Rutland City Public Schools

Instructional Technology Plan

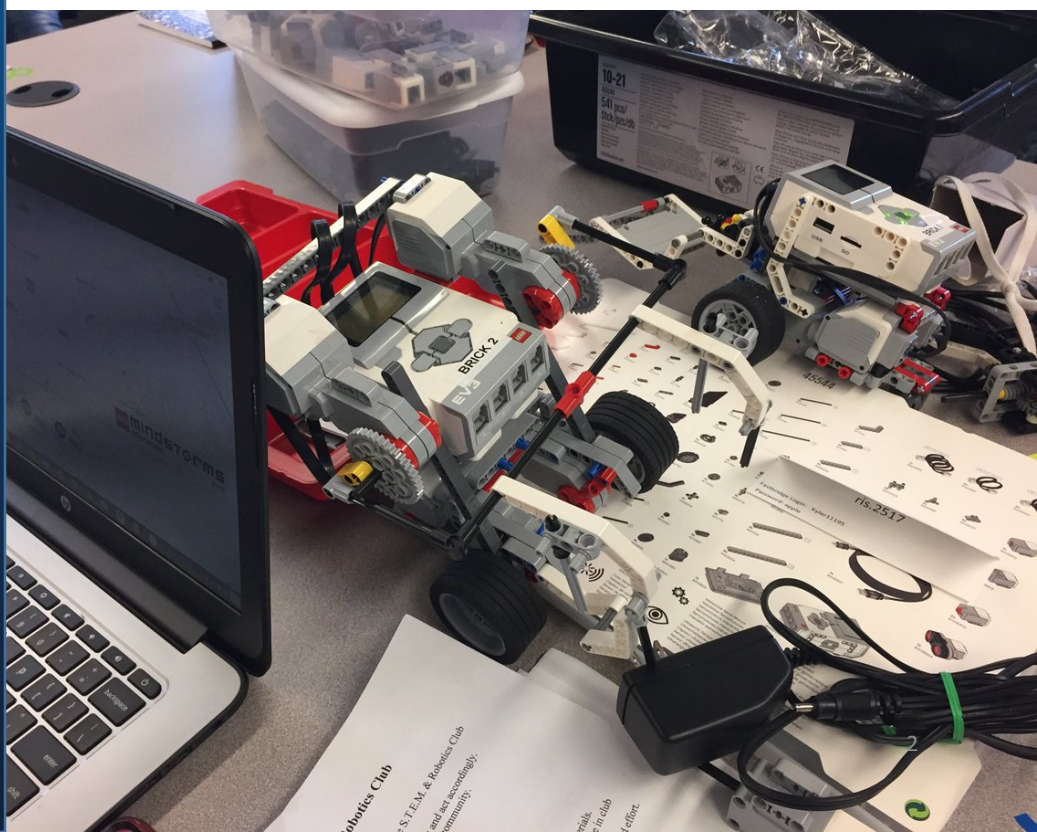
2020-2025

Rutland City Schools

6 Church Street

Rutland, VT 05701

Contents



Every Student

Every Day

District Information

District Mission

We empower students to be accomplished individuals and community members.

We Will

- Deliver a comprehensive and engaging curriculum for a diverse student body.
- Provide a safe and healthy environment that fosters mutual respect.
- Address the social and emotional needs of all students.

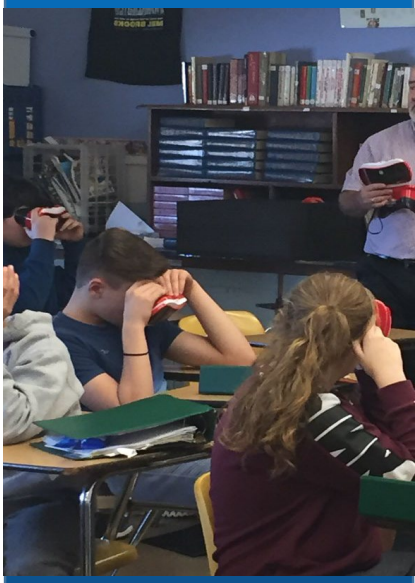
Students Will

Take responsibility for their education.

- Develop their intellectual, creative, social, emotional and physical abilities.
- Be productive members of the school and community.

District Vision

Rutland City Public Schools cultivates a passionate, diverse, and resilient community of critical thinkers who learn with purpose, create innovative and responsible solutions and lead lives of integrity.



Every Student Every Day

Background

RCPS continues to grow in the areas of preK-12 educational technology, assessment tools, data systems and network delivery of resources. We focus on important research in our work such as the International Society for Technology in Education (ISTE) Standards for Students, Teachers and Leaders as well as CoSN's Horizon Report and leadership resources. It is important to note that the State of Vermont AOE has adopted the ISTE Standards for Students as our State Technology Standards. They are cited in this report.

