# Technology Strategic Plan
# 2011 – 2016

# SABIS® International's Strategic Technology Team

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SABIS® is an international, college-preparatory education system with roots in the 19th century and a vision for the 21st century. This system, at the forefront of global education, is currently being successfully implemented in 31 schools in 11 countries with 28,000 students around the world. SABIS® and its team of experienced professionals are dedicated to offering educational management products and services to a membership network of private and public schools.

Schools in the SABIS® Network provide Pre-K and K-12 students with a rigorous, college-preparatory education which challenges the boundaries of individual student potential and establishes a lifelong interest in learning. Member schools offer a safe, caring, and structured educational environment.

# SABIS® International Charter School
# Technology Strategic Plan
# 2011 – 2016

## Our Mission Statement

The SABIS® International Charter School (SICS) is a college preparatory school that provides top-quality education on a non-selective basis to children of different races, religions, nationalities and backgrounds. It teaches these children to perform to the best of their ability, to achieve academic excellence in a global context, and prepares graduates to attend colleges and universities. The school develops and strengthens students' ethical, moral, and civic values thus molding men and women with the knowledge, skills, and social judgment they will need to face the challenges of the times. The School believes those students with a SABIS® education, especially in a multicultural setting, will be able to provide leadership throughout the world.

We can continue to report that our academic program has never been more successful, our school remains viable, and we are steadfast in our faithfulness to our charter.

## Our Philosophy

It is our philosophy that all students can learn and those students of average or slightly below average ability can achieve high academic standards provided that they want to learn and that the school does not allow them to develop gaps in their knowledge. SABIS® offers a systematic way of making sure all prerequisite knowledge is mastered before a student moves on. The school's philosophy is that a core curriculum, coupled with methodology that emphasizes students' mastery of essential concepts, leads to success.

We strive to provide each and every student with the tools necessary to be successful throughout their lives. Our goal is for students to recognize the importance of higher education and for all students to attend and be successful in college.

We strive to instill proper and positive social interactions while students are here so that they may recognize the impact of their words and actions on the greater community. We stress knowledge, responsibility, and acceptance of differences in light of individual backgrounds — a combination which produces valued citizens.

# Introduction to the SABIS® Methodology

## *Curriculum Design and Teaching Methods*

The SABIS® curriculum remains rigorous as SABIS® Educational Systems, Inc., administrators, and teachers work together to align it to the Massachusetts Curriculum Frameworks. It is integrated, sequential, and includes the teaching of age-appropriate skills, knowledge, and values.

In addition to the core subjects of English, mathematics, and Spanish, the SABIS® curriculum is designed to provide knowledge of a broad range of subjects. These subjects include social studies, science, art, music, health, physical education, and computers. The three core subjects are divided into distinct areas, each with its own focus. English, for example, is divided into the following sub categories: comprehension, composition, grammar, vocabulary, and spelling. Each section is tested independently. The entire staff is held accountable for the attainment of our school's goals and objectives while being responsive to the needs of the students.

## *Essential Concepts*

Each subject is broken down into the smallest unit of knowledge, identified as an "essential concept." Essential concepts are considered the building blocks of learning; thus, mastery of each concept is necessary to ensure that the student will move on to the next level of learning. In the charter proposal, the founders of our school stressed that gaps hinder learning; therefore, the teaching methods employed identify the beginnings of these gaps in a child's education before they turn into major crevices. Tutoring is a means through which we address such gaps, and when needed, a teacher will often turn to Student Life to seek peer tutoring for his or her students. One student in the Student Life Organization™ is responsible for running the peer-tutoring program, which includes seeking tutoring referrals from teachers.

## *Pacing Charts*

Teachers use a variety of assessment tools to ensure that students master material. The administration provides each teacher with a "pacing chart" for his or her subject area. The pacing chart serves as a detailed syllabus, providing the teachers with a timetable for the introduction of new materials and subject matter. Pacing charts identify what should be taught, week-by-week, throughout each of the three terms. Teachers who teach the same grades and/or the same subjects typically present the same concepts on the same day (or minimally within the same week). These teachers meet together regularly to maintain a consistent instructional pace. For the most part, due to the carefully created and point-by-point pacing chart, all students master the same material and progress at the same pace. If a class is unable to keep up (as indicated by weekly test scores) the teacher consults with the administration and other teachers for a solution.

