

RANDOLPH TOWNSHIP SCHOOLS

2016 District Technology Plan

PART I: DISTRICT VISION

Randolph Township Schools has an obligation to provide a 21st century education to its students. With that in mind, we were an early adopter in the state of an official Bring Your Own Device (BYOD) policy. As will be explained throughout this technology plan, we expect students to bring their own devices to school, to use them responsibly, and for teachers to incorporate these devices into their daily classroom routines. Randolph's BYOD policy has become the backbone of our instruction as we continue to find innovative ways to allow students and teachers to create with technology.

RANDOLPH ENCOURAGES THE INNOVATIVE USE OF TECHNOLOGY BY ITS TEACHERS AND STUDENTS.

All district schools have access to a robust wireless network. Over the past two years, the Randolph technology department has doubled wireless performance in terms of access points offered in its district buildings. All buildings have 100% wireless coverage and connect to the Internet via a shared 300 Mbps connection through Lightpath. Each district building has a dedicated technology technician to work with teachers to ensure systems and equipment are working properly.

PART II: INFRASTRUCTURE

Randolph meets and in most cases exceeds the basic expectations as outlined by the New Jersey Department of Education for the 2016 technology plan. Our network exceeds at least 100KB per student external connection for each 1,000 students and is scalable up to 1 GB Ethernet. Equipment such as firewalls, switches and routers are scalable. There is an equitable distribution of technology and connectivity available to all students as wifi is available in every building and technology resources like computer labs and iPads are available for student use. There is efficient routing of information between internal users and external resources. Bandwidth and current Internet usage is tracked. There is ongoing coordination when ordering new technologies and maintaining technology between the maintenance department within the district, the technology department, and building principals. This is achieved through regular meetings and through the purchasing process. The district has security software to

manage potential hacks and viruses. There is a security system in place through the use of ProxCard II that regulates and tracks who enters a building.

The school district has digital citizenship support for students in the form of specific class offerings and special programs. The needed technical solutions to support the educational environment are regularly addressed. IT resources are maintained by a reliable and responsible department. Randolph Schools has a dedicated technology department that monitors all aspects of district technology. To ensure network equipment is working, the district documents all infrastructure setups and IP address schematics.

As addressed throughout this technology plan, the school district has a BYOD program in place that offers wifi to students in all district buildings. The district BYOD program is managed by the technology department and regulated by district policy.

PART III: TEACHING AND LEARNING WITHIN THE DISTRICT

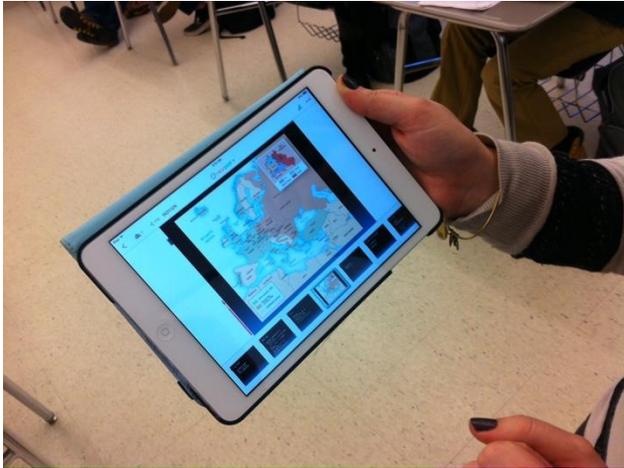
Students have been encouraged to bring their own devices to school since the district's administration unveiled their strategic BYOD plan in June 2012. Since that summer, students



Middle school students use QR codes to review novels

now regularly use their smartphones, tablets, e-readers, and laptops in their many different classes. Students are allowed access to district wireless Internet via the hundreds of access points the technology department has installed in six buildings. Access to the Internet is granted after a student enters their ID and password. This process takes only a few seconds but allows us to ensure that students are using the Internet in a CIPA compliant electronic environment.

In their classes, the students' devices have quickly become essential tools. For example, they use their phones to take videos of themselves describing the parts of our school that reminds them of a cell structure for biology or to interview subjects as they create a 30 for 30 documentary in an English elective. Teachers, using sites like Socrative and Poll Everywhere, assess students regularly on their devices during class. At Randolph, personal devices have become the most powerful tool in a classroom since the book. In a recent history class, students used a website called Incredibox to create their own beatbox background music that they used for backup as they sang and rapped their own compositions about absolute monarchs. On any given day, a walk through the halls of our schools will show students using their devices to create something original as a way to show



mastery of a topic. Students also use their devices to submit work via the Blackboard Student app. Randolph has committed to using Blackboard as a learning management system. Teachers regularly post assignments and other course materials to their Blackboard class site. Randolph has also contracted with a company called Authentica to integrate their student information system (Genesis) to Blackboard. Now, all classes are automatically enrolled with students and

updated every twenty-four hours so enrollment in all Blackboard classes is as up to date as possible.

