

# South Hunterdon Regional School District

## Technology Plan

2023-2026



## **The South Hunterdon Regional School District**

### **Mission Statement**

The South Hunterdon Regional School District, a small, close-knit school district working in partnership with our community, provides dynamic and innovative educational experiences that challenge and empower each student to strive for personal excellence and positive global citizenship.

### **The SHRSD Technology Vision Statement**

The SHRSD has a longstanding, continuous commitment to providing our students with an outstanding education. To that end, we seek to achieve and maintain best practices in using technology to support the educational experiences of all students. **The use of technology should be seamlessly integrated into the curriculum, teaching, and learning.**

**The South Hunterdon Regional School District is committed to providing its students, staff, and community with a stable and secure digital ecosystem that supports and enhances the educational process ensuring that technology is used to engage students in a stimulating academic environment and a challenging curriculum. A student-centered approach, based on real-time data, supports the development of knowledge and skills critical to success in a globally connected world.**

To realize this vision, we must continually respond to changes in the technology landscape by maintaining a robust infrastructure, providing technical and financial support for the use of technology in our schools, investing in professional development for all staff, and providing a wide variety of opportunities for all students to use technology to enhance their learning.

## **Introduction**

The use of technology to enhance student learning is an important District initiative that is supported by the SHRSB staff and administration, Board of Education, and the wider learning community. A key component of the District's work in technology involves preparing and updating plans for using technology to support teaching, learning, and assessment. This document reflects our best thinking on this ever-evolving domain.

This plan is designed to develop a strategic vision and goals to support student achievement and engagement through the seamless integration of technology into teaching and learning, by focusing on Infrastructure, Instructional Technology, Information Technology, and Professional Learning. This comprehensive plan makes many recommendations about future directions for technology in the District that will enable SHRSB to provide all members of its learning community with access to appropriate technological resources, enhanced instructional programs, and opportunities for professional growth.

We would like to thank the members of this committee for their work in developing this plan, and we would also like to thank the members of the administration, teaching staff, the Board of Education, and the community for their continued support of our District technology program.

The following K-12 Technology Committee Members actively participated in the creation of this plan:

Vince Cifelli, Director of Technology  
Ariel Gilbert, Health and PE Teacher (Middle/High School)  
Geoff Hewitt, Director of Curriculum, Assessment and Instruction  
Deborah Lamer, English Teacher (Middle/High School)  
Mike Lippert, IT Support Specialist  
Laura Lucchetto, Technology Teacher (Middle/High School)  
David Miller, Principal, West Amwell Elementary School  
Dave Nodine, IT Support Specialist  
Anthony Suozzo, Superintendent of Schools

## The SHRS Technology Plan: Setting the Context

### National Technology Planning Efforts

Several national technology planning initiatives, sponsored by major educational technology leadership organizations, have provided guidance for the District Technology Plan.

The International Society for Technology and Education (ISTE) is the leading professional organization for computer teachers and educational technology leaders. ISTE has published technology standards that describe technology competencies for students, teachers, and administrators. These standards specifically address *“What students should know and be able to do to learn effectively and live productively in an increasingly digital world.”* The latest version of the standards shifts the focus from technology skills to the changing roles of students as they increasingly use technology in their daily lives. These roles include:

- **Empowered Learner:** Students leverage technology to take an active role in choosing, achieving, and demonstrating competency in their learning goals
- **Digital Citizen:** Students recognize the rights, responsibilities, and opportunities of living, learning and working in an interconnected digital world, and act in ways that are safe, legal, ethical, and self-aware
- **Knowledge Curator:** Students make meaning for themselves and others by critically curating resources through the use of digital tools
- **Innovative Designer:** Students use a variety of technologies within a design process to solve problems by creating new, useful, and imaginative solutions
- **Computational Thinker:** Students identify authentic problems, work with data, and employ algorithmic thinking to propose and automate solutions
- **Creator and Communicator:** Students communicate clearly and express themselves creatively for a variety of purposes using the tools, styles, formats, and digital media appropriate to their goals
- **Global Collaborator:** Students use digital tools to broaden their perspectives, increase empathy and understanding, and work effectively in teams

In November of 2022, ISTE announced a merger with ASCD, recognizing the convergence of technology with the curriculum. This plan recognizes not only how technology is used to engage students in learning, but how technology is intertwined with the curriculum at all levels.

