MUSCOGEE COUNTY SCHOOL DISTRICT

Technology Plan 2017-2020

Dr. David Lewis
Superintendent

Ronald Pleasant
Chief Information Officer

MUSCOGEE COUNTY SCHOOL DISTRICT

Muscogee County School District
At a Glance
2016-2017

Student Enrollment		31,683
Elementary		
	PreK - 5th Campuses	9
	K - 5th Campuses	23
	Total Enrolled Students	15,932
Middle		
	6th - 8th Campuses	12
	Total Enrolled Students	6,717
High		
	9th - 12th Campuses	10
	Total Enrolled Students	8,786
Non-Traditional Sites		4
	Total Enrolled Students	248
Ethnic Distribution of Students		
	African-American	58.27%
	Caucasian	25.25%
	Hispanic	6.83%
	Multiracial	6.34%
	Asian/American Indian/Alaskan/Other	2.94%
District Information		
	Students Eligible for Free & Reduced Lunch	75.13%
	Graduating Students from 2015	1,874

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Creating "WE"

Mission
To inspire and equip all students to achieve unlimited potential.
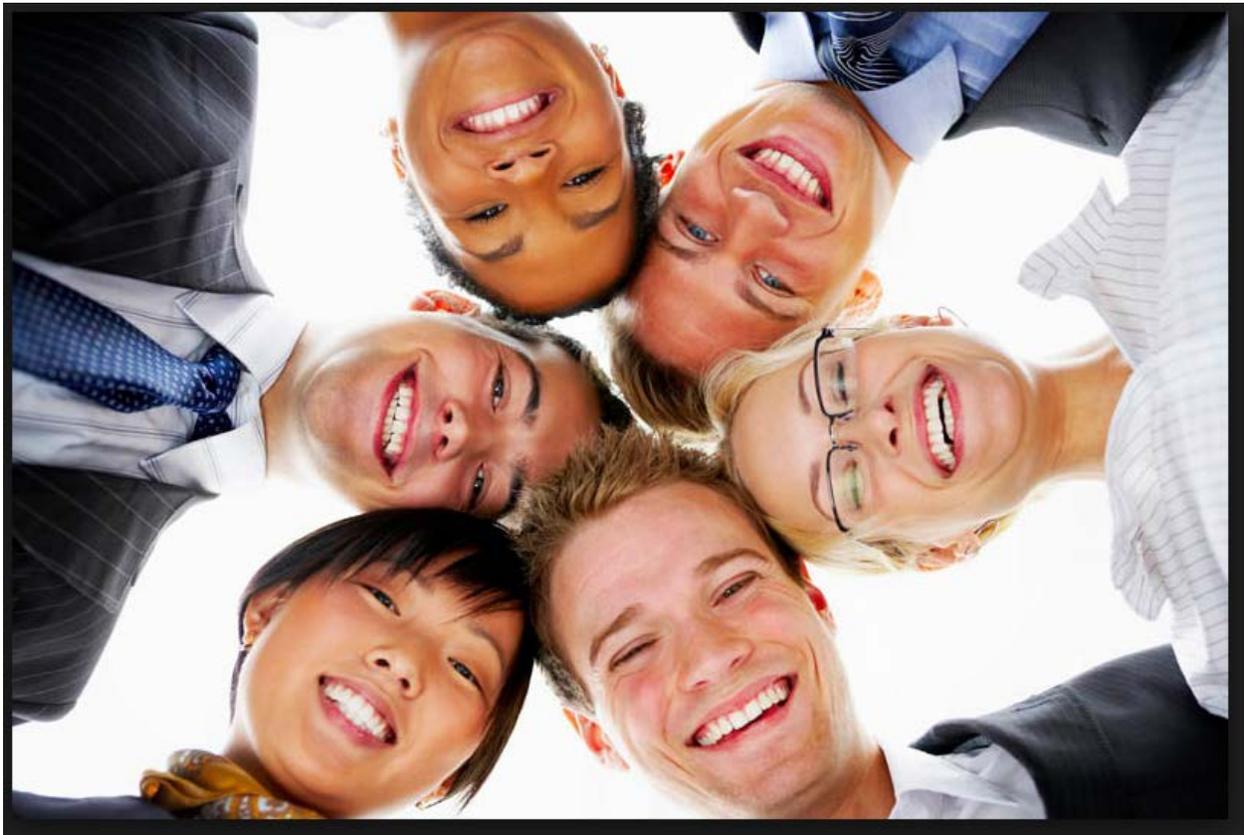
Vision
The MCSD is a beacon of educational excellence where all are known, valued and inspired.

