

NEWSLETTER

Dear Parents,

Welcome to our SIS@Halong Term 2 STEM Newsletter. In this newsletter we showcase highlights of our students' involvement in Science, Technology, Engineering and Mathematics (the STEM subjects)- and this helps our students develop knowledge and skills needed for the future. Bearing in mind that many jobs in the future will be STEM-related, our STEM curriculum is future focused, and the approach teachers here use in the classrooms involves students in hands-on problem solving activities that build creative and thinking skills, problem solving skills as well as design and evaluation concepts. The following are highlights of their achievements and accomplishments in the term.

YOUNG ROCKET SCIENTISTS

Grade 8 students had a chance to design and build their own rockets which flew 30 feet in the air! Here they are seen testing their finished prototypes on the field, with their mentor, Mr. Jayden Almirall. They applied their Scientific Knowledge on the states of matter, and forces and had also researched extrapolated topics such as compression and hydraulic forces, propulsion, aerodynamics and flight, to bring their designs to fruition.

This project is part of the British Science Associations' Crest Awards Scheme (Bronze Awards) which Year 8 students are embarking on now.

Younger students in the Primary Section also had a go at rocket science and flight by designing and innovating straw rockets during STEM Club. This after-school activity is held twice a week. Students first made their designs and initial prototypes, then using the STEM Engineering design process, made modifications and improvements to make their straw rockets go higher and further.

THE STEM VEGETABLE GARDEN

Students from Grades 1-11 had the opportunity to study and develop their own vegetable garden here in Halong. When their vegetables grew, they harvested their crop, sold them to parents, teachers and members of the community, and donated the profits to a local orphanage to help underprivileged children. As part of the STEM learning loop, students began experimenting with different variables, for



Year 8 students getting some pointers from their mentor before testing out their rockets



Students hard at work in the Stem Vegetable garden

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example experimenting with different types of soil, experimenting with different crop nutrients and fertilizers to study their impact on their crops and crop yields, and recorded their results scientifically to look for and analyse trends that could affect crops positively, and contribute to a better yield.

CREST AWARDS SCHEME

Here at SIS@Halong, our students have been active engaged in STEM basic skills and later to attempt STEM projects in the CREST AWARDS, a scheme that inspires young people to behave like scientists and engineers. The CREST awards are the brainchild of the British Science Association, and have suitably pitched projects for students from Kindergarten to Grade 12. These projects are extension activities which take concepts students learn in their textbooks and encourage their learning and hands-on investigation into areas beyond the textbook. Students work in small teams and pursue a challenge which interests them/ relates to an extended study of the topics discussed in class. These short, hands on activities challenge them and help them to



Our students participate in the Crest awards, which is run by the British Science Association.



Our students seen here making and testing out their bamboo kung fu figurines, as well as cleaning the beach as part of the whole school STEM Excursion.

STEM VILLAGE TUAN CHAU

explore the world around them

WHOLE SCHOOL STEM EXCURSION

Students were treated to a half day of hands on STEM immersion activities and environmental awareness activities at the STEM Village at Tuan Chau Island. Activities included lectures, making bamboo stick puppets, STEM games, robotics and cleaning up





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THE STEM CLUB

At SIS@Halong, we run the STEM Club as an afterschool activity for students two times a week, every Tuesday and Thursday from 4-5 pm. Students in this club gain exposure to hands-on problem solving activities that build creative and thinking skills, problem solving skills as well as design and evaluation concepts.

This term the engineering focus has been on exploring shapes and in particular, students discovering for themselves which shapes are the strongest and most stable for them to embark on engineering challenges like straw tower building. Typically students race against the clock— and each other to construct the tallest and strongest towers in a set time. Then they are stretched with an added challenge— i.e. a straw tower that can hold the weight of a tennis ball or a bucket of straws. Students also learnt how to make their own straw rockets and bridges.

When designing their straw rockets, students first made a prototype rocket, then went back to the drawing board to see how they could improve its flight. Could they add more fins, could they make the nose of the rocket heavier to give it stability? Could they use different materials for the body of the rocket to make it fly further up?

For bridge building, students used the knowledge about towers and built simple bridges across them. Then, they wanted an additional challenge— more weight for the bridge, and even longer bridges. As part of the stem process, they refined their designs and came up with some solutions for bridges that could hold more weight and span across a longer distance.



Our students seen here making towers, bridges and taking on the new challenge of making bridges that can span longer distances and carry more weight



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STEM GALLERY

