



VIRTUS  HERALD





# International Science Day

World Science Day for Peace and Development, explores some of today's most impactful scientific objectives, each aiming to shape a brighter future. Don't miss these four research areas, to transform the way we interact with our world in the coming years

## QUANTUM COMPUTERS

While traditional computers use bits as units of information, which can only be 0 or 1, quantum computers use qubits, which can exist as 0, 1, or a mix of both. Without getting too technical, quantum computers will revolutionise how information is processed, allowing them to solve complex problems in minutes —tasks that would take traditional computers thousands of years.

Tech giants like Google and IBM are investing billions to make quantum computers powerful and reliable.

What can we gain from quantum computers?

These machines will be capable of performing tasks impossible for regular computers, from accelerating drug discovery to solving complex problems in physics. "Quantum supremacy" will push the boundaries of our knowledge in the years to come.

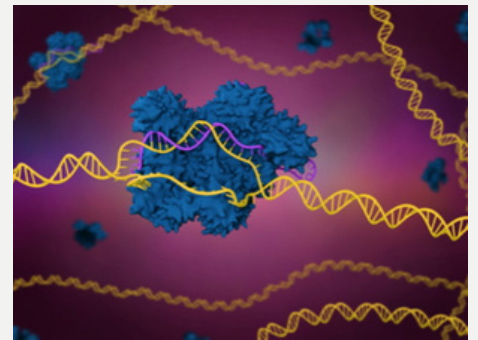


## GENE EDITING - CRISPR/Cas9

CRISPR is a gene-editing mechanism found in bacteria that helps them defend against bacteriophages viruses that infect bacteria. Discovered by Spanish researcher Francisco Mojica, CRISPR/Cas9 enables us to directly modify genes. The CRISPR system recognises a specific DNA sequence, while Cas9, a protein, cuts and modifies the DNA.

What can we gain from gene editing?

Gene editing is a highly promising field in medicine, with the potential to modify flawed genes responsible for genetic disorders like muscular dystrophy (muscle degeneration) or cystic fibrosis (a respiratory disease).

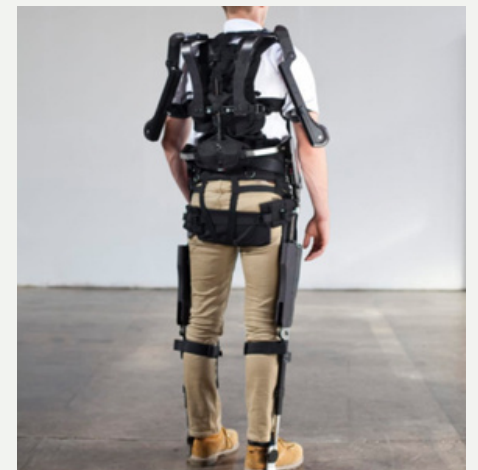


## ADVANCED ROBOTICS

Combined with artificial intelligence, the field of robotics is advancing rapidly, aiming to develop machines capable of performing complex tasks across industries. Companies like NVIDIA, the worlds most valuable chip company, are investing billions in developing safe and advanced robots, including humanoid.

What can we gain from robotics?

robots will help us with repetitive and hazardous tasks in manufacturing and could provide mobility assistance through robotic exoskeleton.

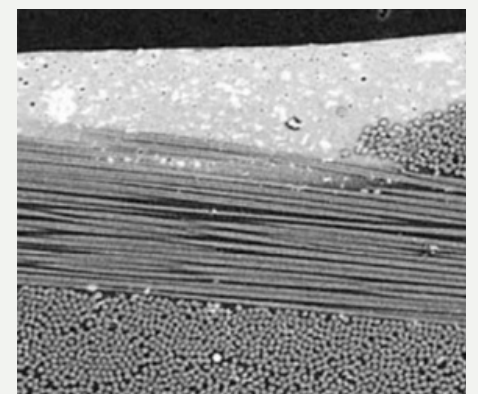


## NANOTECHNOLOGY

Nanotechnology is the branch of engineering that designs systems to manipulate atoms and molecules at the nanoscale ( $10^{-9}$  meters).With nanotechnology, we gain direct control at the atomic level, the foundation of all processes.