Values
MCSD fosters a healthy organization where…

- <u>WE</u> embrace equity and diversity
- <u>WE</u> hold ourselves and others to the same high standards
- <u>WE</u> commit to continuous learning and improvement
- <u>WE</u> treat everyone with dignity and respect

…as <u>WE</u> serve the needs of others

Muscogee County Quick Facts

The Division of Information Services (DIS) includes two departments; Enterprise Technologies and Technology Learning and Support. Enterprise Technologies includes four teams: Data Center Operations, Enterprise Resource Planning, Web Development, and Student Information Systems. Technology Learning and Support includes five teams: Customer Support, Technology Support Services, Technology Academy, Digital Learning Integration Specialists, and Regional Technology Integration Specialists.

DIS provides support to more than 25,000 computers in over 60 locations including schools, programs, and administrative offices. All traditional classrooms include interactive flat panels or white boards with mounted data projectors, and audio enhanced sound systems. In addition to classroom computers and mobile labs, each high school has a minimum standard of four instructional labs, each middle school has a minimum standard of three instructional labs, and all elementary schools have a minimum standard of two instructional labs. These instructional labs have 28-36 desktop computers as well as an interactive white board or flat panel and enhanced audio system.

Figures 1-3 give a glimpse of the resources available to our teachers and students as reported in our most recent Georgia State Inventory submission.
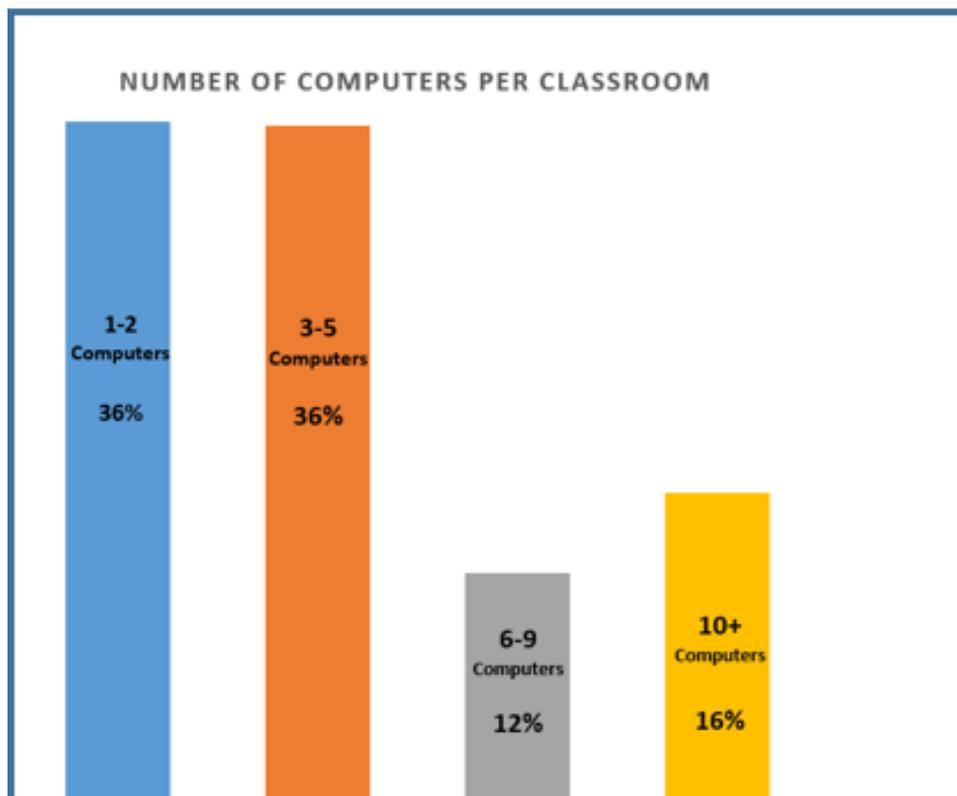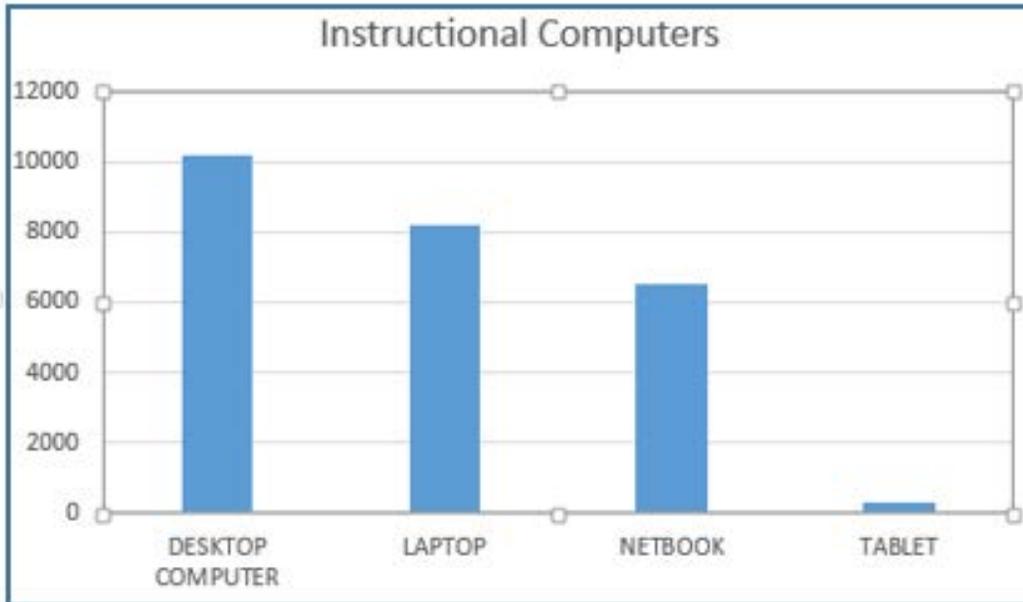
Figure 1: Number of computers per classroom

