



## Overview

**Country or Region:** Singapore

**Industry:** Education

### School Profile

Crescent Girls' School's mission is to develop and inspire in each Crescentian a sense of her own potential as an excellent and well-balanced scholar, a disciplined, responsible member of society, and a caring, gracious citizen of the world. Its shared vision is to be a premier school with a nurturing and innovative environment that prepares its students to be ladies and leaders of tomorrow.

**Number of Students:** 1,200

**Gender:** Girls

**Age Range:** 13–16

**School Leader:** Mrs. Tan Chen Kee

**School Website:** [www.crescent.edu.sg](http://www.crescent.edu.sg)

## Crescent Girls' School

Crescent Girls' School has been selected to be part of the Microsoft Innovative Schools World Tour due to being a showcase example of the following Innovation Topics:

- 1:1 learning environments.** Students work on their own devices and can use technology at any time to access educational tools.
- Virtual learning environments.** Use of technology to extend learning outside of the classroom.
- Physical learning environments.** Focus on physical spaces, seating, and atmosphere to encourage collaboration, creativity, and learning.





“At Crescent Girls’ School, we offer a student-centric holistic curriculum that develops students into ladies and leaders. Technology is naturally and pervasively incorporated into the teaching and learning processes, for deep learning, to facilitate collaboration and knowledge construction. We also adopt a spirit of community.”

Tan Chen Kee, Principal, Crescent Girls' School

## 1:1 learning environments

Crescent Girls’ School has had a 1:1 learning environment since 2003 where each student owns a personal learning device. Under the school’s mobile learning (m-learning) program, students use their devices across all subjects for all levels. The m-learning program is founded on the school leader’s vision and strategy around curriculum, pedagogy, and assessment.

Additionally, 1:1 devices have enabled Crescent Girls’ School to create the following intra-curricular programs where technology is leveraged in unique ways:

- **Secondary 1, 2, and 3 Integrated Curriculum.** A program in which content is drawn from several subject areas to focus on a particular theme to promote more meaningful and engaged learning. It also involves application of skills, concepts, and processes in authentic and real-life situations so that students can see the connection across different disciplines.
- **Secondary 1 Communicative Arts Program.** The English curriculum for Secondary 1 students. Integrating literature and English, the program also places a strong emphasis on the skill of effective oral communication. Through the Communicative Arts program, students are exposed to a wide range of

skills (e.g. inferential, analytical) across all the units which cater to the different types of learners.

- **Secondary 1 and 2 Integrated Humanities.** A program in which the Lower Secondary History and Geography syllabus are taught conceptually with a focus on subject-specific and cross-disciplinary skills. The students then apply these concepts and skills in different alternative modes of assessments that emphasize collaborative learning, knowledge co-construction, and real-world problem solving by harnessing information and communication technology (ICT).
- **Lower Secondary Computer Education Program (LSCEP).** Develops students’ new media literacy skills through weekly training sessions and termly tasks. The program focuses on knowledge construction, collaboration, media, and digital literacies. LSCEP is also one of the main platforms where students are developed in the area of cyber wellness.

The school constantly engages in review and redesign of its programs to deliver a technology-enabled holistic curriculum that prepares students to be leaders in the 21<sup>st</sup> century.

There are more than 10 unique learning spaces designed specifically to support different subjects, pedagogical approaches, and learning scenarios.





### **Key Technology**

Students at Crescent Girls' School use either a tablet or slate for learning. Each device is equipped with Microsoft Office, the Adobe Creative Suite, e-text books coupled with an extensive range of web services, like i-Connect Learning Space (iCLS), Microsoft Office 365, and Microsoft SharePoint. iCLS is a complete learning management system, while teachers use SharePoint to manage data.

### **Virtual learning environments**

Because students have their own devices, learning can take place anytime, anywhere, and with anyone. To harness technology effectively and pervasively for learning beyond the school, Crescent Girls' School has developed a comprehensive suite of technologies and robust programs to extend learning beyond the four walls:

- **e-Learning Week.** During this week, students engage in home-based learning, while teachers conduct live lessons from their own homes. Apart from accessing and completing e-Lesson packages, students attend live lessons using HeuX, which offers videoconferencing and classroom management tools.
- **i-Trails.** Students learn history and geography by actively co-creating i-Trails with their peers based on topics like

food, culture, and historical sites. They use Trail Shuttle™ to create exciting multimedia and location-based i-Trails, which are subsequently made available for both their peers and public to experience through their smartphones and other mobile devices.

