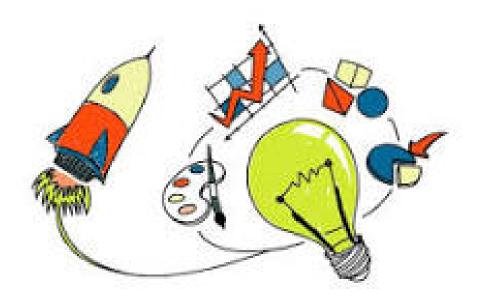


# LEARNING THROUGH THE EYES OF OUR LEARNERS



FEBRUARY 2025





## **Project-Based Learning - Science Project (Forces)**

This year, our Form 2 Science syllabus integrated fun and interactive ways to apply and further grow our knowledge on Forces. To do this, we were tasked with a project that applied the forces we are exploring into creative projects.

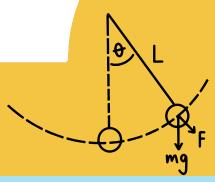
Our idea revolves around creating a system that will encourage compost collection through an interactive, game-based approach. With the addition of a hydraulic elevator system, we developed a fun yet interactive way to get people involved in composting while simultaneously learning about hydraulic systems and sustainability.

Our concept was to design a hydraulic elevator system that responds to the quantity of compost placed in a bin. The more compost, the higher the elevator would travel. To make it more interactive, each level of the elevator would offer different rewards, motivating users to contribute more.

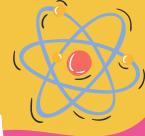
Some rewards include virtual trees, badges and sometimes green coins that can be translated to either gifts or stickers in school. This system is designed with the dual purpose of promoting green waste disposal and demonstrating the practical uses of hydraulic pressure. Our target audience is local elementary schools and communities.

We will develop our model by enhancing its usability and scalability. We will include digital tracking and data collection so that users can monitor their compost contribution in a period.









We also aim to collaborate with residential apartments, schools, and community centres to implement this system in real settings.

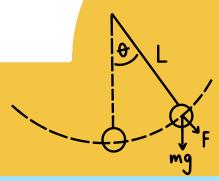
While our prototype demonstrates the system's basic functionality, we intend to integrate electronic sensors to measure compost weight accurately and automate the reward system. We can also develop models for various environments such as city apartments and community gardens. Expansion in another direction involves integrating alternative power sources, such as solar power, to enhance the overall sustainability of the system.

In all, this project-based approach has aided us in understanding the concepts we are learning. It engages and encourages us to use clinical and reasonable thinking to solve problems using the skills we have learnt. This not only broadens our knowledge of what we are currently learning, which is Forces, but teaches us other skills that will help develop us into leaders and inventors with innovative and creative ideas and mindsets.

We truly believe that engaging us (busy-minded teenagers) in this way stimulates our brains and how we receive information, helping us understand what is being taught, and project-based learning does just that for us.

> Eliel Binitie Samar Kassab Majdoub (F2A)









#### REFLECTING ON MY SCIENCE GROUP WORK

Creating a slideshow for a trash cleaning robot project was an interesting and rewarding experience. My role was to design a conceptual robot that used the principles of moments (rotational force) and pressure (force applied over an area) to clean up trash and then present that design in a clear and engaging way.

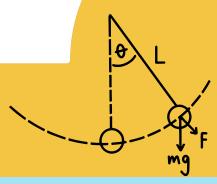
The challenge began with understanding how to apply these principles to a robot. Moments were crucial for designing moving parts, like wheels or robotic arms, while pressure played a role in how the robot could pick up or compress trash. I wanted to make sure the robot's movements were efficient and that the pressure system could clean without damaging things around it. The hardest part of creating the slideshow was figuring out how to explain these complex concepts simply.

I had to balance technical details with clear visuals to make sure my audience could follow the design without getting overwhelmed. It was important to organise the content logically and use diagrams to show how the different parts of the robot would work together. Though I didn't actually build the robot, the project taught me a lot about how ideas come to life in design and how essential it is to communicate those ideas effectively.

I also learned how much planning goes into even a conceptual project like this. It was a great chance to practice research, problem-solving, and presentation skills, and it gave me a new appreciation of how physics plays a role in creating solutions for real-world problems.