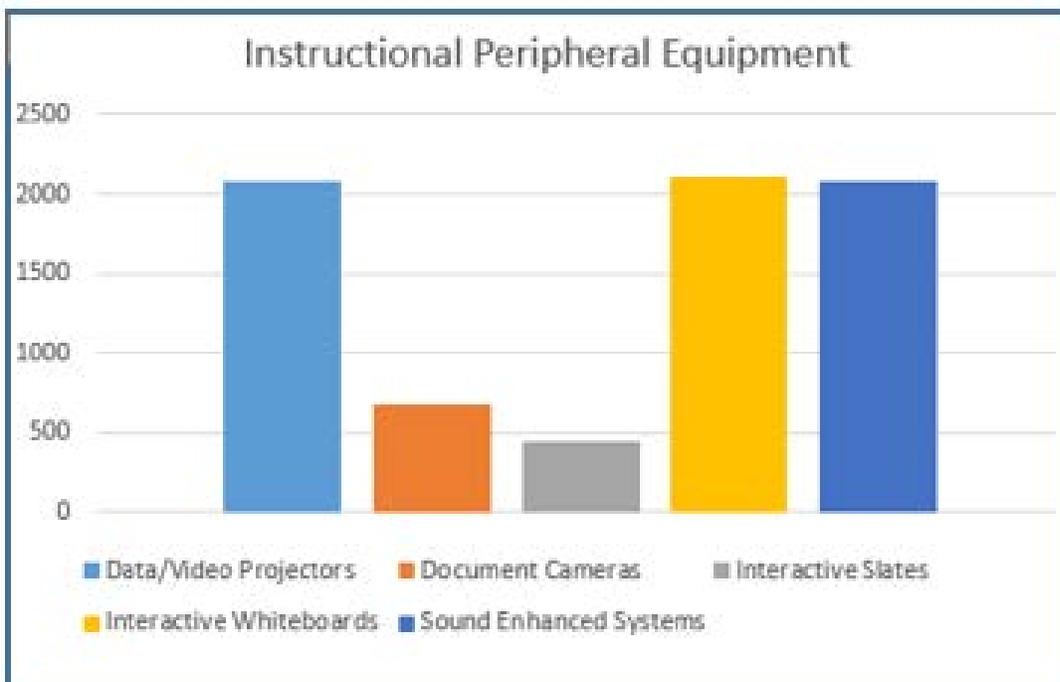*Figure 2: Instructional Computers in MCSD*

Figure 3: Peripherals reported in 2016 state inventory

Executive Summary

The Muscogee County School District (MCSD) is comprised of 58 schools and programs that serve more than 30,000 students in a variety of standard and specialized curricula. It is our belief that technology is an integral component for delivering education that drives student achievement and teacher effectiveness and helps improve operational efficiencies. Technology is at the core of virtually every aspect of our daily lives and work, and we must leverage it to provide engaging and powerful learning experiences and educational content.

