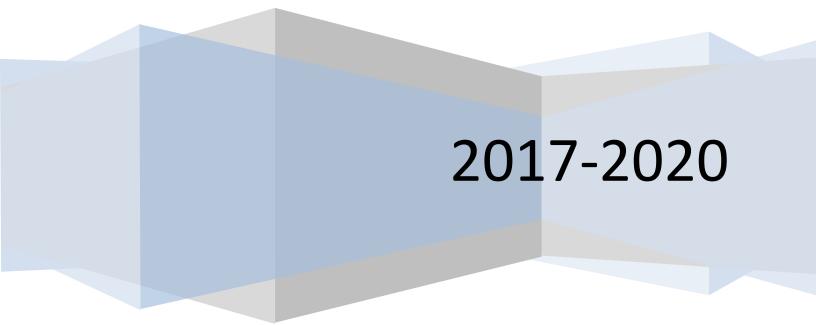# Foxborough Public Schools

3-Year Technology Plan

2017-2020

Technology Plan Working Group

Amy Berdos, Ed.D., Superintendent of Schools
Alison Mello, Assistant Superintendent of Schools
Sandra Einsel, Ph.D., Director of Special Education
Aaron Hyre, Director of Technology
Bill Yukna, Business Administrator

Technology Steering Committee:

Administrators:
Amy Berdos, Ed.D., Superintendent and Co-Chair
Aaron Hyre, Director of Technology and Co-Chair
Diana Myers-Pachla, Principal, Foxborough High School
Susan Abrams, Principal, Ahern Middle School
Moira Rodgers, Ed.D., Principal, Taylor Elementary School

Teachers:
Dan Ambrosio, Technology Integration Specialist, Ahern Middle School
Rachel Barrett, Library Media Specialist, Foxborough High School
Julie Grant, Instructional Technology Teacher, Ahern Middle School
Julia Greenstine, K12 Coordinator of Technology Integration & Assessment, Foxborough High School
Kaitlin Kerrigan, Grade 3 Teacher, Taylor Elementary School
Ken Lacerda, Grade 4 Teacher, Burrell Elementary School
Janet Pacitti, Grade 2 Teacher, Burrell Elementary School
Erica Spitz, Grade 1 Teacher, Igo Elementary School
Caroline Theodoss, Grade 4 Teacher, Igo Elementary School
Darlene Reed, Technology Integration Specialist, Burrell, Igo and Taylor Elementary Schools
Shannon Wasilewski, English Teacher and Department Head, Foxborough High School
Dan Williams, Grade 8 Social Studies Teacher, Ahern Middle School

VISION

The Foxborough Public Schools envisions an innovative PreK-12 learning environment in which technologies enhance teaching and learning in the development of responsible global citizens. This environment personalizes learning and cultivates global connections through dynamic and authentic learning experiences that maximize students' growth and prepare them to thrive in a competitive global society.

INTRODUCTION

The focus of educational technology is changing rapidly, from putting in place a solid infrastructure, to using technology systematically to change educational practices and significantly improve results. The current rate of this change presents significant challenges to technology planning and strategies for implementation that will modernize educational practices.

The Foxborough Public Schools Technology Plan is intended to be a working document that will communicate the examination and adaptation of the role technology plays in our schools as we plan and implement to modernize our educational practices. Our Core Values, Mission Statement, and Vision as outlined in our District Strategic Plan (2017-2020) has guided the development of this technology plan. In the future, the Technology Plan and Strategic Plan will become one combined plan.

The district has a Technology Steering Committee, which is comprised of teachers and administrators from all five schools as well as district level administrators. The Committee meets monthly.

The purpose of the *Technology Steering Committee* is as follows:
- To examine our current educational technology systems and how they are used
- To provide guidance and act as a think tank for issues/challenges that arise as part of infusing technology into the curriculum
- To identify our own strengths and needs in fully infusing and integrating technology into academic standards and curriculum, pedagogy and professional development (i.e., deployment of mobile devices, software, technology resources)
- To prioritize those needs and set goals for the future
- To act as a liaison to schools and to colleagues for the purpose of communicating technology initiatives and soliciting feedback
- To provide models of how curriculum is supported through technology integration

OVERVIEW OF THEMES and OBJECTIVES

Objective 1 - Purposeful Technology Integration & Literacy

Advance the academic mission of the Foxborough Public Schools through innovative and effective technologies, resources and services.

