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THE BVSS STORIES BUILDING VISTA SOWING SUCCESS



THE JOULES PROGRAMME

Harnessing clean energy and environmental technology for a sustainable future

66I enjoyed the JOULES programme as it offered me handson activities and unique experiences not found in textbooks. Hence, I decided to take up computing. STEMeducation allows us to learn in a fun and innovative way by bringing together creativity and technology.

Zane Chua, BVSS alumnus offering Information Technology at Ngee Ann Polytechnic

Gene JOULES programme is a great platform where I learned things related to the current and future world. I enjoyed programming with microbit for our project and it was fulfilling to see how our idea could be realised in the near future!

Ting Zi Jing, JOULES Awardee



Harness the power of light with solar panels!



Imagine designing, coding and flying your very own drones; building cars and racing them; designing and building a smart city. These are some of the things our students do when they undergo our school's Applied Learning Programme (ALP) - the JOULES (Junior OUtstanding Leaders in Energy for Sustainability) Programme.

The JOULES Programme is a multidisciplinary study of the environment that focuses on Science, Technology, Engineering and Mathematics (STEM) education. This four- year programme provides students with rich experiences in design thinking, coding and programming in relation to the environment. This marriage of STEM and the environment is purposeful - we want to grow champions who will lead others in sustainable development.

The JOULES programme fosters critical and inventive thinking skills in students to help them solve real-world environmental problems in future smart cities. Lower secondary students learn about power generation and transport by building solar cars; water pollution by programming a water-sensing robot. Upper secondary students attend workshops at the polytechnics to deepen their interests and knowledge in STEM. We are also one of the first few schools to offer Computing as an 'O' Level subject.

The Thinking HATS Programme

Developing talents into leading advocates for environment and sustainable energy

Do you know that a Singaporean scientist pioneered stem-cell analogue formation using human blood cells from just a pricked finger?

Dr Jonathan Loh's research work on the "reprogrammable" cells has earned him national and international accolades. An Assistant Professor at the NUS Department of Biological Sciences and a Harvard graduate, Dr Loh's interest in Science was sparked while he was a student in Bukit View.

To inspire more students like Dr Loh, the school has a Talent Development Programme (TDP) where scholarships are given out to students who show a keen interest and leadership potential in the environment and sustainable energy. Identified students participate in the National Youth Environmental Conference (NYEC) and the Student Environmental Leadership Conference (SELC) to deepen and develop their passion into strengths, and to their fullest potential.



Dr Jonathan Loh, recipient of the Singapore Young Scientist Award (2009), MIT Technology Review Innovations under 35 Asia Pacific Award (2012), and happy Bukit View alumnus. Photo Credit: A*STAR

The JOULES programme has motivated and equipped me to spread awareness about sustainable ways for everyday activities. I hope to continue my advocacy and help protect our planet for future generations.

Senthil Nathan Divya, JOULES Scholar

Learning the Arts, Living the Values

Developing empathy and values through artistic and dramatic self-expression



Using the drama technique 'tableaux' to tell a story through freeze frames!

Through our Learning for Life Programme (LLP) - Learning the Arts, Living the Values - all Secondary One and Two students learn values and grow in their social and emotional competencies through a twoyear Drama-in-Curriculum programme.

The curriculum is co-designed with professional artistes. Students acquire drama techniques such as improvisation and role-play and have a safe outlet to express themselves. More importantly, the LLP helps students deepen their sense of empathy as they flesh out characters they 1 play.

One highlight of the programme, directly contributing to their development as ethical advocates, is in Secondary 2, where students get the opportunity to immerse themselves in Applied Drama, delve deeper into a topic of their choice and advocate to their classmates. In presenting a skit and facilitating an extension activity through their choice of drama tools they learnt, LLP students actively embody the spirit of ethical advocacy.

The Drama Club supports students who are keen to explore drama at a deeper level, allowing student interests, passions and strengths in this performing art form to flourish.