Melike Esiape (F2W)









### **Science Project-Based Learning - Forces**

Dear Lucas,

I hope this letter finds you well. How have you been? I hope the family is well and Aunty Evelyn is recovering. I wanted to take a moment to share with you some exciting project I'm working on. Guess what! I'm creating a PowerPoint presentation for my science project in school. I'm designing a shoe sole on the topic, Forces.

I'm at Phase 1 where I put my ideas in a PPT, but I'm already excited. I started by thinking through ideas and researching different shoe sole designs, from sleek and modern to bold and colourful. I spent hours scouring the internet for inspiration, looking at designs from top brands and independent designers. I also spent time researching the latest trends in shoe design, to make sure my presentation was relevant and up to date.

As I worked on the presentation, I divided my time between designing the slides and researching the content. I wanted to make sure that the presentation was not only visually appealing, but also informative and engaging. I spent hours crafting each slide, carefully selecting images and text to convey my message.

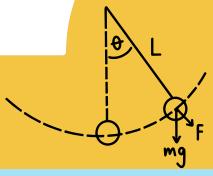
I inserted images of different shoe sole designs, diagrams illustrating the design process, and charts highlighting key statistics. I also included animations and transitions to make the presentation more dynamic and engaging. I wanted to create a presentation that would capture my friends' attention and engage them from start to finish.

After hours of tweaking and refining, I finally had a product I was proud of. I felt confident that my presentation would showcase my skills and knowledge and provide valuable insights to my friends.

I hope this gives you a sense of what I've been working on lately. I'm always happy to share my experiences and insights with you, my favourite cousin. I'll try and convince Dad to bring me over for the upcoming holidays so we can create a prototype for my shoe sole.

Best regards,
Barimah Manu (F2W)









### Celebrating Excellence at TRRS

At The Roman Ridge School, academic excellence is a tradition we proudly uphold. One of the most prestigious recognitions a student can earn is the Honour Roll Award, given to those who achieve a score of 80% or higher in all subjects. This distinction is more than just a certificate—it is a testament to dedication, perseverance, and an unwavering commitment to learning.

Last term, 54 students rose to the challenge, excelling across all their subjects and earning a well-deserved place on the Honour Roll. Their hard work was celebrated in a special ceremony, where teachers, peers, and parents gathered to acknowledge their achievements. The atmosphere was one of pride and joy, as students who had pushed themselves to succeed were recognised for their efforts.

This term, the Honour Roll continues to inspire students to reach for academic excellence. It is not just an individual achievement but a shared celebration of learning and determination. Parents have played an important role in this journey, attending the ceremony to support and encourage their children. Their presence adds to the significance of the event, reinforcing the message that success is not only measured by grades but also by the dedication, resilience, and hard work that students demonstrate throughout the academic year.

The Honour Roll Award Ceremony is a reminder that excellence is possible with focus and determination. As students continue to strive for greater heights, this tradition will remain a beacon of motivation, inspiring all to pursue their best and celebrate the power of education.





## A Journey of Grit, Growth & Guts!

The Business Cup Challenge has been nothing short of a rollercoaster ride for us, Team Nerds. At the start, we were a mix of excitement and nervous energy—unsure of what lay ahead but eager to take on the challenge. Little did we know that this competition would test us in every way possible, pushing our creativity, resilience, and problem-solving skills to the limit.

Case 1 and Case 2 were tough. Seeing the results come in and realising we had not performed as well as we hoped was a gut punch. For a moment, it felt like all the effort, the brainstorming, and the sleepless nights had been for nothing. Motivation? Gone. But here is the thing about Nerds—we do not back down.

Instead of letting disappointment define us, we regrouped, refocused, and recharged. We reminded ourselves why we started in the first place. One last shot. One final push. Case 3 and the elevator pitch became our proving ground—a chance to show what we are truly capable of. With the unwavering support of our teammates and our mentor, we embraced the challenge with renewed energy.

Through all the stress, the wins, the losses, and the late-night strategy sessions, we grew. This challenge was not just about business ideas—it was about teamwork, perseverance, and self-belief. It taught us that setbacks do not mean the end of the road; they are simply detours on the path to success.

Win or lose, this experience has changed us. We walk away from the Business Cup Challenge with less fear, more confidence, and a mindset ready to take on the world. The journey does not end here—the Nerds are just getting started!

