



BUKIT VIEW SECONDARY SCHOOL

www.bukitviewsec.moe.edu.sg

www.go.gov.sg/bvss-openhouse

The JOULES Programme

Harnessing clean energy and environmental technology for a sustainable future

“ I enjoyed the JOULES programme as it offered me hands-on activities and unique experiences not found in textbooks. Hence, I decided to take up computing. STEM-education 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**

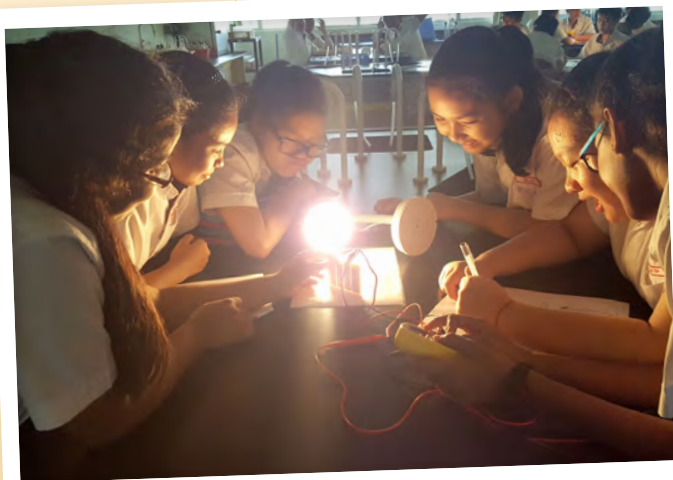
“ The JOULES programme is a great platform where I learned things related to the current and future world. I enjoyed programming with microbit for our project and it was fulfilling to see how our idea could be realised in the near future!

Ting Zi Jing, JOULES Awardee

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 take elective modules 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.



Harness the power of light with solar panels!



Stabilise a drone as it flies to its destination!

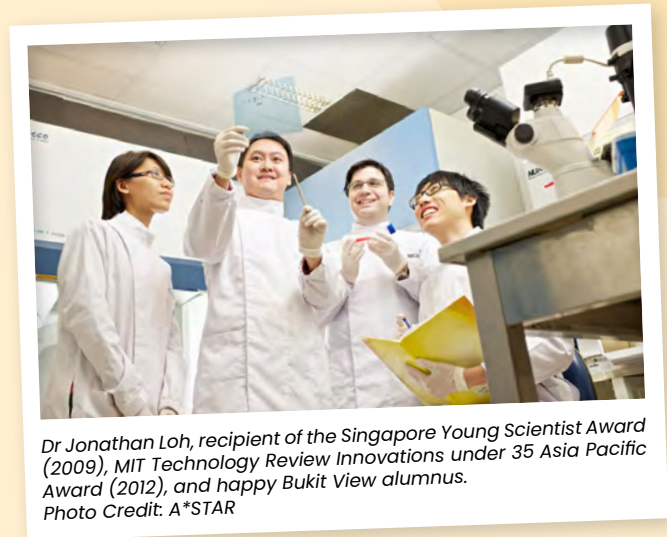
The Thinking HATS Programme

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 environment and sustainable energy. Identified students also undergo the Thinking HATS (High Achieving Talent in Science) Programme. The TDP seeks to deepen and develop students' passion into strengths, and to their fullest potential.



“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 Drama, History and Literature.

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 play, such as the pioneers of Singapore. We also create opportunities for students to reach audiences beyond the school. Our Secondary Two students have collaborated with the Singapore Heritage Board and the National Library Board to showcase plays focused on Singapore's history.

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.

“The best part about the LLP was forging connections with my classmates as we worked together to inhabit our characters' perspectives. This programme has helped me to work in teams and better empathise with others.”

Martha Marie Lim, Drama Club President

“In the classroom, lessons have come alive and many students want to do well, even the shy ones. The two most important things they pick up are values they learned from the characters they play and confidence in expressing their views.”

Mr Muhammad Fadly, SH Literature & Drama

Personalised Digital Learning Programme

Using personal devices for engaged learning within and beyond the classroom



Making the most of the internet and collaborative tools for deeper engagement!

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 Chromebooks 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.

“ 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

Positive Education

Helping all students to flourish

Every student can be responsible for his or her own learning, and believe that he or she is capable of success in Bukit View Secondary. We have adopted Positive Education to harness the individual strengths and motivation of students to optimise their learning. Focusing on the well-being of students, Positive Education develops individual plans for learners to help them reach their goals. This is a big departure from one-size-fits-all teaching.

Positive Education has six domains: Positive Emotions, Positive Engagement, Positive Relationships, Positive Purpose, Positive Accomplishment and Positive Health. By grounding our student support programmes in these domains, Bukit Viewians are fully engaged and find joy in their learning as they develop social-emotional competencies to lead resilient, fulfilling and healthy lives.

To enhance our students' well-being, the GEAR UP Room was opened in 2020 to provide a welcoming environment for our students to engage in fun, interactive and meaningful activities during school breaks and after-school hours.



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

“ We want to equip our students with the competencies to be resilient individuals with a growth mindset. With the positive school experiences that are made possible by building positive emotions and strengthening positive relationships, our students will flourish with confidence and contribute meaningfully to society.

Miss Ang Bee Lee, Year Head

Did You Know?

The JOULES Smart Centre



The JOULES Smart Centre - where sustainability is central!

Achieving sustainability through green school design

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.

Mr Masagos Zukifli, Minister for The Environment and Water Resources, 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 ASEAN Eco-Schools Award in 2019.

The iSpace

Excelling in innovation through smart school design

The iSpace was unveiled in April this year. The iSpace helps students ideate, incubate and innovate, taking their experience in the JOULES Programme further with makers' education. Design thinking is supported by the venue's 3D printers, laser cutter, heat press machine, virtual reality sets and more.

Bukit Viewans can look forward to using the iSpace to create 3D laser-printed objects, 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.



The iSpace - where makers' education comes alive!

Jamming Studio

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 Studio that comes complete with electric guitars, a keyboard, drums, standing microphones and sound amplifiers. Aspiring musicians are also encouraged to work with both their music and art teachers to create their very own CDs! Some of our students' work have been submitted for competitions and our musicians have gone on to showcase their talents at national events!



The SYF - one of the many opportunities to showcase your talent!