Having been on the 1-to-1 Personal Learning Device journey since 2017, teachers and students in BVSS have grown in how they exploit many platforms and their affordances to make learning more rich and engaging. This prepares them well for an ever-changing future.

Mr Alexander Chia, HOD Educational Technology

Personalised Digital Learning Programme

Using personal devices for engaged learning within and beyond the classroom

Bukit View Secondary has been on the PDLP Journey since 2017. One of the first things new Secondary 1 students would notice when they step into Bukit View Secondary are the digital devices held by every student.

We believe in developing students who take ownership of their learning, collaborate effectively with others, and are able to extend their learning beyond the classroom. Therefore, one-to-one computing is put in place to facilitate ICT-enriched learning. Our teachers tap on educational technology to design effective lessons. Technology is used not only to promote active, engaged, and self-directed learning, but also to enable teachers to better track their students' understanding of concepts taught, and assess learning.

Positive Education

Helping all students to flourish

At Bukit View Secondary, we believe that every student can take ownership of their learning and have the confidence to succeed. To support this, we have embraced Positive Education, which focuses on leveraging each student's unique strengths and motivations to enhance their learning experience.

By prioritising student well-being, Positive Education enables the creation of personalised learning plans that help students work towards their individual goals—moving away from a one-size-fits-all approach to teaching.

Positive Education is built on six core domains: Positive Emotions, Positive Engagement, Positive Relationships, Positive Purpose, Positive Accomplishment, and Positive Health. By anchoring our student support programmes in these areas, Bukit Viewans remain actively engaged and find joy in learning, while developing the socialemotional skills necessary for resilient, meaningful, and healthy lives.

To further promote student well-being, we launched the GEAR-UP Room in 2020. This inviting space offers students the opportunity to participate in fun, interactive, and enriching activities during school breaks and after-school hours.



CCAs – one of the many avenues for Positive Education in our school!



Gear-Up programme organised to enhance student well-being, build resilience and motivation!

The JOULES Smart Centre



The JOULES Smart Centre at Bukit View Secondary School is a testament to what can be achieved when community and industry come together as one. It is truly wondrous seeing many green building products and materials coming together in a cohesive manner to create a healthy educational facility for the next generation.

Opening remarks by Mr MASAGOS Zulkifli, at The Joules Smart Centre's Official Opening, 22 February 2018 .

More than a showcase of a green building and green product, the Centre is also a student hub to ideate and fabricate models of smart city dreams. As part of our efforts to teach and spread environmental awareness, our school clinched the prestigious President's Award for the Environment in 2016 and the ASEANE co-Schools Award in 2019.





As part of the JOULES programme, our Secondary 2 students incorporated their knowledge of Design and Technology, Science, Computing and Geography to create working prototypes which solve real world problems.



Excelling in innovation through smart school design

The iSpace helps students ideate, incubate and innovate, taking their experience in the JOULES Programme further with maker education. Design thinking is supported by the venue's laser cutter, scan & cut machine, heat press machine, virtual reality sets and more.

Bukit Viewans can look forward to using the iSpace to create 3D laser-printed objects, polymer clay jewelry, STEM bots, paper circuits, heat pressed shirts, tote bags and whatever the imagination allows. With the iSpace, we fully expect students and the JOULES Programme to reach higher ground.

Jamming Box

Self-directed learning according to interest

Form a band and you can enjoy a jamming session in between classes for up to two hours in the sound-proof Jamming Box that comes complete with electric and bass guitars, a keyboard, drum set, standing microphones and sound amplifiers. Aspiring musicians are also encouraged to work with their music teachers to create pop or rock band song items for school-based performance platforms like Youth Day or Open Mic! Some of our students' song compositions have been submitted for Youth Station Projects (hosted by MOE) and our musicians have gone on to showcase their talents at national events!



The SYF - one of the many opportunities to showcase our students' talents!