In addition, the Framework for Digitally Responsive Educational Organizations provides districts with an understanding of the organizational culture and ecosystems that can leverage the power of stakeholder insights and build capacity for impacting learners through the purposeful implementation of technology. The nine areas identified in the Framework are aligned with the ISTE standards referenced above:

- Leadership & Governance
- Teaching & Learning
- Professional Learning
- Assessment
- Content & Curricula
- Collaboration & Partnerships
- Student Wellness & Inclusion
- Infrastructure
- Safety & Security

The overall Framework guides our thinking about the planning and management of technology in our schools, and our Technology Plan focuses on several of these categories.

## **The Technology Planning Process**

The instructional technology planning process aligns with the district's school construction projects. In the spring of 2022, the Director of Technology initiated a strategic planning process to examine the district's digital ecosystem based on the framework for digitally responsive educational organizations. This was a two-step process that included a technology audit and a survey for the instructional staff and school/district leadership. Teacher input was an integral part of the planning process. Teachers had opportunities to provide input via the survey, and through focus groups led by the Superintendent as a part of the school construction projects. The result of this process was a discovery report that identified areas of success for the district's current technology program and opportunities for growth.

## **Summary of Discovery Report (See Appendix B)**

The South Hunterdon Regional School District is well positioned to support the technological needs of the district's stakeholders in all areas. Technology offers a tremendous opportunity to support educational environments for students, teachers, and administrators. Every stakeholder can benefit from technology's unique ability to streamline work and enrich outcomes. Leveraging technology in a way that achieves these goals requires strong leadership and a clearly communicated vision. Effective leaders understand organizational and instructional needs and challenges. These leaders create an inspiring vision of the future, motivate, and inspire stakeholders to engage with that vision, and coach the team in the delivery of the vision. Based on the results of the data gathered through surveys, interviews and document analysis, the following summarizes three areas of strength that earned the highest feedback from stakeholders, and three opportunities for growth.

### **Areas of Strength**

#### **1. Infrastructure & Access**

The network and Internet/bandwidth connection support district access needs without performance degradation. Wireless access is available and reliable in all instructional spaces and common areas.

The district provides devices and connectivity options for students and families outside of school. All teachers and students have Internet/broadband access outside of the school. Sufficient content filtering operates on student and teacher devices when they are on-premises or on a District-issued hotspot. In addition:

- Students have anytime/anywhere access to digital content and resources
- Teachers have anytime/anywhere access to digital content and resources for instructional use throughout the entire school
- Parents have consistent access to all teacher-generated and curated digital content and the work submitted by their students

## 2. Instructional Resources

Classroom resources (software and hardware) are readily available for teachers and students. Consistent budgeting for instructional technology purchases makes it predictable and easy to plan for future needs. Staff typically have all usage/needs met and services are generally available.

Instructional technology is one tool used as a part of a district wide strategy to support student learning. The district has recently hired two instructional specialists/coaches to support blended learning. Each coach supports staff in helping to address the needs at the building level. The district continues to support the transition to a blended learning model to help improve student engagement, and ultimately student achievement.

The district leadership has demonstrated a commitment to improvement by allocating resources to a multi-year implementation of blended learning. Staying abreast regarding educational research and implementing innovative methods around the effective use of technology through practices and pedagogy are key to driving impactful learning.