## *Intensive Program*

One of the most important components of the SABIS® instructional strategy is the Intensive Program. Students determined to be working below grade level in mathematics and/or English, yet do not have a definable disability, are placed in this program. On average, these classes have a substantially lower

number of students than the regular classrooms. Students are periodically tested to determine if they are ready to return to regular classes.

A Peer-Tutoring Program that began on Saturday mornings each year continues thru each academic year. High academic achievers in the upper school are chosen based on grades and participation in Student Life, and then selected to work with students in the lower school on specific concepts and test-taking strategies in the area of language arts and mathematics. On average, 75-125 lower school students and 20- 30 upper school tutors participate in the program over a 12-week period. The overall program goal is to help all students involved with their skills through targeted instruction, practice and peer mentorship supervised by SABIS® staff members.

As part of the federal No Child Left Behind Act, SABIS® International Charter School offer two programs geared specifically at advancing low-income students' language arts and mathematics skills and helping them achieve high standards on the MCAS examination.

The Princeton Review offers small-group instructional sessions customized for grades 3 through 10. They offer subject-specific classes, and all of their course work is aligned to the Massachusetts State Frameworks. The goal is to ensure that the individual learning needs of each child are addressed. From 50-100 students participate in grades 3-10. Language arts and mathematics pre- and post test assessments are administered to measure each child's level of academic achievement in the course.

## Internal Assessments
SABIS® has developed a patented testing program that assesses whether or not the students are learning. The program incorporates weekly testing in the form of SABIS® Academic Monitoring System™ (AMS) tests, and Periodic Exams for both the lower school and upper school. Final examinations are given at the end of each term.

The multiple choice AMS tests are computerized tests developed by SABIS® to determine whether the students are learning the essential and important concepts being taught. Administration and teachers receive a highly detailed, sophisticated, computerized report of student AMS results, providing information that determines whether students are ready to move on to new material, teachers need to reteach certain concepts, or whether some students need tutoring. Students and teachers look forward to the weekly results.

Periodic Exams follow the same basic format as the AMS; however, they are more comprehensive in that they cover the material that has been taught over a longer time frame. They include short answer, open response, and essay questions.

## SABIS® Point and Prefect System of Instruction
Teachers use the Point and Prefect System of Instruction. A "point" is a specific skill or essential concept; it is an outcome-based learning objective. Each point is very specific; it helps teachers focus on exactly what they will teach and helps students focus on exactly what they will learn. A teacher lists

points for a lesson on the board for all to see, thereby letting students know what they will learn and be tested on. A typical lesson covers three to four points. The points are taught, one at a time, through teacher-centered instruction: explanation, presentations, examples, and questioning. Next follows a written activity to check for understanding, such as an exercise, an application, or a definition.

Students are broken into groups and are led by a student academic prefect. These prefects are selected based on their proficiency in an academic area and ability to work with others. The prefects check the other students' work in their group, enhancing their own understanding of the material as well as their speaking and listening skills. If students need further explanation of the point, they provide it if possible. They report back to the teacher on whether or not the concept is understood by all. By monitoring the students' work, the teacher can determine if it is necessary to re-teach a point.

# SABIS® International Charter School
# Network Topology

Note: Client machines within the 2 separate wings of the building are connected via switches in each wing connected by fiber optic and Cat5/6 cabling.

Router
MecNet Fiber
Switch
8 PCs – SICS District office
27 PCs – SICS Admin offices
# LAN
Switch
Comcast cable
Router
**35**
4 PCs
**Guidance**
36 PCs
**Primary Lab**
5 PCs
**Student Life**
**Teachers**
84 Laptops
**ITL Mobile Lab**
142 Laptops
**HS Lab Admin Staff**

# SABIS® International Charter School
# Technology Infrastructure

## *Network & Internet Connectivity*
SABIS® International currently utilizes a T-3 and Comcast cable lines for connectivity to the Internet. The T-3 access is utilized by all Administrative staff while the cable access is utilized by Academics. Within the school proper the LAN connectivity is at a base 100Mbps speed. Between the Main and Primary offices' network closets a fiber optics connection is in place to facilitate optimal network performance. Connectivity between network closets is currently available at 1 Gb. speed dependent on network cabling (Cat5, Cat6, and Fiber). Also in place is an Aruba based Wi-Fi network that allows remote access for teacher connectivity via their laptops or IPads.

