District Learning Technology Plan Regional School Unit 16

2017-2020



Date Approved by School Committee: June 12, 2017

Plan Authors:

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Schools Affected by the Plan:

Elm Street School, Mechanic Falls, ME Minot Consolidated School, Minot, ME Poland Community School, Poland, ME Bruce M. Whittier Middle School, Poland, ME Poland Regional High School, Poland, ME

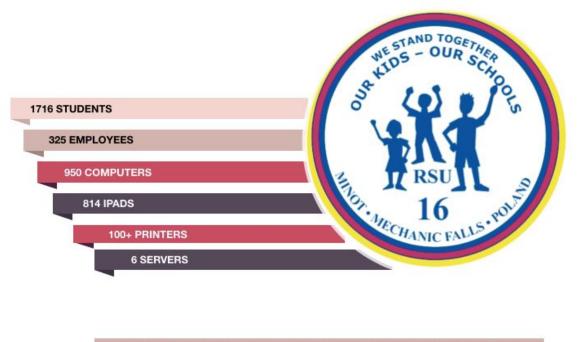
Section I: Introduction

RSU 16 is a rural school district covering three towns of 1700+ students in grades Pre-K through 12. The towns of Poland, Minot and Mechanics Falls became a consolidated system on July 1, 2009 forming Regional School Unit 16. Since 2009, our IT Department covers (5) schools network infrastructure and technology equipment as well as central office and adult ed, financial software, transportation system software, food services, and communications including, telephone systems, cell phones plans, email, student information systems and library automation. In September 2015 we added a Data Support Specialist to our IT staff to develop reporting methods that allow for data driven decision making.

As a result of consolidation our strategic plan ensures a high level of collaboration and a shared vision. Access to technology has always been a commitment in the district. We have a one-to-one program in grades 7-12 and continue to work on equitable access to technology resources in grades Pre-K through 6.

Current Status

School	Enrollment	Student Devices
Elm Street School	290	135
Minot Consolidated School	256	139
Poland Community School	458	240
Bruce Whittier Middle School	232	232
Poland Regional High School	469	469



Section II: Shared Vision for Learning:

RSU 16's mission is to prepare and support all students within a culture of excellence to do their best and to be their best, so that each can be a successful contributing citizen, able to adapt to change and to successfully respond to the future.

Our educational goal is to provide all students with access to education which will assist them in:

- actively engaging, connecting, and developing a passion for active learning.
- becoming proficient in reading, writing, mathematics, and critical thinking.
- being prepared for the next level of education or becoming career ready.
- successfully attaining the skills, habits, and proficiencies required of today's workforce.

In our strategic plan, section A, Equitable Opportunities for Students to Succeed (A.1.a) specifically cites technology.

A.1. a) Update Technology

- Align goals and budget to enhance all schools' technology according to the Technology Plan.
- Invest in resources that improve the RSU's ability to communicate effectively with all staff, parents and students.

• Train staff and students to use technology as a tool of teaching, learning, and communication. It is important to note that the use of technology is woven throughout our entire district strategic plan. These areas include: supporting a transparent and evolving curriculum, supporting effective instructional practices - especially those with strong research support - and providing quality, differentiated professional development.

Section III: Shared Leadership:

Applying Technology to the Vision:

In the 21st century, understanding and using technology is an integral part of daily life. It is the district's responsibility to prepare students for *their* future. The classroom is the primary location where preparation will occur; therefore, every classroom must be equipped with technologies to support teaching and learning. Every teacher must be knowledgeable and skilled in the use of these technologies to be used in daily instruction. When integrated into instruction, technology will support teaching and learning by:

- addressing learning styles,
- accommodating individual learning rates,
- encouraging cooperative, collaborative learning,
- helping students take responsibility for their learning,
- providing the means to participate and communicate globally, and
- improving academic achievement.

In a learner-centered classroom, the teacher serves as a facilitator of instruction, mentor, and coach. Technology will provide the student's academic history and ways to monitor learning progress. Teachers have the data and information needed to individualize instruction and assessment. Through technology, teachers and students will access materials, services, and networks throughout the state, nation, and world. Technology does not replace the teacher, but rather supports and enhances the educational process.

A few examples include using iMovie in groups and collaborating on content, video shots, and all aspect of the creation of the video. In a 6th grade classroom students are encouraged to work together to figure out not only how it works but collaborate on how best to present their content. In the high school video courses, many projects are whole classroom based, where each student in the class contributes to the end product.

