

Frequently Asked Questions about Technology and the 1:1 Initiative

Q. What is the goal and mission of the 1:1 initiative?

A. Our goal is to use technology as a tool to enhance student learning and increase student engagement. Our vision is a 1:1 environment creating learning opportunities transcending content and discipline, with endless possibilities of data-driven and differentiated instruction and collaboration of staff and students in a cloud-based environment. And that 1:1 environment is an equalizer as we fulfill our mission preparing students for constantly evolving technology, creating futures in education and employment we cannot forecast.

Q. What is the timeline and rollout for the 1:1 initiative?

A. The proposed timeline and rollout for the 1:1 initiative is to provide the class of 2019 (incoming freshmen) with a device next year. Subsequently, each incoming class will receive devices as freshmen, resulting in every student having a device by the 2018-2019 school year. Carts with additional Chromebooks will be available to teachers who have mixed classes until we fully become a 1:1 school.

Q. What steps have been taken to ensure that the district's infrastructure (including bandwidth and wireless network) will support this initiative?

A. Over the last three years the district has taken steps to acquire additional bandwidth, install redundancy, add more access points and put bandwidth controls in place. With 250 Mbs and access points in every classroom, we have exceeded the recommendations from other 1:1 schools. The IT department is constantly working/monitoring to make sure that our infrastructure will support this initiative.

Q. What is the overall cost of this initiative to the district, including infrastructure upgrades, professional development, and device acquisition? How does the cost associated with the 1:1 initiative compare to that of reducing class sizes?

A. The *Technology Services Budget Projections* provides historical information along with detailed projections for the next five years. The cost associated with purchasing Chromebooks for students will regularly be offset by student technology fees, making the initiative financially equivalent to hiring 1.5 - 2.0 FTE (MA +1) for the first year only. After the first year of the initiative, the cost of retaining the teacher is more expensive due to increased salary, benefits, and health insurance.

Q. What is the SAMR model?

A. SAMR (Substitution, Augmentation, Modification, and Redefinition) is a model designed to help educators infuse technology into the classroom. The model supports and enables teachers to develop and implement digital learning experiences that utilize technology. The goal of this model is to assist teachers in transforming learning experiences so they result in higher levels of learning and achievement for students.

Q. How will the district define the success of the 1:1 initiative, and what are the benchmarks to evaluate the program?

A. Existing research does not show 1:1 initiatives directly correlate with an increase in standardized test scores because there are too many other factors that contribute to these scores. However, research does show that 1:1 initiatives improve other factors, such as attendance, engagement, discipline, and graduation rates, which indirectly impact standardized test scores. We will annually collect feedback from teachers and students in the following areas: student engagement, attitude towards technology, digital literacy skills, writing experiences, number of redefined learning tasks (SAMR model), teacher and student collaboration, frequency of classroom use, and access and use of resources.

Q. What research on technology, 1:1 programs, and teen brains supports this initiative?

A. In his book, *Visible Learning*, John Hattie (2009), combined the results from more than 800 meta-analyses and found that when technology is used as a supplement to the teacher rather than a replacement, there is a much greater impact. The average student's performance is higher in a classroom where technology is used than the traditional setting that does not use technology to enhance the learning process (Magana, S. & Marzano, R.J., 2014).

Results of a comprehensive study of 21 programs showed that despite variations between and across 1:1 settings, participation in the 1:1 programs led to positive changes in teacher practices, student achievement, student engagement, and students' research skills (Bebell, D. & O'Dwyer, L.M., 2010). There are suggestions in the research reviews that 1:1 technology initiatives improve students' attitudes toward technology, subject matter, parent involvement and communication, and teacher-student relationships (Sell, G.S., Cornelius-White, J., Chang, C., McLean, A. & Roworth, W.R., 2012). Additionally, the Campbell Collaboration meta-analysis (2008) also found positive effects on students' writing skills (Lemke, C., Coughlin, E., & Reifsneider, D., 2009).

Research of nearly 1,000 schools, identified criteria for successful implementation with notable student benefits. Schools with a 1:1 student-computer ratio showed that online collaboration contributes to improved graduation rates and other academic improvements. The findings noted that daily technology use is a top-five indicator of better discipline and increased attendance (The Greaves Group, The Hayes Connection, & One-to-One Institute, 2013).

Q. Will there be additional funding for teachers to buy/add apps to their devices? Will any apps be pre-loaded or purchased for students?

A. Teachers will be able to purchase apps similar to how they purchase software today. The first way is through the software request form that is made available in January/February of each year. The form is reviewed in March/April and the application is purchased for the next school year. The second way would be through the budget used for their department which is controlled by the Department Instructional Coach. There are a few apps that will be available for all students, such as Brain Pop, SlideRocket, and Lucid Charts. Additional apps will be determined based on technology requests by teachers, as described above.