Randolph teachers encourage students to use their devices in class. However, teachers have moved well beyond telling students to use their devices to “look it up.” Devices are quickly becoming essential components of classrooms, enabling students to move from the low levels of the SAMR taxonomy—substitution and augmentation—to higher levels—modification and redefinition. One elementary teacher had students make video reviews of books they have recently read and upload the video to Flickr. From Flickr, each video review was assigned a QR code that was subsequently pasted to the back cover of the book that was reviewed. Now, students interested in a book can use their device to scan the QR code and see a student created review about their potential read.

This, of course, is not the only example of students moving from consumers of content to creators in our schools. Students in art classes have used an app called Aurasma to record audio explanations about their art. When people scanned the Aurasma code during a gallery walk, they were taken to the artists’ explanation about the pieces they had created. Administrators have also used Aurasma to create back to school scavenger hunts for parents and students. Teachers also regularly use sites like Nearpod to deliver presentation content to students’ devices with embedded formative assessment questions. Students answer these quick checks for understanding as the lesson unfolds and the data is delivered right to the teacher’s device. This data is used by teachers to make modifications to their instruction based on the feedback gleaned from their audience. Administrators have used sites like Educanon to embed formative questions to screencasts in efforts to “flip” faculty meetings. By creating screencasts and delivering this content to teachers to review on their own time, more opportunities for collaborative endeavors like assessment creation by grade level, team grading of student work, and the design of virtual teacher pages become available.



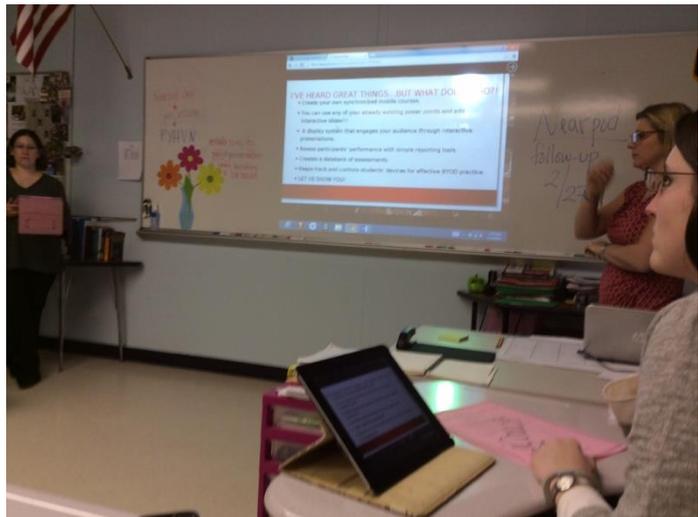
Randolph High School's state of the art collaboration lab

The Randolph community is a supportive environment in terms of innovation. Our board of education and parent organizations have made support of innovation a priority. The community supported the conversion of classroom space in the high school into a state of the art collaboration lab (pictured above) complete with six separate collaboration stations replete with high-definition monitors and BYOD adapters so students can plug their devices in and show their work. Teachers are able to instruct the class on the front LCD projection screen while tables of students work collaboratively to complete projects online using services like Padlet or Google docs to analyze writing. At the push of a button, teachers are able to display exemplary student work to all tables for further review. The collaboration lab is truly an innovative place. These collaboration stations are also available in the high school's media center where students gather to brainstorm and work on project-based learning opportunities.

Professional development is also a major focus of the district's technology plan. Randolph Township Schools supports partnerships with many organizations throughout New Jersey. For example, a relationship with Montclair State University, called the MSU Network for Educational Renewal ensures teachers have access to workshops, many with a focus on educational technology. Randolph also provides certificated professionals with the opportunity to pursue professional development that addresses personal learning objectives aligned with district goals that directly affect the achievement of students including:

- The district's professional development structure allows for choice and flexibility based upon the staff members' professional development goals, as stated in their personal Professional Development Plans (PDPs), and the district's "12 Your Way" program
- The Randolph Academy, where teacher's turnkey best practices for other teachers

- The New Teacher Academy—a comprehensive new teacher program— that supports educators and staff new to the district by providing ongoing meaningful professional development
- Time is often used for on-site professional development through participation in professional learning communities, which align with the NJ Standards and district goals, are relevant to instruction and address needs that have been identified through professional dialogue and student performance data
- As a result of professional development opportunities, students benefit from enhanced teaching strategies, particularly in the areas of Common Core, Reader and Writers’ Workshop, History Alive, Everyday Math, holistic scoring, differentiated instruction, inclusion, ELL, literacy (within and across content areas, using document-based questions, shared rubrics), and project based learning, as well as data-driven lesson development and common assessments
- Providing cooperative relationships with outside educational institutions such as RTC (Regional Training Center through TCNJ), Rutgers University, Montclair State University Network for Educational Renewal, Picatinny Arsenal, and Diversity Council
- Instructional coaching that has been implemented as a resource to all new and existing staff primarily consisting of modeling, co-teaching, becoming a resource, collaborating with other teachers, creating a library of resources, attending and holding workshops and trainings to explore successful teaching strategies
- Department meetings that have seen an increased focus on professional