Shraddha Gupte (L6W) - Team Nerds







## Team Phoenix: Rising to the Challenge!

When we first signed up for the Business Cup Challenge 2025, we were pumped but also a little overwhelmed. The idea of competing against 41 teams, 2 from TRRS and 39 from other schools across Ghana, tackling real-world business problems, and presenting ideas to a panel of professionals? Yes, it sounded like a LOT. But we were up for the challenge.

As Team Phoenix—Yaw, Tenzin, Alex, Yanis, Alvin, and Hugh—we knew we had to bring our A-game. The first challenge hit us fast: "Expand the capabilities of a leading Ghanaian fintech company to make its services indispensable." It was time to think big. After some serious brainstorming (and a few snacks to fuel our genius), we landed on our idea:

Transforming the Ghana Card into a multifunctional financial tool.

Imagine this—your national ID and your digital wallet in one. With this, we could promote cashless transactions, enhance accessibility, and drive financial inclusion across Ghana. It made sense, it was innovative, and best of all—it had the potential to change the way people interact with money.

Presenting our idea was nerve-wracking. But with the encouragement of our mentor, Miss Tetteh, and the support from our friends and school, we pushed through. And guess what? We landed in 5th place out of 42 teams! That was a huge moment for us. Top five! We had started off unsure, but we proved to ourselves that we could hold our own in this competition.



Now, with the next case ahead, we are ready to rise even higher—just like the Phoenix. Our goal? Bring that cup home to The Roman Ridge School.

## Advice to Anyone Taking on a Challenge?

- 1. Step out of your comfort zone. It might seem scary at first, but growth happens when you challenge yourself.
- 2. Teamwork is everything. Surround yourself with people who push you to be better.
- 3. Keep learning. Every challenge is an opportunity to gain new skills and perspectives.
- 4. Have fun with it. Stressing won't help—but passion, creativity, and a little humour will.

To everyone out there, whether you are taking on a competition, a tough exam, or something totally new—go for it. You never know how far you can go until you try.

Watch out, BCC-we are just getting started.

Hugh Ocran (L6W) - Team Phoenix





The Eagles Take Flight at the Lancaster Business Cup Challenge!

The Lancaster Business Cup Challenge (BCC) is the ultimate battlefield for high school students with big ideas and a passion for solving real-world problems. Open to Grade 11 and up, this national competition pushes young innovators to their limits through a series of three intense case challenges and a high-stakes elevator pitch. It is a true test of entrepreneurial spirit—where strategy meets creativity, and innovation takes center stage.

After nearly a decade, The Roman Ridge School made a triumphant return to the competition with not one, not two, but three powerhouse teams: Team Eagles, Team Phoenix, and Team Nerds. This year's theme? The Internet of Things (IoT)—a glimpse into the future of smart tech and innovation.

The first challenge was all about revolutionising Ghana's fintech industry. With fierce determination, Team Eagles developed BizFusion, an integrated SME Digital Business Platform designed to empower Ghana's workforce—a game-changer for financial transactions.

Next up: tackling Ghana's traffic woes using IoT. Despite feeling the weight of back-to-back challenges, we powered through, presenting a cutting-edge system that combines real-time traffic monitoring, data analysis, and automated responses to keep our roads moving smoothly.

With the finish line in sight, we faced our toughest challenge yet—developing a groundbreaking product for mNotify, a leading customer engagement platform. Given 12 days to craft our solution, we are gearing up to deliver a stellar elevator pitch that could secure our place in the finals.

This is where it all comes down to one minute—a high-impact business pitch that could propel us to victory. The top five teams from the semi-finals get a free pass, but for the rest, it is a do-or-die moment. The Eagles are ready. We have worked, we have learned, and now, we are aiming to soar above the rest!

Stay tuned-victory is in sight!

Mame Adwoa Ayeyi Dsane (L6A) - Team Eagles °



# A Battle of Minds – TRRS Senior School Inter-House Science Quiz

The atmosphere at the Senior School forecourt on Wednesday, 15th January 2025, was nothing short of electrifying. The much-anticipated Senior School Inter-House Science Quiz had finally arrived, and the excitement in the air was contagious. Students, dressed in their house colours, huddled together, cheering and chanting in support of their teams, ready to witness an intense intellectual showdown.

As the competition kicked off, the representatives from each house stepped forward, their determination evident. The first challenge required Form 3 students to head to the Chemistry Labs, where they tackled scientific tasks to earn crucial house points. Meanwhile, the Form 4 and 5 students engaged in the IGCSE segment of the quiz.