There are several ways that technology supports differentiating in the classroom such as students using IXL and Jumprope where they can monitor their own progress. NWEA data integrates with Kahn Academy so standards that need to be addressed are identified.

Student access to the internet, email, Skype, and Google Apps for Education allows students to participate with their peers and others globally. We have Skype sessions with authors, email pen pals and a distinct connection with a school in Guatemala through Safe Passage where a group of our students travel every other year to work in a school with children whose families live around the city garbage dump.

Planning Professional Learning Opportunities

Staff will receive training and ongoing support to expand their knowledge, skill, and confidence in using technology in teaching and learning, with the focus on improving student learning rather than how to use the technology. We want to prepare students for life in a digital world. Technology professional development is administered throughout the school year and is led by both Technology staff and academic teachers. We are also excited by the growing number of teachers leading professional development sessions for their peers. One format we use is Expert Down the Hall. Teachers work with building principal and/or Assistant Superintendent to create technology sessions which can be attended by other teachers according to needs or interest during our early release Wednesday. Teachers need professional development time to be introduced to new technology tools to feel empowered to implement these approaches in their classroom. Equally important is time to discuss with colleagues the impact or concerns of using approaches.

Selection of Devices, Apps, Programs, and Other Tools

Our Administrative Team and Technology Director make decisions regarding the selection of devices and software based on what is needed to support student learning and implementation of curriculum.

With the expiration of our MLTI contract in June 2017, the team had to determine what to do moving forward with the high school technology program. After extensive research and collaborating with other school districts it was narrowed down to two options; iPads or Chromebooks. To guide our final decision, we purchased a brand new iPad and Chromebook and kept them in a high school Humanities classroom for a day so the students could experiment with both. We also brought them around to the teacher offices for the same purpose.

While price was a factor, it was not the deciding factor in our decision to implement Chromebooks and G Suite (formerly Google Apps for Education) domain next year. The shift to Chromebooks will allow us to transition to gmail, Google Classroom and other Google opportunities in support of curriculum.

Teachers utilize a variety of resources before selecting apps to use. In addition to colleague recommendations teachers read reviews and educational blogs, try free versions and access the International Literacy Association for resources and recommendations.

CASE Score	Beginning Emerging Proficient	nt 💿 Advanced 🔹 Exemplary	Show More 🕣
Classroom	d 🔊 Up since last data collection	Skills	Environment
Use of the 4Cs Teachers	Access at School Teachers	Foundational Teachers	The 3Ps Support
Students Digital Citizenship	Students Access at Home	Students Online	Professional Learning Beliefs
Teachers	Teachers	Teachers	
Assessment Assistive Technology		Multimedia Teachers Students	

Section IV: District Learning Technology Data and Action Plan:

According to our BrightBytes survey results (grades 7 - 12), shown above, the overall score for RSU 16 is **"Advanced"**. RSU 16 scores "Exemplary" in the area of access to devices and technology resources, "Advanced" in the level of teacher and student technology skills and the overall learning environment and, "Proficient" in the use of technology in the classroom.

The best way to help students master the skills of **Communication, Collaboration, Critical Thinking, and Creativity** is to improve how we teach. To expand the use of the 4 Cs in our classroom, we need to improve the use of technology as an appropriate vehicle for facilitating the process of learning. It is not about learning how to use technology or even teaching with technology tools, it is about students creating and constructing with technology.

Our second highest priority area according to the BrightBytes data is Professional Learning. Our teachers expressed interest in professional development in the the following topics: multimedia skills (55%), online tools for critical thinking (53%), and online collaboration (50%). Regarding online collaboration, 50% of our teachers never ask students to collaborate online with classmates and 46% of our students say they never collaborate with their teachers.

Both the middle school and high school have readiness to improve Professional Learning based on access to school files, technology for learning, and a high interest in online collaboration.