Objective 2: Technology Professional Development

Provide ongoing professional development opportunities to ensure that all staff have access to training to be proficient in the use and integration of technology.

Objective 3: Global Information and Communication

Ensure students develop the skills and competencies needed to become productive members in today's global society.

Objective 4: Accessibility to Relevant Technology

Ensure that Foxborough Public Schools have the infrastructure, staffing and equipment to meet academic needs for effective and efficient operations.

Objective 5: Data and Information Privacy & Security

Continue the process for evaluating the use of technology to inform teaching and learning and to provide a safe and secure environment.

Objective 1 - Purposeful Technology Integration & Literacy

Advance the academic mission of the Foxborough Public Schools through innovative and effective technologies, resources and services.

3-Year Goals:

1. Provide thoughtfully and purposefully planned technology integration opportunities to support and enhance learning experiences in a seamless curriculum design model.
2. Provide technology services to enhance teaching and learning and to foster curricular innovation.
3. Evaluate and implement new technologies to improve teaching and learning.

The following strategies and action steps will address these goals:

- Incorporate technology enhanced instructional strategies into curriculum documents (UbD Units) in all content areas and explicit technology resources that support teaching and learning using the SAMR model as a framework.
- Continue integration of digital literacy and computer science skills and concepts into content area instruction. (Massachusetts Digital Literacy and Computer Science (DLCS) Curriculum Framework and the ISTE standards).
- Continue to develop and support effective blended learning opportunities at all levels in all academic areas.
- Communicate explicit grade level technology skills and expectations for students and teachers using the district's Technology Skills Scope and Sequence.
- Develop and embed checkpoint assessments within the core curriculum to measure student technology literacy.
- Provide opportunities for students to use high quality digital resources: reference, databases, multimedia/video for learning projects that involve research and problem solving, analyzing and evaluation information.
- Optimize use of data and analytics to identify and plan for at-risk students.
- Leverage Learning Management Systems (LMS) to provide instructional technology support to differentiate learning opportunities.

Objective 2: Technology Professional Development

Provide ongoing professional development opportunities to ensure that all staff have access to training to be proficient in the use and integration of technology.

3-Year Goals: (Aligns to Strategic Plan Objective 1)

1. Optimize professional development at all levels to develop the ability to adjust and be flexible when problem-solving with technology, and provide ongoing support to teachers in their attempts to learn new tools.
2. Differentiate on-going professional development that models best practices for technology use and integration as defined by the ISTE Standards for Teachers.

The following strategies and action steps will address these goals:

- Provide differentiated professional development to staff members in order to meet grade level skill and application expectations.
- Offer a wide range of district-wide technology training opportunities to staff and administration on technology integration in order to meet grade level and application expectations.
- Ensure ongoing and consistent district-wide technology professional development for all staff.
- Continue to leverage Instructional Technologists to model and coach educators through an embedded instructional technology delivery model to assist educators in their transition of their instruction from the Substitution stage of the SAMR Model through to the Redefinition stage.
- Provide targeted provide professional and curriculum support using the SAMR Model as the framework for instruction.
- Expand use of Buzz Platform (Online Learning Management System) for troubleshooting FAQs, and recommendations, including reference library moderated by Instructional Technology Teacher Leaders and Tech Integration Specialists.
- Leverage the online learning management system "FPS Online Classroom" as a district-wide instructional reference tool for new and existing classroom/instructional technology and for proven integration strategies that best support innovative teaching and positive learning outcomes.
- Develop user "Practitioner Inquiry Groups" for effectively using district-wide tech tools/resources (ex/TEAMS, Illuminate).

Objective 3: Global Information and Communication

Ensure students develop the skills and competencies needed to become safe, ethical, and productive members in today's global society.