What can we gain from nanotechnology?

from nanotechnology delivering medicines directly to cancer cell (nanoimedicine) to nano engineering materials with revolutionary properties for the aerospace industry, nanotechnology holds great promise.



By Mr Picabea

# HALLOWEEN BAKE SALES



Our school's Halloween bake sale brought the perfect blend of treats, teamwork, and goodwill, raising an impressive 312 euros for charity! It was organised by a dedicated group of students, this event not only filled the hallways with the delicious aroma of freshly baked goods but also showcased the incredible generosity and spirit of the Virtus community.

Throughout the day, students, teachers, and staff members stopped by to sample a wide variety of Halloween-themed treats. From ghostly cupcakes and spider cookies to pumpkin-shaped brownies and spooky cake pops, most of the treats were handmade by students, who volunteered their time and baking skills to support the cause. The event was more than just a bake sale; it was a chance for everyone to come together, have fun, and make a difference.

One of the most heartwarming aspects of the bake sale was seeing students working together to promote the cause. Many wore costumes or Halloween-themed accessories, adding to the festive atmosphere and making it impossible not to smile. Beyond the delicious treats, this bake sale reminded us of the power of community. Each purchase contributed directly to a charity that raises funds for those in need.

Thanks to the hard work of everyone involved, we managed to raise a significant amount of money in just one day! This contribution will make a meaningful impact and help bring positive change to those who need our help.

A huge thank you goes out to everyone who baked, volunteered, purchased, or supported the sale in any way. Your generosity and enthusiasm transformed a simple bake sale into a memorable, impactful event. We look forward to even more successful events in the future, proving once again that our school community can accomplish great things when we all work together.

By Jimena Gutiérrez Sanz





# Virtus Open Day

17:45 – Opening and welcome cocktail

18:15 – Presentation of the Director Mrs. Radford and the Deputy Directors

18:45 – Facilities, methodology, and meetings with the teaching staff

19:30 – Talk with the Senior Leadership Team and students

20:00 – End of the event



Virtus College hosted a highly successful Open Day, drawing a record number of prospective students and their families who praised the engaging tours and retrieved a lot of information of our specific subject showrooms. The students were able to meet the subject teachers and the subject ambassador from the subjects they were interested in joining. Subject ambassadors did a great job



# Competitions

Virtus students are happy to challenge themselves daily and go beyond their limits to foster their growth mindset and participation in the wider international educational communities.

This month, our amazing Physics and Maths students have will be taking part in the following competitions:

British Physics Olympiad 12th November

UKMT Maths Olympiad 20th November





# Virtus in Sports

## Interview with Anastas Zakharyan

Anastas, a student and athlete. His journey in martial arts began at the age of six when he started practising karate. However at 12 years old, he discovered his true passion: kickboxing. According to him, kickboxing felt more natural because it allowed him to hit harder, which he found more enjoyable.

Originally from Ukraine, Anastas moved to Spain at a young age, where he continued his karate training for two years. Eventually he decided to dedicate himself entirely to kickboxing, as it was the sport he enjoyed the most. His commitment to the sport has seen him achieve impressive accomplishments, including winning the Mediterranean Kickboxing Championship and the Catalonia Championship. A very good memory that Anastas keeps from when he won the Catalonia Championship is that his father got so excited for him that he got a trip to New York City.

Balancing his studies with his training has not been easy for Anastas. As in Year 13, in particular has been a challenging time for him, as he has had to manage schoolwork, homework and training. Despite the difficulties he tries to train two hours a day whenever possible, though he prioritises studying during exams.

Anastas' journey could be a source of inspiration for anyone trying to pursue their passions while managing other responsibilities. His hard work and determination prove that success is possible with the right mindset. The school community wishes him continued success both in the ring and in his studies!

By Sophie Pérez







**SYMUN**  
2024  
Guillermo Corrales



# MUN



**SYMUN**  
2024  
Miriám Fernández





# House points



2nd Hawking- 574 points

3rd Seacole- 445 points

4th Attenborough- 385 points



# The Secret Life of Teachers

## Ms Zakaria!



Ms. Zakaria, one of the most adored teachers here at Virtus, was born and raised in Singapore, surrounded by a close-knit group of family and friends. Growing up, she was immersed in British-American culture since English was spoken around her, but she always held onto her Asian values, which have shaped her into the person she is today.