## *Intercom/Telephone System(s)*
Within the Primary buildings network closets reside the digital phone systems. There are 37 Verizon Centrex lines coming into the system providing efficient communication, both incoming and outgoing, to the outside world.

The intercom system was recently updated to allow for total communications between the two offices of the school. The system also allows for total building intercom service for efficiency and safety. All rooms have office communications via the intercom call system.

## *Computer Hardware*
The minimal PC equipment level within the school is at 1.5 GHz. or higher. The low end range of the PCs (5%) are used infrequently, require Internet access for the most part and therefore are not required to be immediately replaced. 95% of all PC's have the Windows 7 operating system as a standard with a minimum of 1 Gb. of Ram. All of the PC's have access to the LAN and the Internet allowing for easy access to any required information.

## *Technology Maintenance and Repair*
All hardware and software repairs, installs and problem resolutions are handled on site via the technology staff. Additionally, training is done on an as needed basis by the technical staff or is handled via outside training consultants. All staff is required to due an initial problem evaluation prior to contacting the technical staff. When technical work of any kind is required an IT Request Form is filled out and prioritized as to need, work effort, and technical staff requirement(s).

## *Technology Planning*
The planning process first looks at the goals that were set from the previous year. Then the budget dollars are looked at to see if the monies allocated for upgrades, improvements and new purchases are close to what was planned and/or anticipated. A conference with the corporate school office and IT department is then held to see if their needs/wants/plans have been meet or will be meet in the near

future. Most of technological enhancements to the infrastructure of the school are driven by the state of Massachusetts, the needs of SABIS® International and the SABIS® Educational Systems Network. Whenever possible, the requirements of the state as the funding source are given the appropriate priority and every attempt to meet those needs is made. The staff of SABIS® International and SABIS® Educational Systems technical requirements are documented throughout the year so that needs assessment, prioritizing, budgeting and implementation can occur within the earliest possible timeframe. This process dictates where and what the IT staff work effort is for the upcoming year(s).

## *School Website*
SABIS® International's Website (http://www.sics-sabis.net) is hosted by Citadel Networks LLC. and is administrated by the local webmaster(s). The website is built to allow for updates/uploads from authorized staff users providing means to keep the site diverse and up-to-date. Administrative information, academic, sports and student activities, a monthly calendar of events are some examples of areas maintained on the website. The web site information is updated in some cases daily to insure an up to-the minute dispersal of information to parents, students and staff.

## *Parent Website*
SABIS® International, as part of the SABIS® Network, is aligned with other SABIS® schools in a parent information website called WebSchool. This site provides academic and behavioral reports on students on a daily basis. This allows parents to keep close track of their child's performance and behavior. Additional functionality planned for this site includes homework assignments, teacher communications, and a school calendar of events.

# Technology Goals

## Ongoing and Yearly Changes
SABIS® International reports to the Department of Education a set of goals each year as part of the Technical Plan Updates. These goals are targets that the school has set for itself in an effort to grow and improve in the area of technology education. The goals have been broken down into two specific groups: Ongoing Goals, ones that are ongoing and are continuously being strived for, and Yearly Changes, ones that are to be implemented within the current or future school year(s).

## Ongoing Goals
☐ Continue the process of updating the technology environment in the school. This would include PC hardware, software, printers and visual equipment providing students and staff with the best available equipment to meet their needs.

☐ Increase the PC to student ratio to align more closely with the Massachusetts technology level requirements for schools.

☐ Update/upgrade the networking topology within the school. This would include obsolete and/or out-of-date hubs, switches, cabling, NIC cards and any other hardware (or software) portions of the network environment.

☐ As Microsoft Office is the SABIS® suite of choice, upgrades to a most current version will continue on an as mandated basis from the corporate office.

☐ Students and Staff will have equal access to a variety of state-of-the-art technology during their educational experience at SABIS® International.

☐ Continue building the interactive board environment within the school. Along with this it should be determined if permanent placement of display equipment is defeasible.

☐ Continue to increase the technology level of staff and administration by providing more in-house
classes and training sessions.

☐ Continue to monitor backup processes and determine if the current data storage capacity is adequate or refinements are needed. Also insure that all mission critical data is included in the backup process and is recoverable.

☐ School administration continues to utilize and support technology school budgets which include realistic appropriations for technology upgrades and support.

☐ Rework the school web site to make it more efficient and client friendly. It is currently more business oriented and should be centered towards the students and parents who will be accessing it.