## 3. Safety & Security

The district has developed policies, practices, and procedures that include guidance for key protective measures to ensure the district's physical and digital resources are secure. Staff feel physically safe in the schools. The district should continue to invest in new technology that can be integrated into existing systems and upgraded in the future. Focus on supporting and ensuring two-way communication technology, website, and district apps that can be easily accessed and used by all relevant personnel and community members. It is also important to test the technological solutions in real-world settings.

Similarly, staff feel well-trained to protect data privacy, and for the safe use of digital learning technologies, and in the use of best practices for cybersecurity. The staff members have a strong understanding that curated data must be handled to ensure that all personally identifiable information is protected. In addition, the district utilizes a system to regularly run phishing campaigns and for ongoing cybersecurity training.

## Opportunities for Growth

### 1. Collaboration & Partnerships

The District has rapidly expanded the instructional technology resources (both hardware and software) available for teacher and student use. While there are professional learning opportunities for instructional technology available, faculty and staff report that there are limited opportunities for internal collaboration through vertical integration or cross-curricular teams. Staff practice collaborating with one another in both vertical and horizontal teams, while providing opportunities for students to positively contribute to multiple communities and assume responsibility for a range of contributions are essential in preparing thriving adults and life-long learners. To maximize results and minimize the potential for the fragmentation of skill development across the K-12 spectrum:

- Schedule time for teachers to frequently share lessons and activities about digital learning in their regular professional learning communities, guiding their work with research-based frameworks (e.g., Marzano, DuFour, Senge, Hord, etc.)
- Provide digital learning-focused professional development that includes ongoing support through peer observation, assessment, coaching, professional learning communities, and mentoring

Students' experiences and opportunities are dependent upon their teachers' self-motivation, confidence, and skills to effectively integrate technology in the classroom is supported by:

- integrating purposeful technology use into daily teaching,
- learning through targeted professional learning,
- collecting and using student data to drive learning, and
- implementing research-based practices and strategies

### 2. Assessment

Staff's proficient ability to capture and explore many kinds of data, and understanding how to identify useful data points, combine them with others (metrics), and apply them to improve outcomes is a hallmark of impactful teaching and learning. Thus, access to concrete, context specific data in a timely manner to establish effective feedback systems, and reporting and analysis tools play a pivotal role in identifying, isolating, and presenting data in actionable formats.

Assessment Practices include gathering and acting on data along the way. While you may be gathering data - what are you doing with it? How are you systemically acting on the data throughout the school year? Is there time carved out for teachers to be a part of the process via ongoing professional

development? Are they receiving ongoing professional learning opportunities to reflect and act on the data - making changes along the way in their instructional strategies and methods?

While moving towards data-informed instruction practices, ensure that:

- Multiple and varied assessments are embedded into instruction and are used to identify individual student needs and strengths for learning goals
- Teachers work across grade- or subject-level teams to create multiple and varied assessments.
- Student learner profiles exist district wide and include historical student performance data, real-time formative assessment data, information on student learning difference and other contextual out of school factors
- Most learning and content tools share assessment and analytics data with a central repository.
- Teachers and students use learning profiles to personalize learning at the student level.
- School administrators use learner profiles to support schoolwide instructional goals at the classroom level

### 3. Long-term Planning & Budgeting

Securing the long-term financial capacity to continually procure technology, update, and maintain systems as well as adequately fund human talent that provides technical and professional learning services. A stable budget and plan are in place for both equitable and timely allocation of technology and appropriate support across the organization.

Implementing a common vision with aligned goals for both instruction and technology, demands foresight, collaboration, and long-term planning. Securing the resources and infrastructure for today's needs while preparing for the future means decision making consists of both short- and long-term goals to address the fluid nature of technology as a moving target, while ensuring the instructional/curricular needs are addressed.