From the very first round, it was clear that this would be a battle of the brightest. Hawks and Bears locked horns in a gripping contest, each team displaying an impressive command of scientific concepts. Cheers erupted with every correct answer, and groans of disappointment followed each narrow miss. In the end, the Bears surged ahead by a decisive margin, claiming victory in the IGCSE round.

However, the competition was far from over. The "Problem of the Day" segment provided a thrilling twist, allowing audience members to step up and win points for their houses. Students leaped at the opportunity, eager to contribute, and the crowd erupted in cheers whenever a house member answered correctly. The unity and house spirit were truly inspiring—every student wanted to see their team triumph.

Then came the AS/A Level segment, a part of the competition that had everyone on the edge of their seats. This was where Science met strategy, and the intellectual battle reached its peak. The Bears, Hawks, and Cobras engaged in a fierce tug-of-war for the top spot, each team answering with precision and confidence. Every second felt like an eternity as contestants carefully crafted their responses, the weight of their house's hopes resting on their shoulders.

In the final moments, the Bears once again proved their dominance, clinching victory with a total of 79 points. The Cobras and Hawks followed closely behind, tying for second place with 75 and 74 points respectively, while the Sharks, though trailing with 50 points, remained resolute in their team spirit.

As the quiz ended and the results were announced, a wave of emotions swept through the crowd—cheers of triumph from the Bears, nods of admiration for all contestants, and murmurs of determination from those already looking ahead to next year's competition. Watching my peers showcase their vast scientific knowledge and quick-thinking skills was nothing short of inspiring. It reminded me that learning extends beyond the classroom—it is about passion, teamwork, and the drive to push the limits of what we know.

Walking away from the competition, I felt a renewed sense of motivation. Science isn't just about equations and theories—it's about curiosity, problem-solving, and the thrill of discovery. The quiz may have been a contest, but the real victory was the celebration of knowledge and the reminder that with hard work and dedication, we can all achieve greatness.







#### WAHU ADVENTURE

On a bright morning of 27th January 2025, the Class 5 pupils of The Roman Ridge School were invited to the library for a presentation by a company called Wahu Mobility which produces vehicles and bikes. The company's main aim is to keep the pollution level down in Ghana and in the world with their products, e-bikes e-scooters and e-hoverboards, their latest technology is e-bikes.

E-bikes are not harmful to the environment as they use batteries instead of fuel. But where do the batteries get their energy from? The batteries' energy come from solar panels which isn't harmful at all. The CEO of the company, a lady called Valerie Labi, spoke at length about the benefits of e-bikes, which are environmentally friendly and economical. The e bikes do not emit any smoke into the atmosphere. They are also a source of employment for young ones -18 years and above. She said there are a lot of riders from Wahu. If you come across one, just shout Wahu! I am really hoping to meet one of those riders myself.

One interesting thing about the presentation was that students were taken downstairs to see the E-bike and observe how it works. It looked beautiful! It has two batteries. You can remove one while riding if you want, and you can also drive it using the pedals to make it easier. I really wanted to ride it, but it was only for 18 years plus people. I wish there was a design for kids so I could ride it.

The bike is made from strong and sturdy materials and has many amazing features, including being able to track wherever it is going using the WAHU App. I think that is so cool.

Finally, we were given an assignment due on the 14th of February 2025. We were asked to make a poster on our own e-bikes and state the features we want to include in them.

Being a witness to this new energy saving technology has inspired me to be more innovative in my thinking and to start thinking about my own invention that will protect the environment.

Shout out to Wahu!