This plan incorporates both instructionally focused goals as well as supporting infrastructure recommendations that will allow students to experience more personalized learning.

Personalized learning can be accomplished through the use of digital tools which can identify and target students' instructional needs, support communication and collaboration, and provide a place for student interest and self-direction.
We will continue with our innovation and diffusion of technology and technological processes as the district's needs and demands change. This will be evident in our progress toward personalized learning and innovation with a focus on student agency.

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Accomplishments prior to 2020

There are many highlights since the previous tech plan was initiated in 2015.

- Deployment of district wide integrated wireless
- A guest network for students, teachers and presenters for Bring Your Own Device (BYOD)
- 1:1 deployment of Chromebook technology in grades 1-12
- Integration of the Google domain and Google products into instruction
- Summer Google Camps for teachers
- Creation of STEM spaces at RHS, RMS and RIS complete with 3D printers and maker supplies
- A Learning Studio at RHS with multiple cutting-edge presentation systems
- Greater access and more granular information about student performance
- Use of social media by administrators to connect with students, teachers, parents and the public
- Implementation of a Learning Management System (Google Classroom)
- Increased bandwidth for access to cloud resources

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ISTE Essential Conditions

Shared Vision

Proactive leadership develops a shared vision for educational technology among all education stakeholders, including teachers and support staff, school and district administrators, teacher educators, students, parents and the community.

Empowered Leaders

Stakeholders at every level are empowered to be leaders in effecting change.

Implementation Planning

All stakeholders follow a systematic plan aligned with a shared vision for school effectiveness and student learning through the infusion of Information and Communication Technology (ICT) and digital learning resources.

Consistent and Adequate Funding

Ongoing funding supports technology infrastructure, personnel, digital resources and staff development.

Equitable Access

All students, teachers, staff and school leaders have robust and reliable connectivity and access to current and emerging technologies and digital resources.

Skilled Personnel

Educators, support staff and other leaders are skilled in the selection and effective use of appropriate ICT resources.

Ongoing Professional Learning

Educators have ongoing access to technology-related professional learning plans and opportunities as well as dedicated time to practice and share ideas.

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ISTE Essential Conditions cont.

Technical Support

Educators and students have access to reliable assistance for maintaining, renewing and using ICT and digital learning resources.

Curriculum Framework

Content standards and related digital curriculum resources align with and support digital age learning and work.

Student-Centered Learning

Planning, teaching and assessment all center on the needs and abilities of the students.

Assessment and Evaluation

Teaching, learning, leadership and the use of ICT and digital resources are continually assessed and evaluated.

Engaged Communities

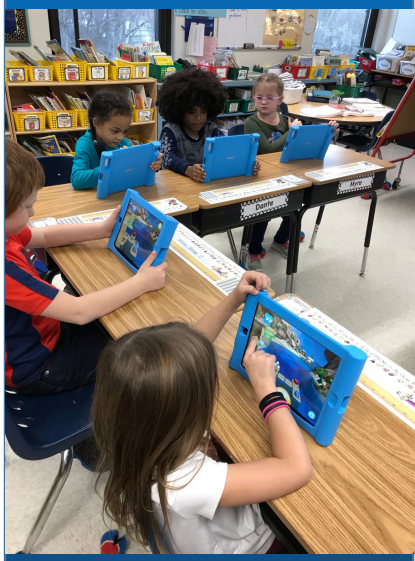
Leaders and educators develop and maintain partnerships and collaboration within the community to support and fund the use of ICT and digital learning resources.

Support Policies

Policies, financial plans, accountability measures and incentive structures support the use of ICT and other digital resources for both learning and district/school operations.

Supportive External Context

Policies and initiatives at the national, regional and local levels support schools and teacher preparation programs in the effective implementation of technology for achieving curriculum and learning technology (ICT) standards.



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ISTE Standards for Students

Empowered Learner
Students leverage technology to take an active role in choosing, achieving and demonstrating competency in their learning goals, informed by the learning sciences.

Digital Citizen
Students recognize the rights, responsibilities and opportunities of living, learning and working in an interconnected digital world, and they act and model in ways that are safe, legal and ethical.

Knowledge Constructor
Students critically curate a variety of resources using digital tools to construct knowledge, produce creative artifacts and make meaningful learning experiences for themselves and others.

Innovative Designer
Students use a variety of technologies within a design process to identify and solve problems by creating new, useful or imaginative solutions.

Computational Thinker
Students develop and employ strategies for understanding and solving problems in ways that leverage the power of technological methods to develop and test solutions.

Creative Communicator
Students communicate clearly and express themselves creatively for a variety of purposes using the platforms, tools, styles, formats and digital media appropriate to their goals.