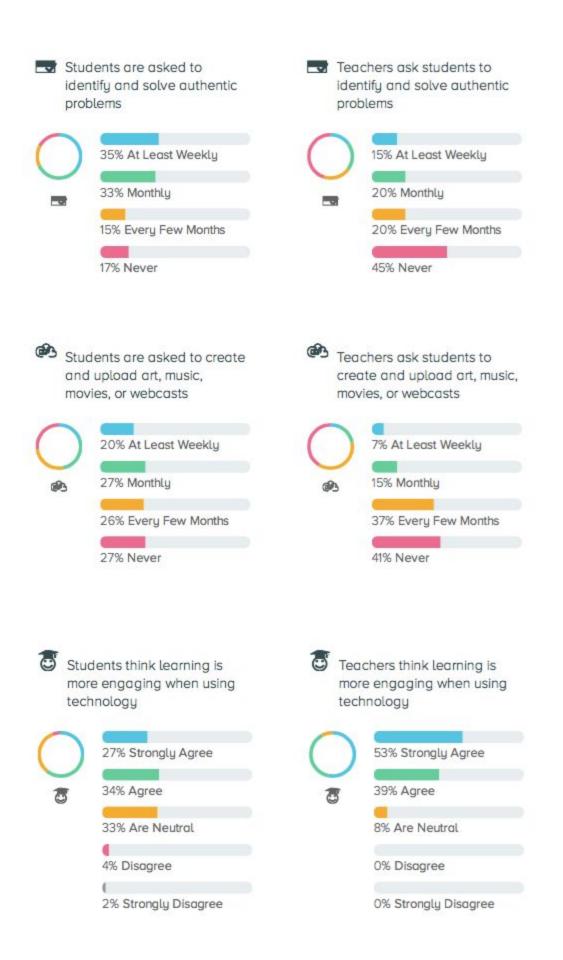
Section IV, Part A: Student Learning & Teacher Practice Results of the Data

Student-reported frequency of computer use in the classroom 89% Almost Daily 7% Weekly 1% Monthly 1% Every Few Months 3% Never

Teacher-reported frequency of student computer use in the classroom



	ts are asked to collect alyze data	Teachers ask students to collect and analyze data
4	5% At Least Weekly	20% At Least Weekly
2	9% Monthly	30% Monthly
16	% Every Few Months	15% Every Few Months
99	% Never	35% Never
	ts are asked to	Teachers ask students to
conduc perform	ts are asked to a measurements 6% At Least Weekly	Teachers ask students to conduct experiments or perform measurements
conduc perform	t experiments or measurements	conduct experiments or perform measurements
conduc perform 30	a measurements 6% At Least Weekly	conduct experiments or perform measurements



Students are asked to create animations, demonstrations, models, or simulations

0	11% At Least Weekly
	19% Monthly
	17% Every Few Months
	52% Never

Teachers ask students to create animations, demonstrations, models, or simulations



Teachers report that the quality of support for problems disrupting instruction is



C		
38% Excellent		
43% Above Average		
18% Average		
3% Below Average		
0% Poor		
0% None		

Teachers believe that computers and technology enhance daily life

	55% Strongly Agree	
5	39% Agree	
	5% Are Neutral	
	0% Disagree	
	0% Strongly Disagree	

Implications Part A: Student Learning & Teacher Practice

Both students (89%) and teachers (78%) are reporting almost daily computer use in the classroom.

Both students (52%) and teachers (66%) agree that students are never asked to create animations, demonstrations, models, or simulations. We believe this may be due to lack of teacher comfort and complexity of the programs to learn and that these types of assignments may be more geared towards elective courses. Also given the time requirements for these types of projects they are likely done less frequently than other types of lessons.

A higher percentage of students (67%) than teachers (25%) reported that they are asked to conduct experiments or perform measurements on a weekly or monthly basis. We feel that this is a result of students and teachers not sharing a common definition of terms used as described above.

33% of our students are neutral in answering if they think learning is more engaging when using technology. 61% of our students strongly agree or agree. Compared to the teachers, only 8% were neutral and 92% agree or strongly agree. We feel that this is a result of technology being no longer new or novel for students and due to their experience at home and school, they may want to choose to do the work in a different app or take a different approach.

Interventions and Next Steps	Person/Position Responsible	Timeline	Evidence
Update and move digital citizenship lessons into RubiconAtlas	Director of Curriculum, Instruction, and Assessment Technology Team	2017-2018 Update lessons 2018-2019 Complete	Digital Citizenship curriculum in RubiconAtlas
Coach teachers to develop learning projects higher on the *SAMR (Substitution, Augmentation, Modification and Redefinition) level	Director of Curriculum, Instruction, and Assessment Technology Team	Ongoing	Identifying and sharing exemplars of lessons/units demonstrating higher SAMR levels

	Task Force Teams		create animations, demonstrations, models, or simulations.
Integrate middle and high school Math and Science technology integration and STEM activities	Director of Curriculum, Instruction, and Assessment Science Task Force Classroom teachers	Ongoing	Activities to create animations, demonstrations, models, or simulations.