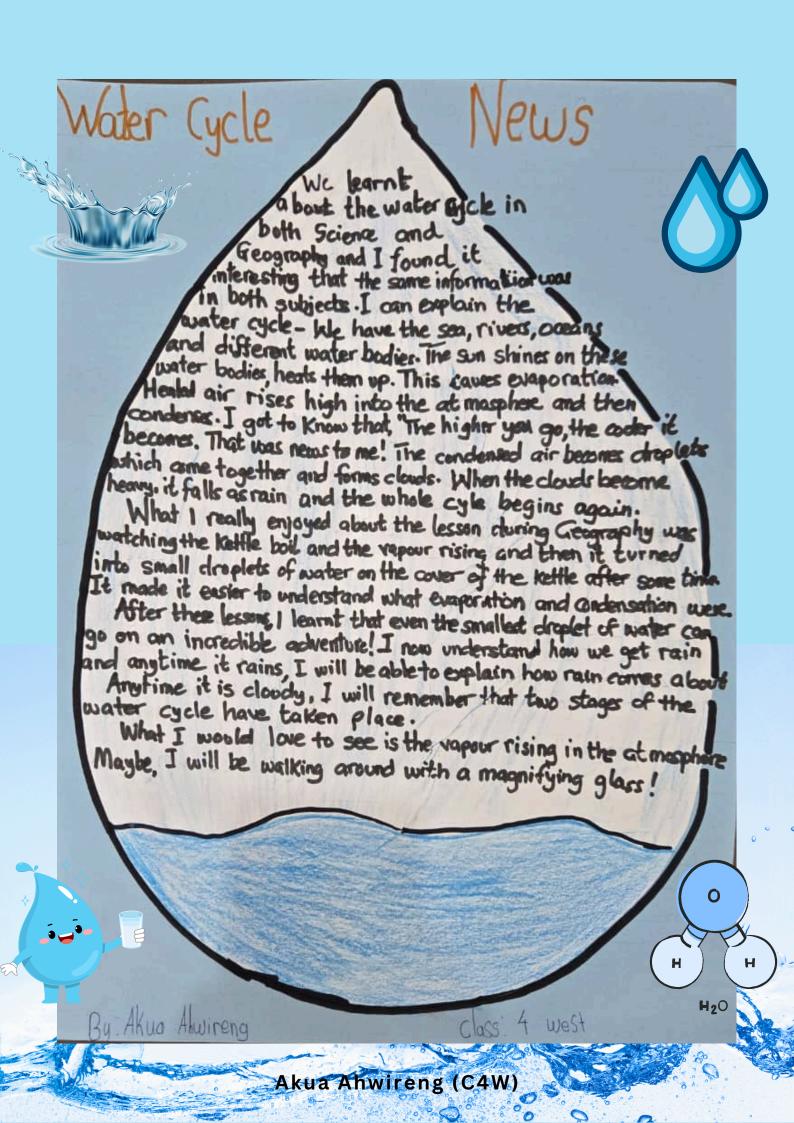








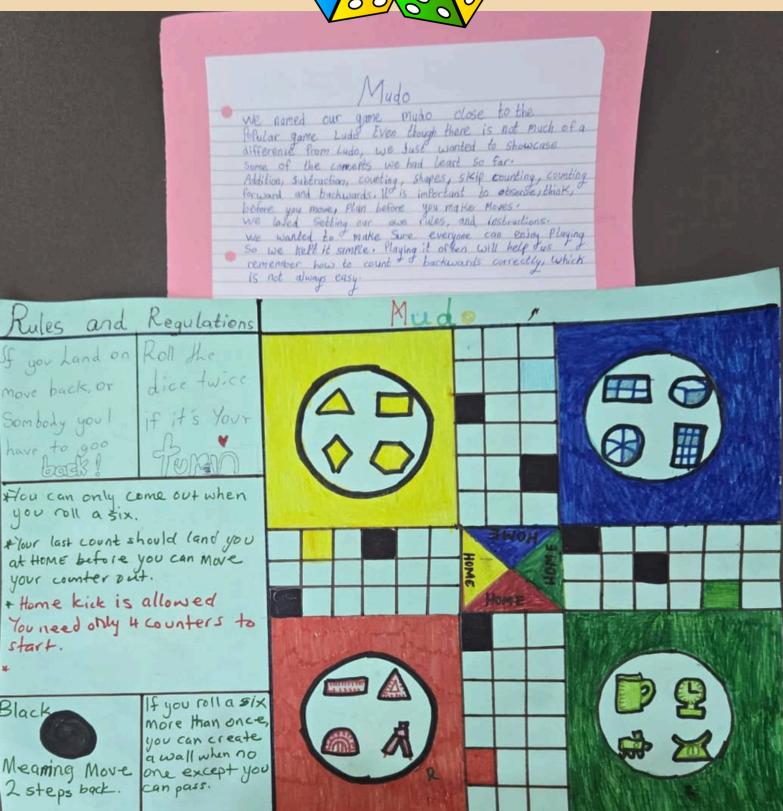




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Sai Aradhya Kaneera Sharma Maame Yaa Koduah Asabere Deion Yeboah Wadie Annalisa Duku (C4W)