Global Collaborator
Students use digital tools to broaden their perspectives and enrich their learning by collaborating with others and working effectively in teams locally and globally.

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ISTE Standards for Educators

Learner

Educators continually improve their practice by learning from and with others and exploring proven and promising practices that leverage technology to improve student learning.

Leader

Educators seek out opportunities for leadership to support student empowerment and success and to improve teaching and learning.

Citizen

Educators inspire students to positively contribute to and responsibly participate in the digital world.

Collaborator

Educators dedicate time to collaborate with both colleagues and students to improve practice, discover and share resources and ideas, and solve problems.

Designer

Educators design authentic, learner-driven activities and environments that recognize and accommodate learner variability.

Facilitator

Educators facilitate learning with technology to support student achievement of the ISTE Standards for Students.

Analyst

Educators understand and use data to drive their instruction and support students in achieving their learning goals.

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ISTE Standards for Leaders

Equity and Citizenship Advocate
Leaders use technology to increase equity, inclusion, and digital citizenship practices.

Visionary Planner
Leaders engage others in establishing a vision, strategic plan and ongoing evaluation cycle for transforming learning with technology.

Empowering Leader
Leaders create a culture where teachers and learners are empowered to use technology in innovative ways to enrich teaching and learning.

Systems Designer
Leaders build teams and systems to implement, sustain and continually improve the use of technology to support learning.

Connected Learner
Leaders model and promote continuous professional learning for themselves and others.

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Goal 1

Student Centered Personalized Learning

Technology is used to shift the focus of instruction from the teacher to the student. The student influences content, activities, materials, assessment, and the pace of learning. Educators design learning environments that are flexible and personalized through the use of technology.

Action	Plan	Key Questions	Evaluation	Professional Development
1.1 Design technology rich opportunities across all content areas and grade levels	Create greater consistency in the use of district approved technology across classrooms so that students experience equitable opportunities	How do students and teachers use technology to address the ISTE Standards? How are digital tools engaging students, enhancing and extending the learning environment? How are teachers planning together for consistency of experience across grade levels and content areas?	Key software usage statistics such as Google Classroom, and Google Suite Chromebook access data Student and teacher surveys Teacher plans and curriculum materials Principal walk-throughs and observations	Summer and afterschool professional development Integrationist collaboration in grades 3-9 Provide coaching opportunities to teachers Screencasts and YouTube video playlists Peer observation

Goal 1

Student Centered Personalized Learning continued

Action	Plan	Key Questions	Evaluation	Professional Development
1.1 continued	Increase the opportunities for STEAM/Maker Space integration into non-technology classes	How are teachers learning to utilize STEAM/Maker Spaces? Are students creating innovative STEAM/Maker projects and exhibiting agency in the process? Which teachers are using STEAM/Maker Space? Why?	Digital and physical evidence of student products Student and teacher surveys Logs, schedules and other evidence that spaces and resources are used Teacher plans and curriculum materials Principal walk-throughs and observations	Summer and afterschool professional development Integrationist collaboration in grades 3-9 Screencasts and YouTube video playlists Peer observation

Goal 1

Student Centered Personalized Learning continued

Action	Plan	Key Questions	Evaluation	Professional Development
1.2 Multi-tiered Systems of Support (MTSS)	Broaden the availability of assistive technology and supportive learning tools for struggling students	How does a teacher leverage Chromebooks, other devices and software to support all learners and meet them where they are? How many students are able to access add-ons, Read and Write for Google and other support mechanisms? How do we build a culture where teachers in Tier 1 explore and implement tools for struggling students?	Chromebook access data Software usage data Student and teacher surveys	Summer and afterschool professional development Integrationist collaboration in grades 3-9 Screencasts and YouTube video playlists Peer observation

Goal 1

Student Centered Personalized Learning continued

Action	Plan	Key Questions	Evaluation	Professional Development
1.3 Digital Citizenship and Positive Learning Environments	Teachers incorporate digital citizenship resources into instruction such as the ISTE Standards, Common Sense Media, etc. Teachers explore the use of technology as part of Positive Behavioral Interventions and Supports (PBIS) Examples include Classcraft, badging sites, Google Interlands	Do students feel like they have the expertise to navigate an increasingly digital world? Are students engaged in the PBIS model through gamification and technology?	Surveys of parents, teachers and students about digital citizenship Digital citizenship curriculum alignment documents PBIS and behavior data	Summer and afterschool professional development Integrationist collaboration in grades 3-9 Screencasts and YouTube video playlists Peer observation