*SAMR - A technology integration model that helps teachers design and deliver units and lessons that are technology-infused. The four levels of technology integration encourage teachers to continue progressing through each level, with the goal of the teacher consistently integrating technology at the highest level. The four levels of the SAMR model are as follows:

Substitution - technology is substituted as a tool with no functional change. Example: Using Google Earth instead of an atlas to locate a place.

Augmentation - technology is still a substitute but there is some functional improvement. Example: Using Google Earth to measure the distance between two places.

Modification - technology allows the teacher to significantly redesign tasks. Example: Using Google Earth 360 to research places.

Redefinition - technology allows the students to complete tasks that are not possible without it. Example: Students create a narrated Google Earth tour and share online.

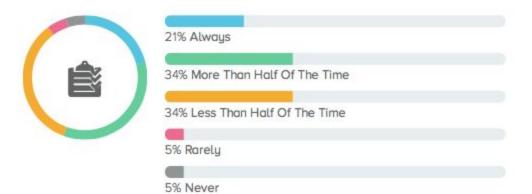
Section IV, Part B: Leadership for Learning Through Technology

Results of the Data

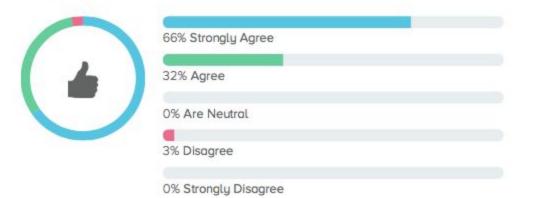
 ${\bf Q}$ Teachers discuss technology use during classroom observations or visits



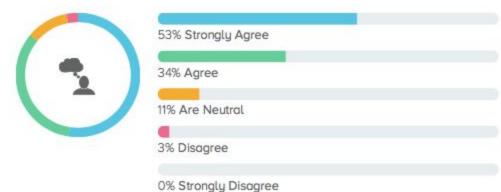
Teachers discuss technology use during evaluations



Teachers believe the school encourages technology use for teaching and learning



Teachers want to learn more about effective technology use for teaching and learning



Students believe the school encourages technology use for teaching and learning

-	31% Strongly Agree
(👍)	43% Agree
	21% Are Neutral
	4% Disagree
	1% Strongly Disagree

Students believe technology use in class can enhance learning

	38% Strongly Agree
5	32% Agree
	19% Are Neutral
	7% Disagree
	4% Strongly Disagree

Implications Part B: Leadership for Learning Through Technology

Most respondents, 74% students and 98% teachers, agreed or strongly agreed that their school encourages technology use for teaching and learning. To be able to continue encouraging technology use in the classroom, we need to provide professional development to assist implementation and clear definition of what can be achieved through technology within content areas, while also making connections to core standandards/goals.

Technology is discussed during observations and evaluations. This means our district is not only encouraging technology use in the classroom, but it is also a consideration during observations and evaluations.

87% of our teachers want to learn more about effective technology use for teaching and learning. This is a high priority as 70% of our students believe technology use in class can enhance learning.

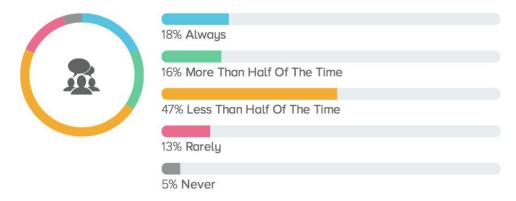
Interventions and Next Steps	Person/Position Responsible	Timeline	Evidence
Provide BrightBytes survey results to the District	Technology Committee	Ongoing. At least 2 meetings per year.	Collected Data District Technology Plan

Technology Committee to review, prioritize needs, and create district action plan	Director of Curriculum, Instruction, and Assessment Technology Director		Early Release Workshop Day Agenda
Showcase student exemplars of effective use of technology	Director of Curriculum, Instruction, and Assessment A-Team Building Leadership Team	Ongoing	Early Release Wednesday agenda, Workshop Day agenda, Summer professional learning
Provide teachers opportunities to learn more about effectively using technology tied to curriculum	A-Team Building Leadership	Ongoing	Expert Down the Hall, Early release Wednesday, technology workshops, ACTEM Conference, RSU 16 Technology Integrator