3-Year Goals: (Aligns to Strategic Plan Objective 1)
1. Provide more opportunities for students to engage in collaborative learning experiences that will expand access to and understanding of different perspectives and worldviews.
2. Ensure that all curricula encourage students to develop an understanding of critical cultural frameworks in their investigations and opportunities to learn about today's global society.
3. Utilize technology to access, integrate, and evaluate information and communicate and collaborate with others.
4. Leverage web, social media, and mobile technologies to provide effective and consistent content delivery.

The following strategies and action steps will address these goals:
- Improve access to real time international communication opportunities (Skype, Facetime, virtual fieldtrips, etc.).
- Add more opportunities for inquiry-based learning, including long-term research projects motivated by student interest.
- Increase opportunities to add problem-based learning/project-based learning/service learning to the curricula at different levels.
- Increase opportunities for students to contribute to community by solving real-world problems at both the local and global levels.
- Incorporate opportunities for interdisciplinary work in upper levels (middle/high school).
- Increase opportunities for students to locate, evaluate, and curate information and communicate and collaborate with others.
- Provide opportunities for students to demonstrate the ability to function safely, ethically, and productively as online citizens

Objective 4: Accessibility to Relevant Technology

Ensure that Foxborough Public Schools have the infrastructure, staffing and equipment to meet academic needs for effective and efficient operations.

3-Year Goals: (Aligns to Strategic Plan Objective 3)

1. Ensure planning for current and future financing to support the District Technology Plan.
2. Maximize access to curriculum for all students leveraging universal design principles and appropriate assistive technology.
3. Continue to develop, budget and communicate the district's master staffing plan to support both instructional technology and infrastructure needs.

The following strategies and action steps will address these goals:

- Develop a criteria and process for selecting, implementing, and evaluating the effectiveness of instructional technology resources, hardware and related infrastructure using predetermined criteria including cost-effectiveness, and sustainability.
- Expand access to technology that enhances and supports innovative teaching and learning.
- Expand access to digital resources such as video streaming, and online curriculum resources including digital texts, multimedia, eBooks, etc.
- Develop and communicate annual technology capital plan to support district technology needs and equipment replacement cycle.
- Pursue funding for technology programs from federal, state, and private resources.
- Explore ways technology can reduce costs and create efficiencies in other areas of the district budget.
- Leverage school-based Technology Liaisons for assistance with common technological problems and coaching.

Objective 5: Data and Information Privacy & Security

Continue the process for evaluating the use of technology to inform teaching and learning and to provide a safe and secure environment.

3-Year Goals: (Aligns to Strategic Plan Objectives 3 and 4)

1. Continue to develop and implement data systems and strategies to positively impact instruction and student learning outcomes.
2. Ensure procedures and guidelines are in place to ensure security and privacy of student data (stored off-site or with applications), tools, software or online products and services.
3. Evaluate and implement mass communication strategies to better communicate with stakeholder groups and community.

The following strategies and action steps will address this goal:

- Provide embedded professional development and individual coaching for all staff on data security and privacy.
- Continue to maintain procedures and guidelines that ensure staff members are knowledgeable of and adhering to data security and privacy policies.
- Develop and implement protocol for maintaining/updating the current student privacy database of online tools.
- Conduct stakeholder working group to define minimum expectations for data literacy.
- Develop implementation and evaluation protocol for the selection and use of digital resources.
- Revise digital citizenship curriculum to ensure vertical alignment and age/use appropriate digital citizenship program.
- Review and revise as needed all procedures and guidelines annually.
- Review policies and procedures annually with staff including Responsible Use Policies.
- Continually research and revise policies and procedures to reflect best practices.
- Continue enforcement of security procedures and best practices.
- Provide access to digital environments that enable teachers to collect, analyze, and manage multiple data sets to inform teaching and learning.
- Monitor and maintain inventory of existing hardware and software.
- Expand and improve communication strategies through new web presence.