RHS instructional coaches leading a professional development

development in an effort to develop and improve interdisciplinary collaboration and horizontal articulation

- The district has made a commitment to provide release time for teachers to observe peers and reflect on best practices
- A partnership with Blackboard, Inc. to provide for extensive on-site professional development in the concept of blended learning and in the use of the district's learning management system
- A partnership with Rutgers Center for Mathematics, Science, and Computer Education to provide professional development with teachers in makerspace theory and cross-curricular implementation of technology

These innovative programs are developed in a collaborative environment where all stakeholders are active participants. Programs and initiatives are published online on our district's website, www.rtnj.org as well as shared via staff meetings, parent-teacher organization meetings, and board of education meetings.

How does the school district know that its initiatives are working? Randolph schools has moved forward with an online portal for teacher evaluation and student data analysis, called My Learning Plan. Using My Learning Plan, teachers are able to create and monitor Student Growth Objectives that track student progress over a defined period of time using pre- and post-assessments. Randolph also frequently administers online needs assessment surveys to staff to determine their professional needs. Local Professional Development Committees (LPDC) have used school-based performance and other data to drive professional development for district's schools. The supervision and evaluation model provides an informal and formal observation instrument, which identifies key data to use for commendation, recommendation, and professional growth. Walk-throughs and formal observations by district administrators provide additional data regarding current instructional strategies and classroom practices. The district has increased ways in which school staff are able to communicate with parents, via the online grading system called Genesis, so they can offer information that staff can use to address the particular needs of their students and influence instruction. The high school's LPDC committee, for example, developed a final



analysis based on a comprehensive needs assessment and resulted in the following district priorities:

- Strengthen rigor, relevance, and relationships
- Utilization of student data to implement effective teaching practices
- Emphasis on literacy and writing in all grade levels and all content areas
- Continued integration of technology
- Identification of individual student needs and the differentiation of instruction to address these needs

Randolph Township Schools is committed to innovating our approach to technology and instruction. District teachers are confident they will meet this challenge—in fact, they are using this initiative as motivation to begin moving additional class content online to open up valuable time in the classroom for more differentiation and student-centered learning.

PART IV: TRANSFORMATIONAL BUDGETING

All monetary sources for upcoming projects have been identified. Long-term projects have been identified many of which are funded with Title II, Part A funds. Randolph Schools monitors all projects to ensure they are being used appropriately. The district also participates in and applies for grants. The most recent grant awarded the school district was a \$6,000 STEM Partnership Material Resources Grant funded by the New Jersey Department of Education.

PARTS V & VI: SCHOOL INFRASTRUCTURE & SCHOOL TEACHING AND LEARNING

Elementary Schools

Shongum, Center Grove, Fernbrook, Ironia

Building Goal:	Create Makerspaces in district buildings that include the incorporation of new technology like 3-D printing to capitalize on and emphasize inter-disciplinary approaches to learning
Strategy:	Reorganize media center space and other district space to accommodate this philosophy with appropriate resources deployed for its success
Indicators:	Newly designed district spaces; curricula updates involving the new technology
Objective:	To aid district students in being curious, competent users of technology

Projects/Activities Required to Ensure Activity Completion:	Reorganization efforts/curricula updates
Person Responsible for Overseeing Project:	District teachers and administrators
Resources Needed:	Furniture, technology

Randolph Middle School

Building Goal:	Maximize technology resources
Strategy:	Ensure students have access to devices for instruction and for PARCC testing
Indicators:	Quantity of devices
Objective:	Determine how to maximize resources to bolster technology acquisition
Projects/Activities Required to Ensure Activity Completion:	Use a needs assessment to inform building technology needs
Person Responsible for Overseeing Project:	Building principal, Director of Technology, district teachers
Resources Needed:	Technology, facilities

Randolph High School

Building Goal:	To increase teachers' use of Blackboard, the district's learning management system
Strategy:	Implement effective professional development for teachers on blended learning; Create synergy between the district's learning management system and the district's student information system
Indicators:	Activity and assessments in Blackboard
Objective:	To create additional opportunities for students to learn at their own pace and receive additional feedback
Projects/Activities Required to Ensure Activity Completion:	Integration of student information system and learning management system; administer professional development in blended learning
Person Responsible for Overseeing Project:	District Blackboard implementation team, instructional coaches, administration
Resources Needed:	Technology, professional development days