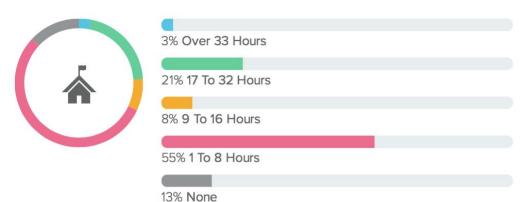
Section IV, Part C: Professional Learning

Results of the Data

Teachers discuss technology use during department or grade-level team meetings



Teacher-reported time spent per year participating in school-sponsored PD



Teacher-reported time spent per year participating in non-schoolsponsored formal PD

0% Over 33 Hours
5% 17 To 32 Hours
11% 9 To 16 Hours
39% 1 To 8 Hours
45% None

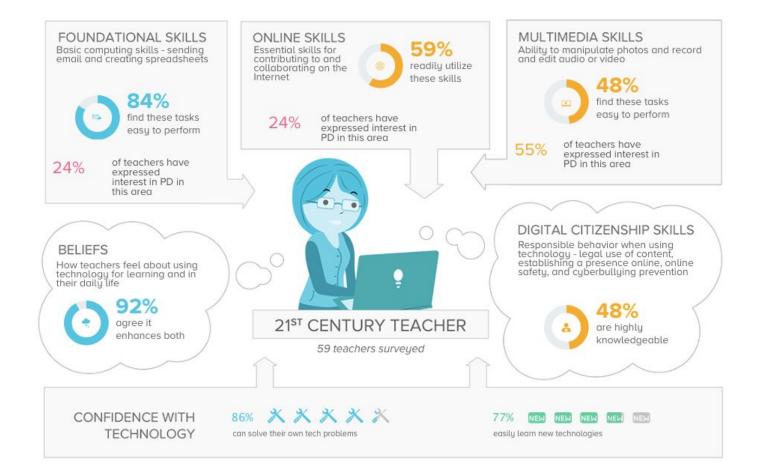
Teacher-reported time spent per year participating in non-schoolsponsored informal PD

0% Over 33 Hours
3% 17 To 32 Hours
13% 9 To 16 Hours
37% 1 To 8 Hours
47% None

Implications Part C: Professional Learning

Technology Professional Learning is an area where the BrightBytes survey data suggests RSU 16 is, "Emerging."

Technology will not make a difference if educators do not know how to leverage it for deeper learning. Ongoing professional learning provides educators with the learning they need to use technology purposefully and successfully. When educators have adequate time to build collaborative networks with each other, their ability to apply digital tools in the classroom grows exponentially. Almost half of our teachers are not seeking formal or informal professional development opportunities outside of the district.



Interventions and Next Steps	Person/Position Responsible	Timeline	Evidence
Work with the Task Force Committees to include technology in meaningful ways to deepen and enrich learning and assessments	Director of Curriculum, Instruction, and Assessment Task Force Committees	Ongoing	RubiconAtlas maps and unit calendar
Offer regular diverse professional learning opportunities	Director of Curriculum, Instruction, and Assessment A-Team Building Leadership Team	Ongoing	Send a team to ACTEM conference, Professional development options that focus on technology will be in at least 25% of district PD
Provide Professional Development opportunities based on educators' needs	Director of Curriculum, Instruction, and Assessment	Ongoing	Informal such as webinars, personalized online options. Formal such as Early

	A-Team Building Leadership Team Teacher Voice		Release, workshop days, and conferences
Develop incentive structures to encourage participation in non-school sponsored PD	Director of Curriculum, Instruction, and Assessment A-Team	Ongoing	Incentive structure Raffle (flash drives etc)
Help educators implement new knowledge and skills	Director of Curriculum, Instruction, and Assessment School Principals Building Leadership Team	Ongoing	Gain School Board support for a Technology Integrator. Plan and Implement a Summer Technology Institute Technology Integrator

Section IV, Part D: Learning-Focused Access

Results of the Data

The perceived quality of internet speed as reported by teachers is

30% Excellent
33% Above Average
35% Average
3% Below Average
0% Poor
0% N/A

Student Access to Internet and Wireless at Home



Teachers report that school filters prevent access to websites needed for classes