### **Key Technology**

- iCLS: personalized solution for learners and educators
- Spectrum: rapid content creator and delivery for bite-size learning
- Frappe: mobile application that allows real-time collaboration and discussion among teachers, students, and parents in a secured environment
- Trail Shuttle: multimedia learning trail creation tool for learners and educators
- HeuX: classroom management and videoconferencing solution for virtual learning
- Merror: reflection application based on reflection strategies
- Buffet: collaborative wall based on various learning strategies
- Chronos: calendar and workload management for education

### **Physical learning environments**

One of the most important innovations at Crescent Girls' School is the design of ICT-infused learning spaces to augment the 1:1 learning experience for students. There are currently more than 10 unique learning





spaces designed specifically to support different subjects, pedagogical approaches, and learning scenarios. Two examples of these learning spaces include:

- **i-Cove.** An area containing 11 HeuMi tables, which offers multi-player and multi-touch experiences. Students can work in groups and engage in collaborative learning by using applications like Collaborative Suite™ or Submariner™. These applications were co-designed by Crescent Girls' School teachers and their industry partners.
- **Faraday Lab.** Students experience IIVR (Immersive and Interactive Virtual Reality). Lessons come alive with the infusion of three-dimensional scenarios coupled with Socratic questioning for deeper understanding.

#### **Key Technology**

- *HeuMi (interactive table) for collaborative learning*
- *IIVR for effective visualization*
- *Chroma-key effects for production of videos*
- *Automated video recording facility for archiving lessons as part of professional development*
- *High-definition videoconferencing for real-time cross-boundary collaboration*

## **Improving student outcomes**

With the pervasive and innovative use of technology, each Crescentian can realize her potential as an excellent and well-balanced scholar, a responsible member of society, and a caring, gracious citizen of the world.

Crescent Girls' School measures student outcomes holistically. Apart from academic results and test scores, the school uses a set of competency rubrics to track students' development of 21<sup>st</sup> century competencies. The above technology innovations and interventions have led to definite student outcomes in terms of acquisition of the various 21<sup>st</sup> century competencies.

## **Driving leadership and a culture of innovation**

Aligned with the school values, one of which is "Innovation," Crescent Girls' School uses a three-pronged structured approach to promoting a pervasive innovation culture:

- **Policies** that support innovation, such as staff deployment policies, professional development policies, and partner engagement policies, equip staff to continually innovate and generate robust ideas.
- **Programs** that promote an innovation culture, for example the Innovation Fund



Program, provide a safe environment for staff to experiment with innovative ideas, with a high tolerance of failure. Additionally, no extensive key performance indicators are established and there are no repercussions on the staff if the ideas do not take flight.

- **Platforms** to implement, evaluate, and celebrate innovation: For example, dedicated timetables provide platforms for subject and cross-functional teams to collaborate, plan, and implement innovations. Internal platforms (staff meetings), national platforms (ICTLT, an international conference organized by the Ministry of Education in partnership with ISTE), and international platforms (overseas conferences) are used to evaluate and celebrate the innovations. Finally, staff innovation efforts are rewarded and recognized on an annual basis through various awards.

Crescent Girls' School seeks to share learning points that have been gleaned in its 10-year journey using technology for teaching and learning. The school officially launched the Crescent Academy for Digital-age Learning (CrADLe) in 2011 and has since reached out to more than 200 schools and 1,000 educators in the region. With the CrADLe (International) strand launched in 2013, the inaugural CrADLe International Conference was conducted in March 2013 with the focus on 21<sup>st</sup> century learning design (21CLD). The academy also explores co-creation of learning applications, including a portal that helps teachers design 21CLD lessons. Crescent Girls' School is poised to engage the global educational fraternity in harnessing technology to engage digital learners.



## Scaling best practices beyond Crescent Girls' School

Crescent Girls' School blazes the trail by creating educational solutions for the local and global teaching fraternity. The applications they have designed have created an impact and are scaled across local schools, different countries, and even different sectors.



# Microsoft Innovative Schools World Tour

## For More Information

For more information about Microsoft in Education, visit:

[www.microsoft.com/education/ww/solutions/Pages/index.aspx](http://www.microsoft.com/education/ww/solutions/Pages/index.aspx)

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## Technology Infrastructure

