my promotional exams, which left me with 10 days before the deadline. Out of those 10 days, I spent five days writing the script, three days filming and two days editing. Drafting the script was definitely the most complicated part of the process as I had to ensure that what I say would be informative yet still easy to follow. To aid understanding, I thought of analogies like video games to illustrate the idea of bacteria gaining resistance, and humans to explain the exchange of genes between bacteria cells. It took three drafts of scriptwriting before I was fully satisfied! As for the video production, I didn't have the necessary software to animate my ideas. Hence, I went old-school – using stop-motion and drawings. For the rest of my video, I used the talking-head approach with my iPhone to elaborate on the animations. All in all, my video revolved around these key props – LEGO figurines, antiseptics, a screaming chicken and the whiteboard and markers for the drawings."

Thank You Mrs Wong!

"My Biology teacher Mrs Wong Seok Hui inspired me for the creation of the video mostly through the way she brought biological ideas to life. Even though there's an increasing emphasis on technology nowadays, Mrs Wong taught us just as effectively with the whiteboard. She would draw super-sized versions of cells to illustrate the biochemical reactions of respiration or photosynthesis, and erase parts of her drawings to incorporate our ideas. I was definitely inspired by how interactive she made Biology even with a traditional teaching method."

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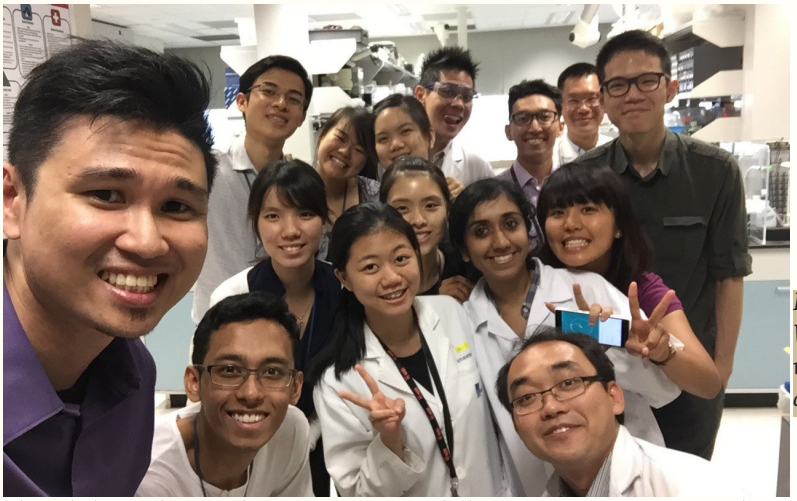
Her RGS Experience

"RGS for me has been incredibly meaningful and full of opportunities. In school, we're always encouraged to reach beyond our perceived limits, and then reach even higher than before. Through special programmes and competitions, RGS moulded me into an adventurer eager to explore new paths. There were many milestones along my RGS journey, but among them, I would say joining Cogitare (Co-Curricular Activity) in Year 1 was the most impactful. Through Cogitare, I had the privilege of meeting many like-minded sisters and mentors who loved science beyond what we learnt in class. We carried out wacky experiments (with precautions!) in the labs, organised lectures and went for competitions together. These shared experiences married our passion for science with important skills like teamwork and responsibility, which helped us grow into better individuals within a close-knit community. Even though it's been slightly over a year since I've left RGS, the friendships made and precious lessons from Cogitare remain some of my best takeaways from RGS."

A batch picture of Cogitare - "my home away from home".

Fuel for her Passion

"In RGS, I had many opportunities to further my passions through the Raffles Academy (RA Biology) and Research Studies projects, as well as competitions such as the BBC Knowledge Schools' Challenge and GMAC Students' Challenge, among others. RA definitely lived up to the rigour it promised, helping me develop a more intricate understanding of the complex relationships in Biology. I am also grateful for the privilege of joining the Youth Research Programme, which gave me the valuable experience of working with research scientists. These opportunities opened my eyes to a world way beyond the pages of a textbook, and helped me relate what I've studied to a practical setting."



Through the Youth Research Programme, Deanna had an eye-opening experience working in a lab.

Favourite RGS Traditions

"Our Unite cheer will always remain close to my heart. I still remember the first time my batch did the cheer during our Year 1 Orientation – it cemented our solidarity and pride for RGS. Even after graduating, hearing our juniors enthusiastically cheer the familiar refrain "we're for Raffles" brings back wonderful memories of RGS, which I'm sure holds true for many generations of alumnae too."

Greatest Learning Experience

"One of my favourite things about RGS is how it brings together so many passionate individuals. From my teachers, I learnt to communicate ideas with as much passion as they had. From my peers, I learnt to work on every project and competition for the love of it. My greatest learning experiences thus come from what I've picked up from both my mentors and friends in RGS; they've taught me to be curious and to persevere in everything that I set out to do. My favourite of these experiences actually come from coaching my juniors for the BBC Knowledge competition, because it gave me the chance to put all these lessons into practice and pass them on to the next batch of students."

Deanna was part of the winning team for the 2015 BBC Knowledge Schools' Challenge.

Hopes and Wishes for RGS

"Even as RGS moves into a new home, my biggest wish would be for the RGS spirit to remain as strong as ever, if not stronger. RGS was where I discovered both myself and a second family, and I hope future batches of RGS girls will similarly find their calling on this life-changing journey. On a lighter note, I hope the new labs at the new campus will help fellow science fans strengthen their passion too! Finally, I wish for RGS to continue inspiring high-ability girls to care for one another, stay curious and dare to be different."

Know an inspiring Rafflesian who has a story to share? Write to us at adeline.chow@rgs.edu.sg to tell us more, and who knows, you may get to see yourself or your long-lost classmate in subsequent issues of the Raffles Wave!