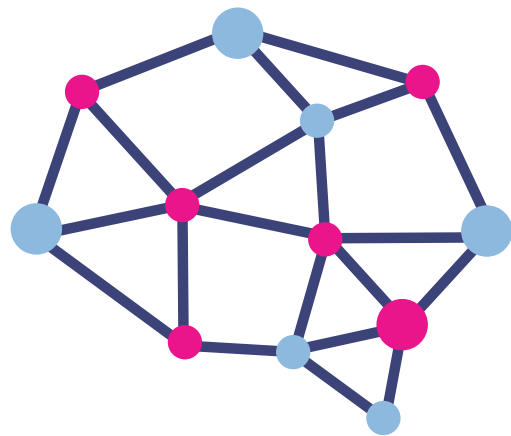


Kritikos



KRITIKOS CURIOSITY PROJECTS, JUNE 2021

Mrs Katharine Payne, Kritikos Coordinator

Kritikos is Woldingham's programme for academic scholars. As part of the programme, students complete a 'curiosity project', which gives them the opportunity to pursue their own enquiry, research, reflect and work independently.

A summary of the curiosity projects undertaken by Kritikos students in Years 7-9 is shown below.

Amelia, Year 7 - *Discovery of space*

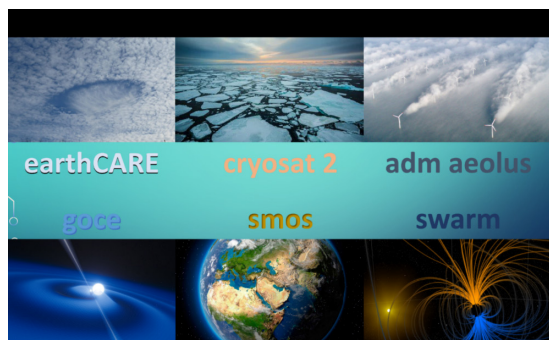
The history of space exploration, past, present and future, questioning along the way if science fiction can offer any solutions to the future of the planet.

Living in space?

By 20th century expectations, we are way behind schedule on finding places to live in the solar system. After the Apollo moon landings, some scientists and NASA officials envisioned launching astronauts to Mars in the 1980s and building cities in space to be habitable by the 2000s. But the only humans in space today are a few astronauts in a space station orbiting Earth.

Drawing on the science and history of space exploration, Wanjek paints scenes of future human activity across the solar system. "A two-week trip to the moon would be much like an African safari was 150 years ago," he writes. "Initially for the wealthy, with a tinge of danger, and certainly not for the kids, at least not at first." he expects a permanent human presence on Mars in the 2050s and visits to Jupiter's moons by 2100.

Wanjek contradicts these ambitious ideas with honest points about the dangers of space travel. "Living in microgravity sucks." Weightlessness weakens bone and muscle, and he is not convinced that the International Space Station diet and exercise regimen is enough to keep astronauts fit for the trip to another planet.

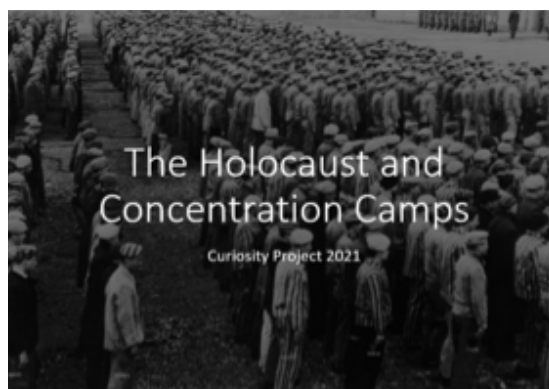


Isobel, Year 7 - *The discovery of Earth via satellites*

Isobel researched the technology behind how different satellites work and how they enable us to better understand our planet. She explored their impact in a number of different fields, from the everyday use of GPS, to weather and military operations.

Evie, Year 7 - *Discovery of WWII concentration camps*

Evie says "it was such a big part of history, so I feel that I should know a lot about it. I recently read *The Diary of a Young Girl* by Anne Frank and It made me even more intrigued." Evie also explored the Year 9 history curriculum, first person testimony from www.ushmm.org and wider academic research.



WHY DID I CHOOSE CLOUDS?

Everyone loves a sunny day, and everyone hates a cloudy day, right? My interest in clouds had begun at a small age. I'd always be intrigued by clouds because when I looked up, they were always there. In primary school, playing during break time with my friends, we would look up and spot different patterns in the clouds and I often wondered who. When we were given the curiosity project this year-themed discovery, I knew instantly what I was going to discover. In my discovery, I realized that there was more to clouds than I ever imagined, of which I will share with you.



Megan, Year 8 - Discovering the wonders of clouds

Megan explored clouds from many different perspectives: religious, mythical, computing, scientific and psychological.