During Sixth form, she studied Business, Economics, English Literature and English Language, while also taking her mother tongue as a compulsory AS-level subject. She later went on to study a double degree in Economics and Language at the University of Singapore.

Something that wouldn't surprise us here at Virtus is that as a young girl, Ms. Zakaria dreamed of becoming an actress or a singer—she even admits she still sings in the shower! She also considered following in her father's footsteps to become a lawyer. Knowing her vibrant and lively personality, it's easy to imagine her shining on stage as a performer. In fact, if we ever have a school talent show, I'd personally make it my mission to ensure she's the star of the performance! But life had other plans. After graduating during the 1998 Asian financial crisis, she found herself working as a junior banker for six months, a job she absolutely despised. However, in the middle of those challenges, she stumbled upon teaching, and it turned out to be her true calling. We're all so lucky that she did because it's hard to imagine Virtus without her infectious energy and endless passion.



Her life took an exciting turn in 1999 when she met her husband in Singapore. They got married a year later, and just two weeks after their wedding, they moved to Barcelona. From there, they travelled back and forth between Barcelona and Florence until 2002, when they returned to Singapore for her husband's new job. They lived there for ten years, and during that time, Ms. Zakaria gave birth to her two sons. Eventually, the family moved to Madrid, where they settled for good. She's fallen in love with Spanish culture and says she can't imagine going back to Singapore, as her boys are thriving here, and she loves the lifestyle. Although teaching has been her passion, Ms. Zakaria doesn't plan to retire as a teacher. Instead, she sees herself working as a consultant or trainer within the education field. If she weren't a teacher, she says she'd love to be a chef, a passion well-known among other Virtus teachers, who are always eager to try the delicious things she brings from home.

In her free time, Ms. Zakaria is busy with her ongoing never ending gardening project. Last year, she added a huge tropical palm tree to her garden and created a beautiful pathway with plants and small rocks. She's also a talented musician. She started playing the piano at the young age of four when her father bought it for her older sisters, who quickly lost interest. Ms. Zakaria took over and excelled, completing Grade 8 by the age of 16. She planned to pursue a diploma in piano during her sixth form, but with so much on her plate, she had to give it up, a hard decision she still regrets. Now, she plays just for fun, which she finds incredibly fulfilling.

Looking ahead, Ms. Zakaria has two big goals. One is to start an online business, though she's still figuring out exactly what kind. Her other dream is to visit Bora Bora, a place she's always wanted to see and I think we can all agree that we can envision her in a tropical

By: Gabriela Andronis



# Ms Birkenhead!

Ms. Birkenhead, one of our school's most beloved teachers, was born and raised in Liverpool. Daisy has two identical twin brothers, and two younger sisters. Growing up, she attended a school she describes as "not the best," but her determination to succeed was evident. She excelled in her GCSEs, which earned her a scholarship with the University of Liverpool. She went on to obtain her A-levels in History, English Literature, and Psychology, subjects that laid the foundation for her future aspirations.



Her academic journey didn't stop there. Ms. Birkenhead pursued a Bachelor's degree in History and after finishing immediately transitioned to a Master's in History. During her studies, she made the bold decision to move to Spain, where she discovered her passion for teaching. She completed her PGCE with the University of Nottingham and officially began her career as an educator. Now, combining her love for teaching and mental health, she has started a Master's in Psychology with the University of Liverpool, continuously expanding her knowledge and skills.



Ms. Birkenhead's dedication to her students goes far beyond academics.

She takes immense pride in seeing them grow, especially those who initially struggled but ultimately achieved the grades they needed to reach their dream universities. These moments of transformation, along with the funny and heartwarming experiences in the classroom, are what make teaching so fulfilling for her. Despite describing herself as "the definition of burnout" at times, she has developed effective strategies to maintain work/life balance, such as using to-do lists with small goals and staying organised.



Beyond the classroom, Ms. Birkenhead has a deep love for travel and new experiences. One of her favourite destinations was Croatia, although she also loves Italy - with one of the most beautiful places she visited being San Pellegrino. Next summer, she hopes to tick

Thailand off her bucket list. At home, she's a devoted cat owner, a role she took on after adopting three shelter cats: Lea, Mia, and Nina. Though she originally planned to adopt just one, she couldn't resist giving all three a loving home. She shares a funny story about being "catfished" into adopting Mia, a Siamese cat she jokes looks like a capybara and only warmed up to her after two years. She has also recently adopted a Podenco / Mastin mix puppy, named Wendy!