Goal 1

Student Centered Personalized Learning continued

Action	Plan	Key Questions	Evaluation	Professional Development
1.4 Computer Science and Technology	Students learn computer programming, and computational thinking in an equitable manner	Is coding integrated into the content area through products like Scratch, BeeBots, and MSMakeCode? Are Bee Bots, Legos and programming software integrated equitably in K-3? Do students have opportunities to experience computer programming in grades 4-8 beyond the Hour of Code? Are technology teachers in 9-12 designing courses using the CS Framework?	Digital and physical evidence of student usage Student and teacher surveys Teacher plans and curriculum materials Principal walk-throughs and observations	Summer and afterschool professional development and coursework Screencasts and YouTube video playlists Peer observation

Goal 1

Student Centered Personalized Learning continued

Action	Plan	Key Questions	Evaluation	Professional Development
1.5 Personalized Learning Plans and Personalized Learning Experiences	Design personalized learning experiences using digital resources including a learning management system In grades 7-12 used Google products to develop personalized learning plans	How many teachers are using a learning management system? Is there evidence of student agency in product and process? How are learning management systems used for social learning? Local collaboration? Global collaboration? Do students create personalized learning plans that allow for reflection and growth? How do students demonstrate innovation as part of personalized learning?	Surveys of parents, teachers and students Google Classroom data Google Suite of Tools data	Summer and afterschool professional development Integrationist collaboration in grades 3-9 Screencasts and YouTube video playlists Peer observation

Goal 2

Leadership in a Student Centered Learning Environment

As 21st Century Leaders, school administrators will demonstrate their skills in a variety of settings and for different purposes such as communication, collaboration, Data-Driven Decision-Making (DDDM), curriculum design, productivity and teacher support, growth and evaluation. They will deploy building technology with an emphasis on student centered and personalized learning.

Action	Plan	Key Questions	Evaluation	Professional Development
2.1 Model the use of technology professionally	Utilize technology for community and parent engagement	How many school leaders are using technology to keep parents and employees apprised of information regarding their student(s)? How? Products? What frequency? Purpose?	IC portal, Remind, Messenger data Website Principals have at least one appropriate technology goal in their professional learning plan	Summer professional learning and conferences Cabinet meetings

Goal 2

Leadership in a Student Centered Learning Environment continued

Action	Plan	Key Questions	Evaluation	Professional Development
2.2. Principals plan and deploy technology collaboratively with the Technology Director	Develop building based technology goals that align with district initiatives and plans Budget and manage technology existing outside the district budget, at the building level (projectors, carts, some software)	Are principals planning for 21st Century Classrooms and spaces? Do principals design Continuous Improvement Plans (CIP) that align with language in the technology plan? Do principals have a replacement plan for non-computer technology in their budget?	CIP and other planning documents Walk-throughs by Technology Director Advanced presentation devices per teacher	n/a

Goal 2

Leadership in a Student Centered Learning Environment continued

Action	Plan	Key Questions	Evaluation	Professional Development
2.3 Supervision and evaluation of technology integration	Develop a system for evaluating technology during observation, such as SAMR or the T3 Framework Provide digital citizenship training for staff	Do teachers have technology goals in their evaluative plan? Is time allotted for digital citizenship training every year?	Teacher evaluations include reference and feedback on technology in the classroom Digital citizenship standards from ISTE in Curriculum Digital citizenship training	Summer and afterschool professional development Integrationist collaboration in grades 3-9 Screencasts and YouTube video playlists Peer observation

Goal 3

Infrastructure for Efficiency, Access, Privacy and Security

Students are at the center of our values and decision making with a goal of providing an efficient, cost effective environment which supports continuous improvement. Technology serves as an important force in personalizing learning, which is measured by the knowledge and skills students demonstrate.

Action	Plan	Key Questions	Evaluation	Professional Development
3.1 Design technology rich environments for student-centered personalized learning	Continue an approximate 1:1 device deployment for teachers and students Provide opportunities for students to take devices home	Does the plan adjust as technology shifts to more cloud based software? Is there adequate funding? Are the devices appropriate? Are students borrowing laptops from the library? Do students have Internet access at home?	Survey families, students and teachers Devices-Average age of student and teacher machines Computers per employee Computers per student IT spending per student IT spending as a % of the budget Library Chromebook checkout logs	Technical staff attend appropriate trainings and conferences

Goal 3

Infrastructure for Efficiency , Access, Privacy and Security continued

Action	Plan	Key Questions	Evaluation	Professional Development
3.2 Implement a multi-year plan that supports user access, redundancy and network security	Annual review of upgrade plan for replacement of hardware, management tools and security tools Maintain an up to date network diagram Backups offsite	Does the plan adjust as technology shifts to more cloud based software? Has the plan been reviewed by external auditors? Are we following best practices and staying current?	External Technology Audit for Vulnerability, Client Risk and Network Management (2016 and again in 2022) Network Key Performance Indicators (KPI) HelpDesk KPIs	Technical staff attend appropriate trainings and conferences Cross training of essential network tasks