13% Never 53% Rarely

33% Less Than Half Of The Time

(3% More Than Half Of The Time

0% All Of The Time

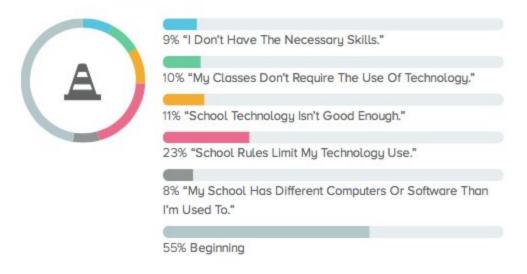
X Teachers report that the quality of support for hardware repair is



Student-reported membership in student groups that provide technology support at school



Students believe the following obstacles prevent their use of technology at school



Implications Part D: Learning-Focused Access

Over the last eight years, RSU 16 has continuously improved access to technology in our classrooms by updating the networking infrastructure to support teachers and student learning.

The data generally shows positive information. Student internet access at home is 96%. In our district, teachers believe that internet access in the home (96% of our students have access to internet and wireless at home) provides students the opportunity to show their parents what they are learning at school. It also provides teachers and parents an open gateway for communication.

We are working toward improving access across all schools for grades 3-6 and improving technology access in grades K-2. Improved access to technology for grades K-2 and 3-6 will allow teaching of the basic skills and functions at a younger age, so as students progress the technology can be used more seamlessly within the curriculum.

We receive internet services from Network Maine via Time Warner. All the schools in our district have a 100 Mbps connection allowing for robust and reliable online learning. Network Maine also provides prompt support for any issues that arise and is key to our educational programming.

Interventions and Next Steps	Person/Position Responsible	Timeline	Evidence
Replace existing technology in grades 3 - 6.	Technology Department Budget	Ongoing	Student Classroom Access and Use
Replace existing technology in grades K- 3.	Technology Department Budget	Ongoing	Student Classroom Access and Use
Replace existing technology support equipment as needed. (Examples: Projectors, AppleTV, etc)	Technology Department Budget	Ongoing, as needed by 2019 - 2020.	New technology equipment
Integrate technology effectively into curricula and instruction	Teachers Technology Integrator	Ongoing, as needed by 2019 - 2020.	Technology Integrator Professional Development
	Director of Curriculum, Instruction, and Assessment		

http://www.networkmaine.net/

Section V: Responsible Use:

Instruction

To educate students in all of our schools about responsible use, our teachers utilize materials from Common Sense Media's Internet Safety/Digital Citizenship curriculum. All schools are asked to provide instruction from this curriculum throughout the school year. All schools have a section in the handbooks to familiarize parents and students with the concepts in the Common Sense Media curriculum, including expectations for responsible use, cyberbullying, policy, and consequences for not following the policy.

We are teaching Digital Citizenship at all grade levels that includes appropriate online behaviors, safety, online bullying, and informational literacy. Organizations such as Advocates for Children or Sexual Assault and Prevention and Response (SAPR) educate elementary children including lessons on how to be safe online.

Policy

Appropriate Use Policies and policies related to discipline and corrective measures for inappropriate use

http://www.rsu16.org/ schoolboard/RSU16%20policies/RSU16%20policies/IJNDB-StudentComputerUse.pdf

http://www.rsu16.org/_schoolboard/RSU16%20policies/RSU16%20policies/IJNDB-R_Student_Computer_Use_Rules.pdf http://www.rsu16.org/_schoolboard/RSU16%20policies/RSU16%20policies/IJNDB-C-1%20%20student%20signs.pdf http://www.rsu16.org/_schoolboard/RSU16%20policies/RSU16%20policies/IJND%20Web%20Site%20Policy%20NEW.pdf

Filtering and Firewalls

RSU 16 is in full compliance with the Children's Internet Protection Act (CIPA) and the Protecting Children in the 21st Century Act. We have one firewall that all internet traffic travels through for all schools in the district. Internet filtering software is applied to all schools. Teachers supervise student use of technology and monitor the online activities of minors.

Section VI: Certifications:

By signing below, the superintendent is acknowledging the following:

- The district has completed one Technology Access Survey per school in the district
- The information submitted in the Technology Access Survey is accurate
- The Learning Technology Plan has been approved by the SAU's school committee
- The district is committing to work the plan (recognizing that plans do evolve over time).