Additional information:

In regards to safety, security and data retention the district has a CIPA-compliant Acceptable Use Policy (AUP) regarding Internet and network use. The policy is updated as needed to help ensure safe and ethical use of resources by teachers and students. A plan is in place to protect the

security and confidentiality of personal information of its students and staff[1]. The district complies with federal and state law[2], and local policies for archiving electronic communications produced by its staff and students. Staff and students are informed that any information distributed over the district or school network may be a public record.

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[1] To find out how state agencies in the Executive Branch must protect personal information, as well as to find training tools related to this effort, see the Commonwealth's (http://www.mass.gov/anf/research-and-tech/policies-legal-and-technical-guidance/legal-guidance/privacy-and-security/exec-order-504).

[2] Information about state regulations is available from the state's Record Management Unit (http://www.sec.state.ma.us/arc/arcrmu/rmuidx.htm).

Appendix

International Society for Technology in Education (ISTE) https://www.iste.org/

SAMR Model supports and enables teachers to design, develop, and infuse digital learning experiences that utilize technology. The goal is to transform learning experiences so they result in higher levels of achievement for students. Dr. Ruben Puentedura is the creator of the SAMR Model.

- **Substitution:** At the substitution stage of the Model, technology has been introduced into the classroom, but as a direct substitution for more traditional educational tools, activities, and teaching. There has been no change in either the process or end results through technology's inclusion at this early stage, and the benefits and results for students are negligible. A frequently cited example of the substitution stage include writing essays or assignments on the computer, as opposed to pen and paper.
- **Augmentation:** The augmentation stage of the SAMR Model is similar to the previous level of technology adoption, with technological tools and software again acting as a substitute for traditional educational means. However, there is a functional improvement at this level in the teaching, learning, or working process, providing some benefits, though slight, to students. Examples at this stage include student using the spell- and grammar-check functions of word processing software, easing the writing process and improving their potential speed and efficiency.
- **Modification:** The modification stage of the Model provides the most significant change in technology adoption in the classroom for both educators and learners. Through modification, the tasks and goals of the classroom are changed through the use of, and access to, technology. This redesign of educational assignments, assessments, and more presents new opportunities for students to analyze their work and their learning process through a technological lens. The use of Google Docs to write documents, allowing for student collaboration and immediate feedback, would be a considerable modification to the learning environment.
- **Redefinition:** The final stage of the SAMR Model, redefinition, provides intensive changes and transformative experiences for students and educators, with traditional educational tasks and goals now completely replaced through the incorporation of technology in the classroom. With an understanding of the benefits and possibilities presented by technology, teachers can create new learning tasks, assignments, and assessments strictly based through a digital platform. This offers students new immersive experiences and despite appearing to be a daunting task, Puentedura notes that the redefinition stage ultimately provides positive results in the classroom.

Redefinition
Tech allows for the creation of new tasks, previously inconceivable

Modification
Tech allows for significant task redesign

Augmentation
Tech acts as a direct tool substitute, with functional improvement

Substitution
Tech acts as a direct tool substitute, with no functional change
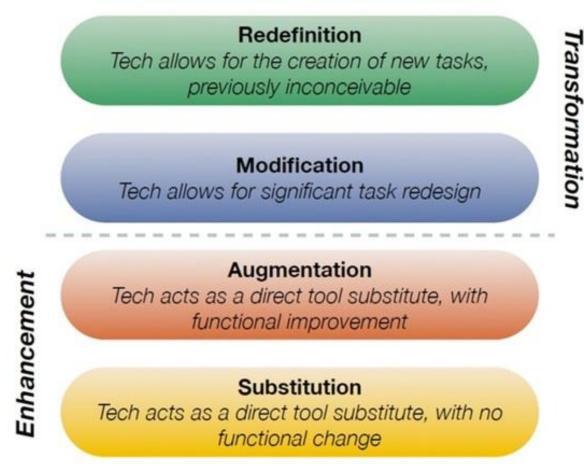
Transformation

Enhancement

Image the creation of Dr. Ruben Puentedura, Ph.D. http://www.hippasus.com/rrpweblog/