Ms. Birkenhead plans to stay in education until retirement, driven by her passion for inspiring and mentoring young minds. Her journey from Liverpool to Spain and her unwavering commitment to her students make her a true role model. She's not just a teacher but an inspiration, bringing warmth, dedication, and positivity to everything she does.



# Geographers Reflection on DANA - Valencia

In recent weeks, Valencia and surrounding regions have suffered from a challenging weather phenomenon known as DANA (Depresión Aislada en Niveles Altos), a term used in Spain for isolated high-altitude depressions. This natural event is associated with intense and unpredictable storms, which has led to severe flooding, disrupted communities, and raised concerns about the effects of climate change on weather patterns in the Mediterranean.

DANA occurs when cold air at high altitudes meets the warm, humid air from the Mediterranean Sea. This clash results in extremely heavy rainfall concentrated over a short period of time, creating dangerous conditions and flooding. The Valencia region, known for its sunny climate all year long, has experienced a series of these intense storms, which have left several towns flooded, roads blocked, and communities in need of support.

Streets of towns have quickly turned into rivers, cars were submerged, and schools and businesses were temporarily shut down as the amount of rain exceeded typical seasonal averages. For residents it has become a huge challenge, with locals increasingly concerned about the future of their region in the face of climate change.

The consequences of DANA extend beyond immediate disruption. The agricultural sector, which is a vital part of the Valencian economy, has faced significant losses due to the torrential rains and subsequent floods. Orange, olive, and vineyard crops have been particularly affected, leading to financial losses for farmers and impacting the region's economy as a whole. Local authorities are actively seeking ways to offer support to those who have been affected, with discussions of financial aid and improved infrastructure to better manage these events in the future.

In response to these extreme floodings, people and organisations from across Spain have come together to provide vital support to the region. One of the primary efforts has come from emergency services mobilising on a national scale. Firefighters, police, and Civil Protection units from various regions have been sent to assist in Valencia. These units have worked to evacuate residents, clear blocked roads, and ensure the safety of those affected by the floodwaters. Also citizens and organisations have organised donations and fundraisers to support the flood victims. Local governments have launched initiatives encouraging people to contribute financially or donate essential items like clothing, food, and hygiene products. Many people across Spain have responded generously, helping to provide for those who have lost their belongings due to the severe weather. Volunteers have taken to the streets, helping residents clear debris and repair damaged infrastructure, highlighting the resilience and unity of Valencian communities in the face of hardship.

The region's experience with DANA is a reminder that climate change is not a distant issue but a present reality that requires immediate attention and action from all of us. This recent DANA issues in Valencia serve as a powerful wake-up call for both Spain and the global community. As communities rebuild and reflect, the challenge remains to address the root causes of these increasingly extreme weather events. The actions taken now will determine whether future generations will continue to face these challenges, or whether they will see a world better equipped to manage the complexities of a changing climate.

By Jaime Abarca and Gabriel Bento





# Anti-Bullying Week

Week of the 11th of November



As students we should want to have an inclusive and supportive environment for each other. Antibullying week is the perfect time to make us stop and reflect and ensure our school is standing up against bullying and promoting kind and accepting values. Bullying doesn't only happen in school, it can happen anywhere and to anyone.

- 12% of students (12-16) in Spain have reported to experience a form of bullying in school
- In 2020 around 11% of students had been cyber bullied
- In 2021, UNICEF reported only 40% of students that witness bullying don't report it

With these statistics we can see how important it is to address this issue and spread awareness.