3162, RSU16 SAU MEDMS ID # & Name tmeserve@rsu16.org Superintendent Email

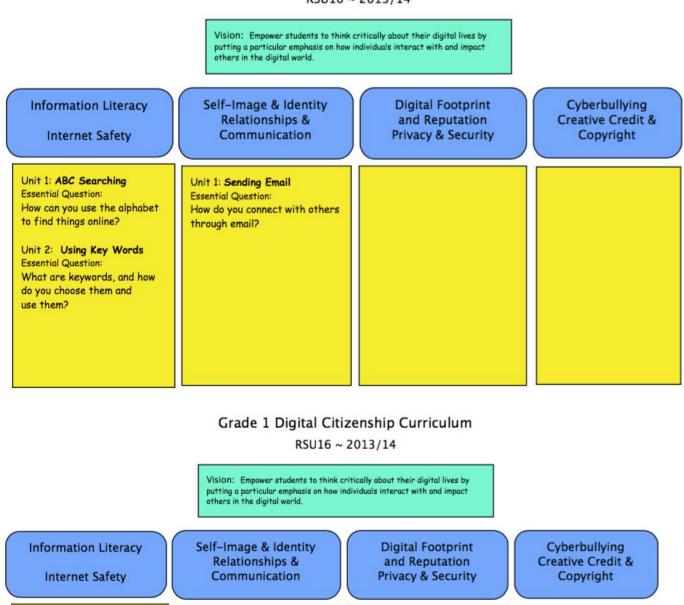
Superintendent Signature

Date

Appendix

Grade K Digital Citizenship Curriculum

RSU16 ~ 2013/14



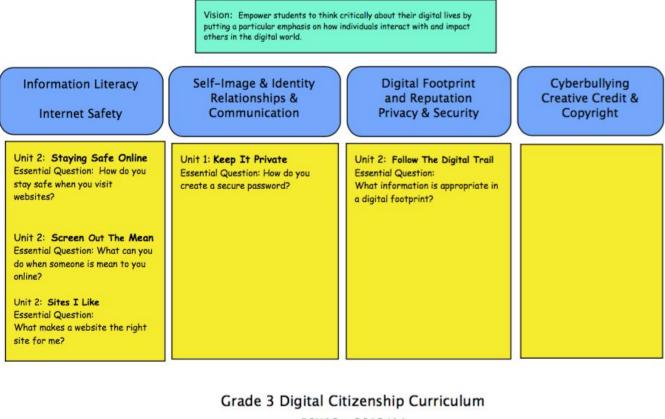
Unit 3: **My Online Community** Essential Question: How does the Internet connect you to others?

Unit 1: Going Places Safely Essential Question: How do I go places safely on the computer? Unit 1: My Creative Work

Essential Question: How can you give credit to your own creative work?

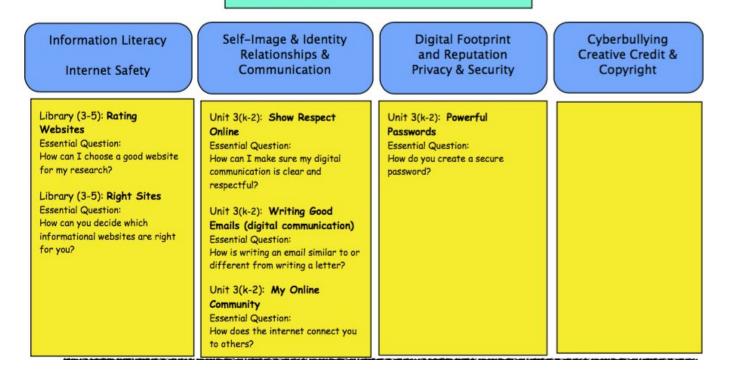
Grade 2 Digital Citizenship Curriculum

RSU16 ~ 2013/14



RSU16 ~ 2013/14

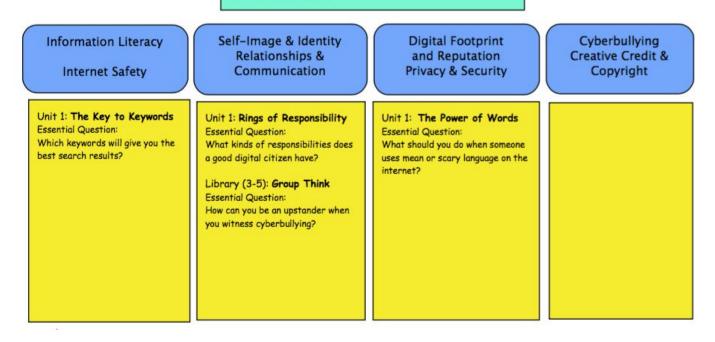
Vision: Empower students to think critically about their digital lives by putting a particular emphasis on how individuals interact with and impact others in the digital world.