Q. What type of training will teachers receive before, during, and after 1:1 implementation (including training each year for new staff members)? What kind of support will teachers have during each period of the school day?

A. The Instructional Technology Coordinator (ITC) will work closely with building administration to plan and embed professional development opportunities for staff. Professional development opportunities will include attending conferences, professional development sessions led by RB staff and technology specialists in the field, summer curriculum hours, embedded instructional support in and out of the classroom from the ITC, and resource videos and documents on the website. New teachers will receive training during their orientation and throughout the year through their induction workshops.

Q. Will students be able to take their Chromebooks home? Do students get to keep their Chromebooks from year to year?

A. Students will be allowed to take the Chromebooks home each night. As many students will need to use the Chromebook to complete class assignments, we intend for students to have access to their Chromebooks 24 hours a day, including the summer.

Q. Do students have to return their Chromebooks when they graduate?

A. No, students will keep their Chromebooks when they graduate.

Q. Will the school provide charging stations? Will teachers receive power strips for their classrooms so students can charge their Chromebooks? If a student forgets his/her Chromebook or has a dead battery, will there be extra Chromebooks available for that day?

A. Because the student Chromebooks have a battery life of approximately eight hours, the Chromebook will be treated as any other school supply. Just as students are expected to bring other supplies to class, they will be expected to charge their Chromebooks before the school day. We will not be providing charging stations or power strips, but we are looking into having some Chromebooks available for students to check out in the library under limited circumstances with possible limitations.

Q. Will students be able to print from their Chromebooks?

A. No. If students need to print, they must use a school desktop computer. From site visits, we have learned that this will eliminate unnecessary printing.

Q. What if a student breaks or loses a Chromebook?

A. All Chromebooks will be insured for 4 years. This insurance covers water damage, drop damage, normal wear and tear, and hardware failure. There is no limit on the number of repairs per Chromebook and RB will loan students a Chromebook while their Chromebook is being repaired. Parts and labor are included in the insurance.

Q. Will all courses have online textbooks?

A. No, not all courses will have online textbooks. As new textbooks need to be purchased, classroom sets with online licenses and resources will be bought. Teachers can also look at using primary sources and other resources to supplement or replace textbooks as appropriate for each discipline.

Q. What kind of support will students have during each period of the school day?

A. We are investigating a student run help desk that would be available before, during and after school. This help desk would be located close to or possibly in the library and offer support to staff and students. It would be accessible via email, walk-in or phone.

Q. What type of training/orientation will incoming freshman students receive (including information on digital citizenship)?

A. We have received feedback from the students and teachers who are currently using the Chromebooks and will collaborate with the feeder schools as well to plan the training/orientation for students. One possibility is to incorporate this training into the freshman orientation at the beginning of the year.

Q. What is the response to parents who object to their students having Chromebooks?

A. Devices will be required and will be an integral part of classroom instruction. All incoming freshmen will be assessed the same fee and will be given a Chromebook.

Q. What type of training and/or orientation will parents receive prior to their students receiving Chromebooks?

A. Parents will receive some information at Residency when their student picks up their Chromebook. They will also have additional opportunities to learn more about the Chromebooks and other technological resources throughout the year. Information will be posted on the website and communicated through email.

Q. What does a Chromebook cost?

A. The projected cost associated with each Chromebook is \$400, which includes a Chromebook, case, and management license that will be distributed at Residency.

Q. What is the cost for students?

A. The current technology fee will be raised from \$30 to \$100 for incoming freshman along and all future classes. This annual fee helps offset costs and allow for insurance and extended warranty on each device. See the chart below for the breakdown of the technology fee for the Class of 2019 and beyond. Student fee waivers for free lunch students will apply to the 1:1 Chromebook initiative. Current students who are not part of the 1:1 initiative will continue to pay the \$30 technology fee.

	Current tech		
	fee*	Insurance	Chromebook
Year 1	\$30	\$60	\$10
Year 2	\$30	\$0	\$70
Year 3	\$30	\$0	\$70
Year 4	\$30	\$0	\$70
Subtotal	\$120	\$60	\$220
Total	\$400		

*This fee covers regular infrastructure needs.

Resources:

Bebell, D. & O'Dwyer, L.M. (2010). Educational outcomes and research from 1:1 computing settings, The Journal of Technology, Learning, and Assessment, 9(1). Retrieved from:

<http://ejournals.bc.edu/ojs/index.php/jtla/article/view/1606/1463>

The Greaves Group, The Hayes Connection, & One-to-One Institute (2013). Retrieved from:

<http://www.projectred.org/about/research-overview.html>

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http://www.cisco.com/web/strategy/docs/education/tech_in_schools_what_research_says.pdf

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