## Planned Goals 2012-2013
☐ Rebuild the school webpage to a more up to date and informative source of information.

☐ Refine the current network infrastructure to provide more immediate throughput of requested resources.

☐ Finalize the operating systems move to Windows 7 for all remaining PCs and laptops.

☐ Refine the school-wide application acquisition system for the Teachers and Administrators utilizing the Apple IPad as their base technology tool. This would have to include an app dispersal tool (Meraki?) which will allow provide application downloading capabilities dependent on client or group requirements.

☐ Finalize the IT Department's inventory of dispersed technology locations and "owners". This will aid in the PARCC's information requirement assessment and for future rollout needs.

☐ Rewire and re-label network closets to provide more efficient troubleshooting options and clearer access to networked hardware.

☐ Rebuild the wireless network to address the increased demands by the rollout of teacher laptops and IPads.

☐ Work with **SABIS®** Educational Systems to implement the data structures required for implementation of the SIF project into the SABIS® SSMS data system.

☐ Upgrade the current firewall system to the latest technology available to insure the safest possible Internet environment for all students and staff members

## Future Goals 2013-2016

☐ Add a new static testing laboratory for students' use. This lab will consist of 128+ high end PCs network connected to facilitate a much improved learning verification area. The lab will provide quicker notification to students and teachers as to what has been learned and what has not. This testing lab depends on construction by SABIS® International of a new addition to the school.

☐ Add a new media lab/library to the envisioned construction of the addition to the school. This could be a MAC lab versus the current Windows framework found within the school. This "lab" could also be considered as a virtual lab if plans for the addition are not formalized.

☐ Enhance the connectivity between network closets to fiber optics from the current copper format. In addition, increase the speed of all closet switches/ports to be at a 1 Gb. level. This will provide maximum throughput within the site's footprint.

☐ Build the internal network infrastructure to handle portable tablets mini labs for the school. These would consist of mobile tablet carts which could move from room to room dependent on academic need.

☐ Make the internal Wi-Fi Network signal available out to the external campus footprint. The need here is in case of emergency or evacuation allowing for access to critical emergency information by staff.

☐ Push the software system developers to strive toward making all systems within the SABIS® network more client oriented and friendly. This would allow for clients to be empowered to take control of their own work requirements.

☐ Rebuild the security aspects of the wireless network throughout the school. This would involve changing the Wi-Fi security aspect of the network from the WEP protocol to the more secure WPA protocol.

☐ Evaluate the feasibility of tablets for use by all students. This would involve in school use as well as the possibility of home use. It also could require a rebuild of the current W-Fi infrastructure as the demand for network capability would increase.

☐ Build the infrastructure for the SABIS® WebSchool software package. This would involve student, teacher and parental accesses which can be accessed from outside the school proper as well as from within.

☐ With the continued growth of technology within the classrooms, continue to insure the safety and security of that equipment by providing adequate equipment for storage.

☐ Continue to work on increasing the PC to student ratio to align more closely with the Massachusetts technology level for schools.

## *Professional Development*

With a new professional development coordinator in place, we are able to utilize our grant funds as well as in-house budgeted professional development funds more efficiently and effectively. Professional development training includes in-house training from our affiliation with the Connecticut based training firm: New Horizons. Training includes various levels of Microsoft Excel, Microsoft Word and Microsoft Access. Ad-hoc training is provided by in-house IT personnel in the use of: printers (how to load ink/toner, troubleshoot); e-mail (housekeeping, proper file attachments, virus recognition); Internet (spy ware removal, site access awareness, software install considerations); Windows 7 (usage, security, network integration). The Mass Cue seminar has been attended by staff members to further broaden IT awareness and additional options for IT classroom integration. DESE seminars continue to be attended to view refinements/changes to online systems/data requirements as well as acquiring knowledge about current available systems (VES). Mass Cue will be attended on upcoming years to see what other options/ideas can be implemented in the school to further technology awareness and usage within our curriculum. Classes planned for yearly includes most basic levels of Excel, Word, and Access as well as the more advanced subjects of these softwares. Utilization of online software packages has begun within the school. In this case, the Special Education department has been using a web based IEP software to fulfill the state's Special Education requirements. The continuation of PC software upgrades (Windows OS, Windows Office suite) will further allow the increase of our staff's productivity utilizing the power of the new software. The security issues faced by all school PC users are an ongoing process which continues throughout the year.