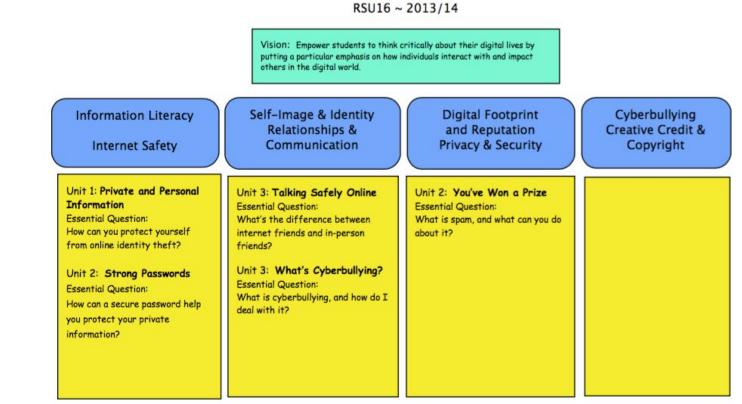
Grade 4 Digital Citizenship Curriculum

RSU16 ~ 2013/14

Vision: Empower students to think critically about their digital lives by putting a particular emphasis on how individuals interact with and impact others in the digital world.

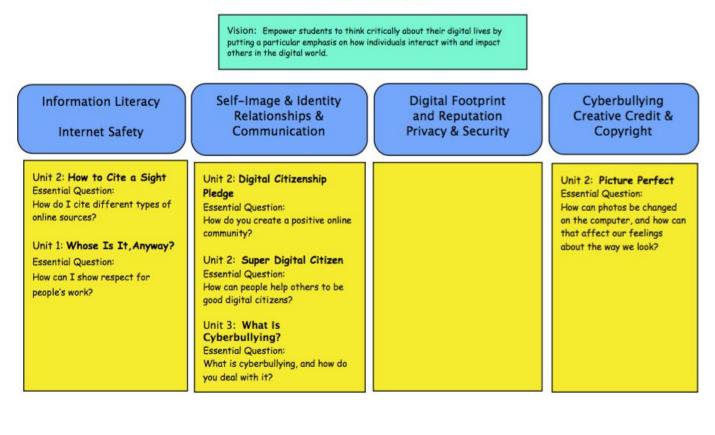


Grade 5 Digital Citizenship Curriculum



Grade 6 Digital Citizenship Curriculum

RSU16 ~ 2013/14



	Grade 7 Digital Citizenship Curriculum Lesson Checklist	Grade 8 Digital Citizenship Curriculu Lesson Checklist	IM_
1.	Unit 1: Digital Life 101 □ Day 1 □ Day 2	 Unit 1: Every Waking Minute? Day 1 Day 2 Day 3 	
2.	Unit 2: Which Me Should I Be? □ Day 1 □ Day 2	 2. Unit 2: My Media □ Day 1 □ Day 2 	
3.	Stop Cyberbullying □ Self Assessment & Reflection	 Stop Cyberbullying □ Self Assessment & Reflection 	
4.	Cyberbullying: Be Upstanding Day 1 Day 2	 4. Unit 2: Safe Online Talk □ Day 1 □ Day 2 	
5.	Unit 3: Cyberbullying: Crossing the Line □ Day 1 □ Day 2	 5. Unit 3: Reality of Digital Drama □ Day 1 □ Day 2 	
6.	Unit 1: Managing Your Digital Footprint Day 1 Day 2 Day 3	 6. Unit 3: Trillion Dollar Footprint □ Day 1 □ Day 2 □ Day 3 	
7.	Bonnie: Top Secret Day 1 Day 2	7. Bonnie: Secret Sharer Day 1	

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High School Digital Citizenship

This is a 4 year high school course concerning the appropriate use of technology for students at Poland Regional High School delivered via our Roundtable advisory groups that meet daily for 30 minutes. The curriculum is based on Common Sense Media and is located in iTunesU at the link below. https://itunes.apple.com/us/course/digital-citizenship-curriculum-prhs/id694044135

It is also tied to the PRHS School-wide Ethical Use of Technology Rubric below. http://www.rsu16.org/PRHS/images/SWrubricimages/EthicalUseOfTechnology.jpg