The district needs to engage in coordinated long-term technology planning to:

- create a vision, goals and strategies that complement and support the district's organizational and instructional strategic plans
- identify a routine and comprehensive replacement cycle for all devices and digital technology infrastructure to support the expansion of digital teaching and learning resources
- sustain consistent technology training and professional learning connected to pedagogy
- ensure the sustainability and scalability plan for maintaining and expanding digital services for students in more contexts that are continually updated with new financial projections, budget items, and priority areas

- define the metrics to evaluate the efficiency and effectiveness of the technologies used for organization and instructional purposes

Subsequently, the Director of Technology worked with the District's leadership to identify a technology planning committee to develop a multi-year Technology Plan. The technology plan was developed through a series of regular committee meetings held monthly from March to June. Regular bi-weekly meetings of the District's Technology Committee which included principals, directors, and other building administrators also met regularly.

## **Professional Learning and Support**

### **Supporting the Use of Technology as an Instructional Tool**

Technology professional development aligns with the district's overall goals to improve learning and instruction, focusing on core district initiatives, including the support of blended learning, and using technology tools to improve instruction. In addition, professional development includes helping teachers understand how to use Google Workspace for Education to support student work across all curriculum areas, as well as learning management systems.

As a part of the survey in the Spring of 2022, teachers indicated they understand how to use the technologies, but would like more training on the digital resources the district has available, and how to effectively integrate these tools into the curriculum. The survey also collected information about teacher requests for additional professional development, and those results will inform future professional development plans, and are reflected in the goals of the Technology Plan.

The district is committed to providing targeted, needs-based, and personalized professional development, based on each teacher's capacity and interest. Blended Learning will continue to be a focus and supported as a part of the professional learning program.

The effectiveness of the professional development plan will be evaluated by conducting annual surveys to determine if teachers feel that their needs are being met. In addition, surveys are used to evaluate professional learning opportunities to determine if the individual experiences are effective in providing teachers with the support they need.

## District Technology Goals

The following goals have been identified by the PreK-12 Technology Committee:

### Goal #1: Infrastructure

**SHRSD will implement upgrades to the computer network system to improve performance and security and to expand access allowing students, faculty, staff, and community members the ability to securely access digital resources.**

#### Action Steps for this Goal

1. Infrastructure
  1. Design, budget for and implement network infrastructure upgrades
  2. Responsible stakeholder: Director of Technology
  3. Refresh 2024-2026
2. Staff Devices
  1. Define replacement cycles for staff devices and review/update software image build
  2. Responsible stakeholder: Director of Technology
  3. Other Responsible stakeholder(s): District Technology Committee
  4. Ongoing; Plan for refresh one year prior to lease cycle termination; Build new OS/Software image prior to purchase
3. Student Devices
  1. Define replacement cycles and support contract details for student devices
  2. Responsible stakeholder: Director of Technology
  3. Other Responsible stakeholder(s): District Technology Committee
  4. Chromebook fleet refresh (Grades 2-12 & Paraprofessionals) - Summer 2023
4. Classroom Technologies
  1. Review and assess classroom A/V technologies, hardware/software
  2. Responsible stakeholder: Director of Technology
  3. Other Responsible stakeholder(s): Director of Curriculum, Assessment and Instruction & District Technology Committee
  4. Annually
5. Cybersecurity
  1. Review and assess cybersecurity solutions for any needed improvements/changes; Develop DR Plan
  2. Responsible stakeholder: Director of Technology
  3. Other Responsible stakeholder(s): District Technology Committee
  4. Annually
6. Physical Security
  1. Implement district-wide physical security solutions
  2. Responsible stakeholder: Director of Technology

3. Other Responsible stakeholder(s): District Safety Committee
  4. PreK-4 & 5-8 implementation 2023-24; Review Annually and renew licensing as needed
7. Communication (Public, Families, Internal)
1. Research solutions, determine the proper direction for the district, align with reputable partners as needed for successful implementation
  2. Responsible stakeholder: Superintendent of Schools
  3. Other Responsible stakeholder(s): District Technology Committee; School and Community BoE Committee; Director of Technology
  4. 2023-2025