Livvy, Year 8 - How will the 2020 US Presidential campaign promises affect the rest of the world, and have they been fulfilled?

Livvy built on her tremendous AQA EPQ project, which looked at the campaign promises of Donald Trump and Joe Biden. She explored what Biden actually achieved in his first 100 days and if he is living up to his promises. She read widely in *The Economist*, *New York Times* and *New Statesman* and shows insight of this highly relevant topic well beyond her years.



Lea, Year 8 - What could be the impact on the world if we fully understood how our brains work?



I think the brain is still a major mystery to us because we know so much and yet so little.

If we keep learning about it, it may lead to amazing scientific advancements including curing some of the most terrifying diseases for humans because they change personalities.

But it is not only about the human body and its comprehension, it is also technological breakthroughs such as AI.

It is simply the lead to an infinite number of projects.

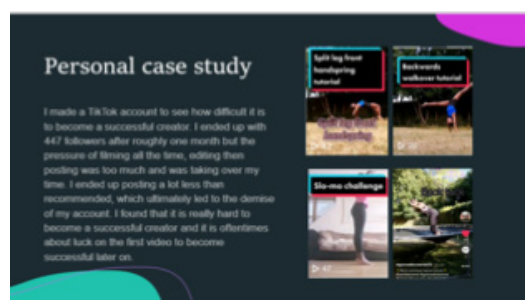
Conclusion



Caitlin, Year 8 - How are our views on abuse influenced by outdated stereotypes?

From her research, Caitlin concluded that the stereotypes surrounding abuse are harmful and outdated and therefore affecting general views and ideas about abuse negatively. She explained that by educating people on the subject, we will save future generations from becoming victimised and hopefully make those who have been abused feel comfortable to come forward and report it so that justice is served.

Waishe, Year 8 - Does TikTok affect its users for better or for worse?



Fleur, Year 8 -

How to be a time traveller? (Spoiler, you already are one.)

Fleur says, "I have chosen time and time travel because it has always been an unrealistic theory to me and I want to reveal what time actually is and to help develop an understanding of how things like time and gravity work. I want to show how theories can become reality as I think this is a fun topic to understand. I want to spread the knowledge of this amazing discovery."

Fleur has a tremendous ability not only to understand these really high brow concepts but to explain them in a way we can all understand.



Charlotte, Year 9 -

What is the likelihood that there is other life in the universe?

There is no way of telling the number of extraterrestrial civilisations, if any, in the universe. Instead, we look to various equations that aim to work out the problem.

Experts offer many reasons why somebody, or something, might be out there, yet beyond our

detection. On the other hand, the ultra-cautious might remind us that, while a lifeless cosmos seems unlikely, we have exactly zero information one way or the other. Still, scientists say they like our chances of finding some form of life and are hard at work on the telescopes and instruments that could make that future epiphany a reality.

"It's not a question of 'if,' it's a question of 'when' we find life on other planets ... I'm sure in my lifetime, in our lifetime, we will know if there is life on other worlds." - Ravi Kopparapu.

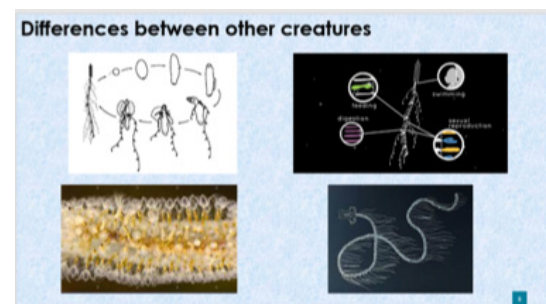
Hattie, Year 9 -

Discovering the siphonophore

A siphonophore is usually long, thin and consists of a clear gelatinous material. Some species that are found deeper in the ocean have dark orange or red digestive systems meaning they can be seen inside their transparent tissues. Siphonophores are extremely fragile and when slight forces are applied to them they fracture into many pieces.

During spring 2020, a new siphonophore, called siphonophore apolemia, was discovered in the Ningaloo Canyons off the coast of Western Australia. As you may have guessed, the newly discovered creature is a predator and it hunts by dangling its toxic tentacles, which ensnare and kill prey.

Because this creature was so recently discovered, there is so much to be investigated and a constant flow of new information comes through. For example, there was a video with facts that have now been updated as scientists have found new details. I find this very interesting because it shows how nothing in science is final and there can always be new discoveries.



Grace, Year 9 -

Are humans too self-absorbed to make obvious discoveries in the world?

A fungus found on the leaves of some of the Wollemi pines in the wild has been found to produce small quantities of a chemical known as taxol - an anti-cancer agent. The Wollemi pine has been a story that has captured people's imaginations. It is a tale of high adventure and academic excellence. First, there was a dramatic canyoning exploration trip that led to its discovery, then scientific detective work to determine exactly what that 40-metre-tall tree found by Noble actually was, followed by the quest to understand how it survived unnoticed so close to Sydney. On the day of its discovery, the director of the Royal Botanic Gardens, Carrick Chambers, announced: "This is the equivalent of finding a small dinosaur alive on Earth."