## How can you help?

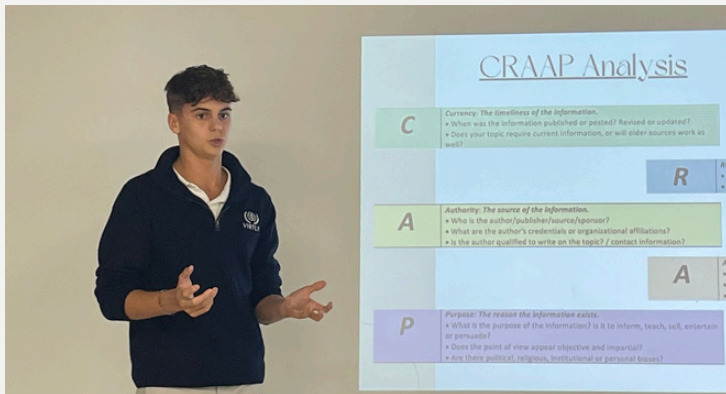
- Stand up for those being bullied. Check in on others and if something is wrong, tell a trusted adult.
- Spread positivity to make people feel included and encourage others to do the same.
- Talk openly about bullying and share your thoughts.

By Cecilia Heras

# Outside the classroom

EPQ (Extended Project Qualification) Presentations  
6th of November 2024

## Jaime Guerrero



“My EPQ journey taught me valuable skills, from managing timelines to conducting in-depth research on global warming’s impact on businesses. Using credible sources like, I critically analysed diverse perspectives, refining my problem-solving and analytical abilities. This experience deepened my understanding of global issues and strengthened my ability to think independently and communicate effectively.”

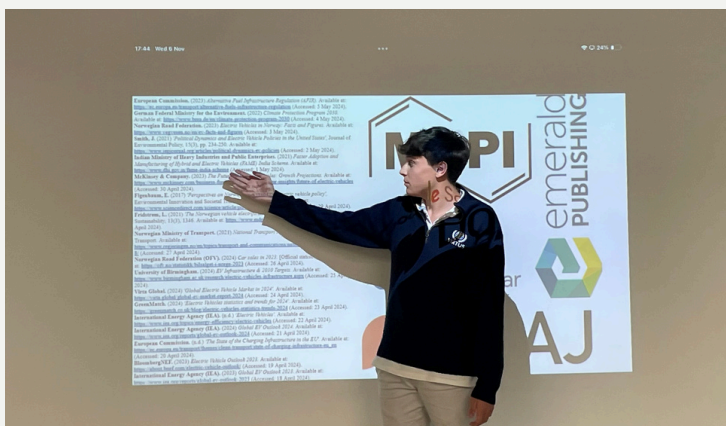
## Nicolas Valderrama

“My EPQ project investigates the viability of alternative and sustainable fuels as solutions to reduce environmental impacts. The research evaluates the potential to replace conventional fossil fuels in transportation, industry, and energy production. By analysing case studies, government policies, and innovations in technology, the project highlights the role of sustainable fuels in transitioning to a cleaner, low-carbon future.”



## Gabriel Ezerzer

“My EPQ centered on analyzing the electric vehicle industry and exploring the factors behind its rapid growth. For students considering undertaking an EPQ, I would advise them to carefully assess whether they are willing to commit to the significant effort required. Personally, I dedicated over 100 hours of independent work to this project, and the process was both challenging and rewarding.”