## **Goal #2: Professional Learning**

**SHRSD will create and implement an ongoing technology training plan for newly hired and existing faculty and staff.**

### **Action Steps for this Goal**

8. Curriculum
  1. Map out the plan for professional learning, integrate with other learning opportunities, connect to ongoing initiatives for blended learning
  2. Responsible stakeholder: Director of Curriculum, Instruction and Assessment
  3. Other Responsible stakeholder(s): Instructional Coaches, Technology Team
  4. Ongoing process
9. Digital Fluency
  1. Provide instructional support for faculty and staff to be effective, efficiently and proficient with the digital tools they use every day
  2. Responsible stakeholder: Instructional Technology Support Team
  3. Other Responsible stakeholder: Instructional Coaches, Building and Curriculum Administrators
  4. Ongoing process
10. Implementation
  1. Survey staff and faculty to identify needs for professional development, and coordinate offerings based on feedback
  2. Responsible stakeholder: Director of Curriculum, Instruction and Assessment
  3. Other Responsible stakeholder: Technology Team, Teacher Leaders, and/or other appropriate staff members
  4. Annually
11. Professional Development
  1. Execute the trainings
  2. Responsible stakeholder: Director of Curriculum, Instruction and Assessment
  3. Other Responsible stakeholder: Technology Team, Teacher Leaders, and/or other appropriate staff members, Building and Curriculum Administrators
  4. Ongoing

### **Goal #3: Curriculum, Instruction & Assessment**

**The SHRSD will continue to develop and maintain a strong commitment to the area of instructional technology to support all students through the development of collaborative learning environments.**

#### **Action Steps for this goal**

##### 12. Instruction

1. Use technology in the classroom in a purposeful and meaningful way - assessment, using digital media, sharing what you learned in a digital community, collaboration
2. Evaluate current digital tools in use and determine the best solutions
3. Organize and maintain a catalog of district software subscriptions
4. Implement district software subscriptions
5. Responsible stakeholder: Director for Curriculum, Instruction and Assessment
6. Other Responsible stakeholder: Building Administrators
7. Ongoing

##### 13. Curriculum

1. Library/Media Centers as a resource/tool for research and personal learning
2. Develop dedicated spaces for students to create, design, and produce digital learning artifacts
3. Responsible stakeholder: Building Administrators, Technology Team
4. Other Responsible stakeholder: Library Media Specialist, Teachers
5. Annually

##### 14. Implementation

1. Apply the blended learning instructional model as a way to bridge the gap of technology use, technology integration, and to meet the diverse needs of all learners
2. Responsible stakeholder: Director of Curriculum, Instruction and Assessment
3. Other Responsible stakeholder: Building Administrators, Diversity, Equity and Inclusion Team, Technology Team, Blended Learning Cohorts, Instructional Coaches
4. Ongoing

##### 15. Learning Environment

1. Create and maintain innovative and engaging classroom learning environments that capitalize on the intersection of physical and digital spaces
2. Responsible stakeholder: Building Administrators
3. Other Responsible stakeholder: Instructional Technology Department
4. 2023-24, and then ongoing

#### **Goal #4: Data-Driven Decision-making**

**The SHRSD will use data to drive decision-making to adapt and maintain a comprehensive academic program for all students.**

#### **Action Steps for this Goal**

##### 16. Implementation

1. Implement a new Student Information System that supports long-term data collection and analysis, culminating in individual digital portfolios used for documenting long-term student growth
2. Responsible stakeholder: Director for Curriculum, Instruction & Assessment
3. Other Responsible stakeholder: Data Coordinator, Building Administrators, Instructional Coaches
4. 2023-24 (Phase 1), 2024-25 (Phase 2)

##### 17. Assessment

1. Develop a variety of significant summative and formative assessments
2. Appropriately analyze and collect data to drive classroom instruction
3. Responsible stakeholder: Director for Curriculum, Instruction & Assessment
4. Other Responsible stakeholder: Data Coordinator, Building Administrators, Instructional Coaches
5. Ongoing