Wollemi pines have become a symbol of survival and all that is good about what we can do when we are determined to protect something. It shows that all is not lost as human-made climate change tightens its grip.



Negative and Positive Impacts of Technology in Jobs

Negative

- Redundant jobs - job - human labour replaced by machines, e.g., farming
- AI - reduces employment availability for technically skilled people
- Continuously update tech knowledge to sustain themselves in the job market

Positive

- Eliminates burden of doing repetitive tasks e.g. manufacturing in factories - increases productivity
- Creates new jobs
- Economic Growth - services expanded my technological innovation, creating more jobs
- Increased consumerism - increased job opportunities

Jessica, Year 9 -

How will discoveries in technology affect future jobs?

What does this mean for students in the future? As technology is going to have a big role in the job market in the future, this means that everyone should learn tech skills such as coding and programming. This helps students to have a wider variety of job opportunities and decrease their chances of unemployment

Learning ICT skills is highly encouraged and here are some quotes from well known people:

"Learning to code is useful no matter what your career ambitions are."

- Arianna Huffington, Founder, The Huffington Post

"Coding is the language of the future, and every girl should learn it. As I've learned from watching girls grow and learn in our classrooms, coding is fun, collaborative and creative."

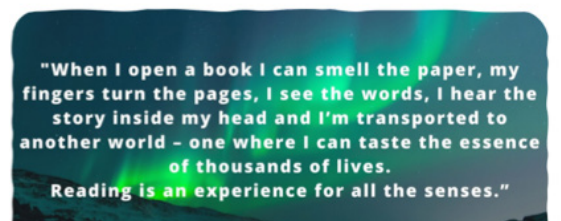
- Reshma Saujani, Founder, Girls Who Code

Mia, Year 9 -

Reading: the journey of discovery. How does reading fiction influence the reader and to what effect?

Having reflected on *The Gilded Ones*, by Namina Forna, and *The Danger of a Single Story* by Chimamanda Ngozi Adichie I think it's really up to the reader to decide what they get from a book. If someone is educated enough to understand the meaning of what they're reading and come to their own conclusion on this then, yes, reading still influences them to a degree but in a good way.

However, if someone is not aware of this then they might accidentally pick up the wrong ideas. In terms of books from other time periods, I think the context of where the author or characters are coming from is vital. As long as you understand why a book might be portraying certain messages and ideals and can form your own opinions on it, then, regardless of what you read, the right ideas will form.



The discovery of the tomb

- ▶ In November of 1922 Howard Carter found King Tutankhamun's tomb
- ▶ It was found under a line of abandoned workers huts
- ▶ The archaeologists found King Tutankhamun's burial room through a fake wall in the antechamber
- ▶ The tomb had been sealed off for 2300 years
- ▶ It took 6 years to fully excavate
- ▶ The most intact ancient Egyptian tomb ever found



Anna, Year 9 - *How was King Tutankhamun's tomb discovered?*

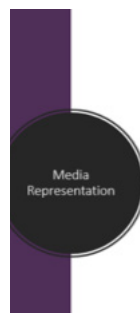
As King Tutankhamun and his family lived such a long time ago it is difficult to get exact information about any of them but the findings of archaeologists have increased our knowledge about the ancient Egyptian monarchy and new discoveries are happening all the time.

Anjali, Year 9 - *Why do we think the supernatural exists?*

Given that the supernatural can encompass a vast multitude of things, I did some in-depth research on vampires and werewolves; witches; and ghosts. It raised the following questions:

- Do you think the supernatural exists?
- How do you think media representation has affected our view on the supernatural?
- How would you go about proving the existence of the supernatural scientifically?
- Do you think sheep-mentality makes people believe in things that aren't there?

While I do not have a definite conclusion to my question, I believe it is due to a mixture of sheep mentality, media representation and wanting something transcendent to exist to explain the inexplicable, as well as science still not being at its full advancement in areas like these.



Caitlin, Year 9 - *How has data analytics changed sports?*

Sport is a multi-billion-dollar industry. Like any other business, professional sports are all about making money. Data analytics helps inform important decisions in order to be successful and, effectively, how to buy wins. Therefore, fine-tuning and improving results by even 1% can make a huge difference. But, it's not just

about better recruitment of players - it can help with a range of other factors, from tracking a player's health, to what flavour of crisps to sell at the stadium.

In the modern world, data analytics is an unmissable part of sports, but at the end of the day, it's still up to the players to perform on the field, court or racetrack. Analytics is just another factor, albeit an important one, adding extra excitement.



Kritikos



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