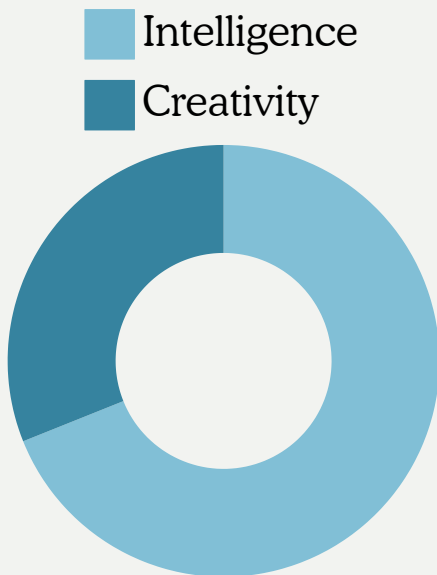
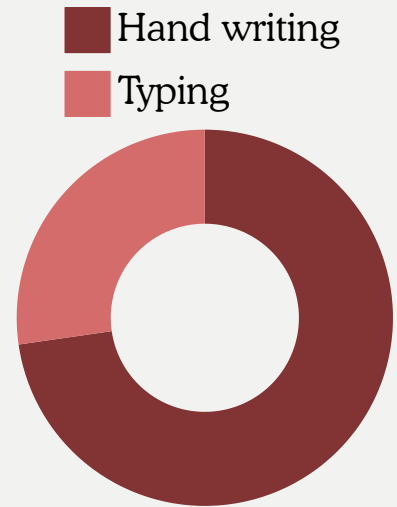
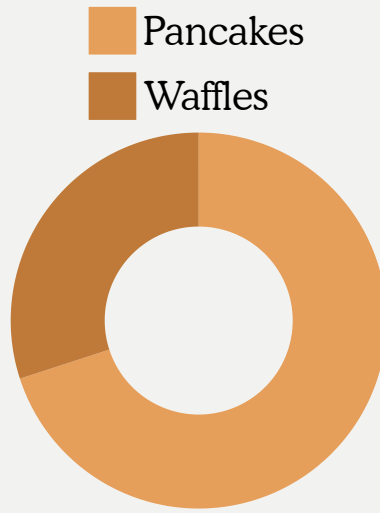
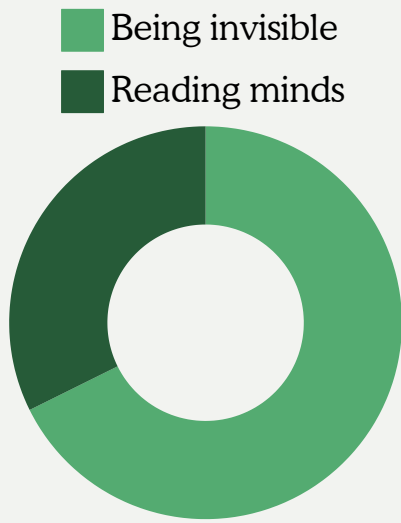
## Juan Trinchant

“In my EPQ, I explored how the aerodynamics of the front and rear wings affect a car’s performance by analyzing their roles in generating downforce, reducing drag, and improving stability. I examined the impact these aerodynamic elements have on cornering, acceleration, and top speed, highlighting their influence on overall handling and race performance.”

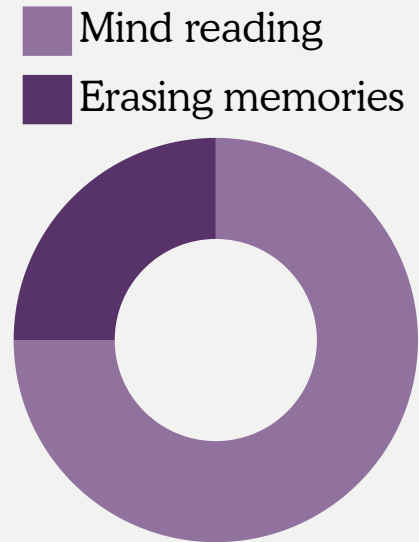


By: Riana Parwani





***This or  
that at  
Virtus***



Sharks evolved before trees  
 Cows have best friends  
 High heels were made for  
 aristocratic men  
 Zebras are black with white  
 stripes



By: Cecilia Heras

# STUDENT SPOTLIGHT Y12

Future CEO



Best dressed



Social butterfly



Win an argument



Best Humor



Future Olympian



# STUDENT SPOTLIGHT Y13

Future CEO



Best dressed



Social butterfly



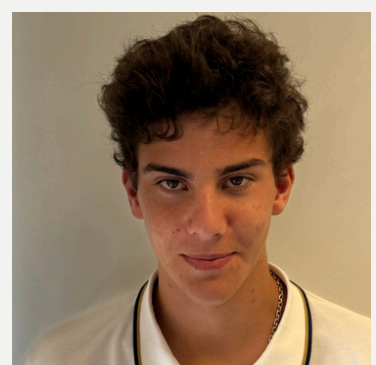
Win an argument



Best Humor



Future Olympian





# Credits

We hope you enjoyed this issue of the Virtus Newspaper! Every edition will be different and hopefully you can learn a thing or two from it.

Here is who is behind this project:

Jimena Gutiérrez- Editor

Gabriela Andronis- Deputy Editor

Cecilia Heras- Deputy Editor

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Sophie Perez- Writer



**Special  
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Gabriel Bento - Guest Writer

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Ms Birkenhead - Interviewee

Ms Moreno - Moral support