##### 18. Content & Curricula

1. Transition curriculum writing to new LMS (Phase 1)
2. Use the LMS system to allow educators to effectively and efficiently maintain access to digital resources (Phase 2)
3. Responsible stakeholder: Director of Curriculum, Instruction and Assessment
4. Other Responsible stakeholder: Instructional Coaches, Teacher Leaders
5. 2023-25 (Phase 1), 2025-26 (Phase 2)

## **Assessment & Future Considerations**

### **Assessment & Evaluation of Goals:**

The technology committee will meet bi-weekly to review the progress of meeting the goals established in the Technology Plan and to discuss the implementation and use of instructional technologies related to student engagement.

Goal #1 will be evaluated based on the network uptime. Network uptime and network performance will be monitored with network performance monitoring systems, with updates and advancements designed and implemented to support the network infrastructure improvement initiative. As a result, the district expects to achieve a 100% uptime of SHRSD computer network core components of the district computer system. Cybersecurity systems will continue to be enhanced and strengthened at the network level along with at the end user level. Our training efforts in security awareness and the techniques used to exploit vulnerabilities will result in a reduction of failed phishing campaigns and will demonstrate that our users are more adept at recognizing potential cyber security concerns.

The other goals will be evaluated based on stakeholder feedback and anecdotal and observational data. These goals will be accomplished when the district has developed a plan for professional learning that corresponds with the rollout of new technologies for instruction and operations, including the school information system, school messaging communications, the employee management suite, and all purchased academic software tools. In addition, the district will survey staff annually to evaluate the effectiveness of the learning opportunities and to identify next steps to meet the needs of the staff and students.

### **Future Considerations:**

Due to the changing nature of technologies and the emergence of new technologies, the K-12 Technology Committee will continue to meet and discuss how they should be incorporated in our instructional technology program. The committee should research and monitor technology in this domain, for several reasons:

- We want our students to be well-prepared and aware of what is coming
- We want students to understand these changes and how to live with them
- We need to understand why the technology is being developed (hopefully from a need)
- We believe that this technology will help students to promote their own ideas and make positive changes in the world
- We want students to understand the correlation between inequities around the world between those with emerging tech and those without

Finally, we want to ensure students have shared experiences with these technologies in an age-appropriate manner.

The following technologies were classified as “emerging technologies” and many are already being used in our schools **now**:

- 3D Printing
- 3D Modeling
- Simulations
- Drones
- Physical Computing
- Robotics
- Augmented Reality
- eSports

Technology that is **increasingly being utilized** in educational settings:

- Internet of Things (IoT)
- Cybersecurity
- Artificial Intelligence (AI)
- Machine Learning

Technology that will likely become more widespread in the **future**:

- Natural Language Processing
- Big Data
- Micro-Learning (Digital Badges)
- Biometrics
- Blockchain
- Quantum Computing
- The Metaverse
- Financial Technology (FinTech)

## Appendix A: Informing our Vision

### Websites

- *Common Sense Media*  
<https://www.commonsensemedia.org>
- *American Association of School Librarians Framework for Learners*  
<https://standards.aasl.org/wp-content/uploads/2017/11/AASL-Standards-Framework-for-Learners-pamphlet.pdf>

### Technology Planning Resources

- ISTE Standards for Students  
<https://www.iste.org/standards/iste-standards-for-students>
- COSN Framework  
<https://www.cosn.org/careers-certification/framework-of-essential-skills/>
- Framework for Digitally Responsive Educational Organizations  
<https://www.bloom.com/resources/defining-digitally-responsive>

### Other Resources

- [Fostering Powerful Use of Technology Through Instructional Coaching](#)
- [Edutopia Technology Articles](#)

**Appendix B: 2022 Discovery Report and Survey Summary**