In November 2014 the U.S. Department of Education partnered with the Alliance for Excellent Education and more than 40 other partner organizations to launch *Future Ready. Future Ready* is designed to establish a roadmap for schools allowing for the personalization of learning for every student in the nation moving toward the goal of preparing students for success in college, careers, and citizenship (U.S. Department of Education, Office of Educational Technology 2016). The department also challenged superintendents to indicate their commitment to transform teaching and learning in their districts by signing the *Future Ready Pledge* to become a *Future Ready* District. Muscogee County Superintendent, Dr. David Lewis, signed that pledge committing MCSD to become a *Future Ready* School District.

The overarching theme of *Future Ready* is the need for a clear vision demonstrating how technology supports educational goals and the need for superintendents to lead the transition toward connected learning and to garner support in developing that vision into an executable plan. With that in mind, the MCSD chose the *2016 National Education Technology Plan- Future Ready Learnin*g, *Reimagining the Role of Technology in Education (NETP)*, as a model for our local four-year technology plan.

It is understood that technology alone does not transform learning; rather, technology helps enable learning and enables **transformational change** in the delivery of information between teachers and students. Transformational change is only achieved through well thought out and properly executed plans. This technology plan is a framework for becoming a Future Ready District and preparing our students for success.

Introduction

Historically a learner's educational opportunities have been limited by the resources found within the walls of a school. As educators today, we live in exciting times. We possess the ability to teach dynamic lessons with technology that previous generations of instructors could only dream of. The digital age has opened a door for schools to provide extraordinarily innovative educational experiences for our digital native learners.

The presence of technology in schools does not guarantee an improvement in student achievement: rather; the value of technology in terms of student achievement, depends on the quality of its implementation. As reported in the NETP, the implementation strategies are as important as the technology itself and require an aligned vision and support from every level of the instructional team from the Superintendent and his Cabinet to the classroom. These implementation strategies must include extensive planning with much thought given to infrastructure, devices, access, professional development, as well as budget.

Technology is not a learning outcome but a tool that, when used effectively, allows students to raise awareness, start conversations, find answers, join other students outside of the walls of their classroom, and begin the drive toward transformational change.   The evidence of this transformational change will be seen in a more personalized approach to student learning. Technology provides a multitude of paths that make this possible including the Universal Design for Learning (UDL), Personalized Learning, Blended Learning, Gamification, and Virtual Learning just to name a few. Implementing these integration models requires planning and rethinking the structure of the classroom; when, where, and how students learn and what they use to enhance the learning experience. Successful implementation of these learning models will require continuous, just-in-time, job-embedded professional learning, where teachers can be taught to begin transforming their instructional practices toward a more dynamic learning environment using educational technology and digital content to engage learners and transform learning (National Educational Technology Plan 2016). As reported in the New Media Consortium 2015 K-12 Horizon Report, *the biggest barrier to personalized learning is in condensing numerous methods and technologies into a streamlined strategy that can be implemented, scaled and replicated throughout the schools* (Johnson, L., Adams, Becker, Estrada, V., and Freeman, A. 2015). In light of that, this plan will be implemented over a four-year period and is designed to be scalable to allow time for refining and streamlining our methods as needed.

As previously noted, transformational change requires a paradigm shift in both teaching and in the way students learn and will require a strong partnership between district leadership and administrators, teachers, students and parents.   In an attempt to strengthen the partnership between the Division of Information Services and our partners, we established a Technology Advisory Committee (TAC) to open lines of communication with our partners. This committee is comprised of principals, teachers, and media specialists throughout our schools who meet with the Division of Information Services to review, modify, create, and support technology-specific

policies and procedures. It gives the Division of Information Services a first-hand look at the pulse of technology in our schools and provides an avenue for open communication. The plan is to continue meeting with the TAC and broaden its membership to include parents, students, and community members

We also coordinated five "listening sessions" we called Technology Town Hall Meetings. The meetings were held at schools throughout the district with the intent to gather feedback from our partners in education- parents, students, teachers, and administrators- on the future of technology in MCSD. Participants were given a set of questions beforehand to use a guide to spark the conversation and to help prepare for the meeting. The information we gained from these sessions was invaluable, shaped the instructional components of this technology plan, and helped to establish our five specific areas of focus: Teaching and Learning, Professional Learning, Leadership, Assessment, Infrastructure and Support.
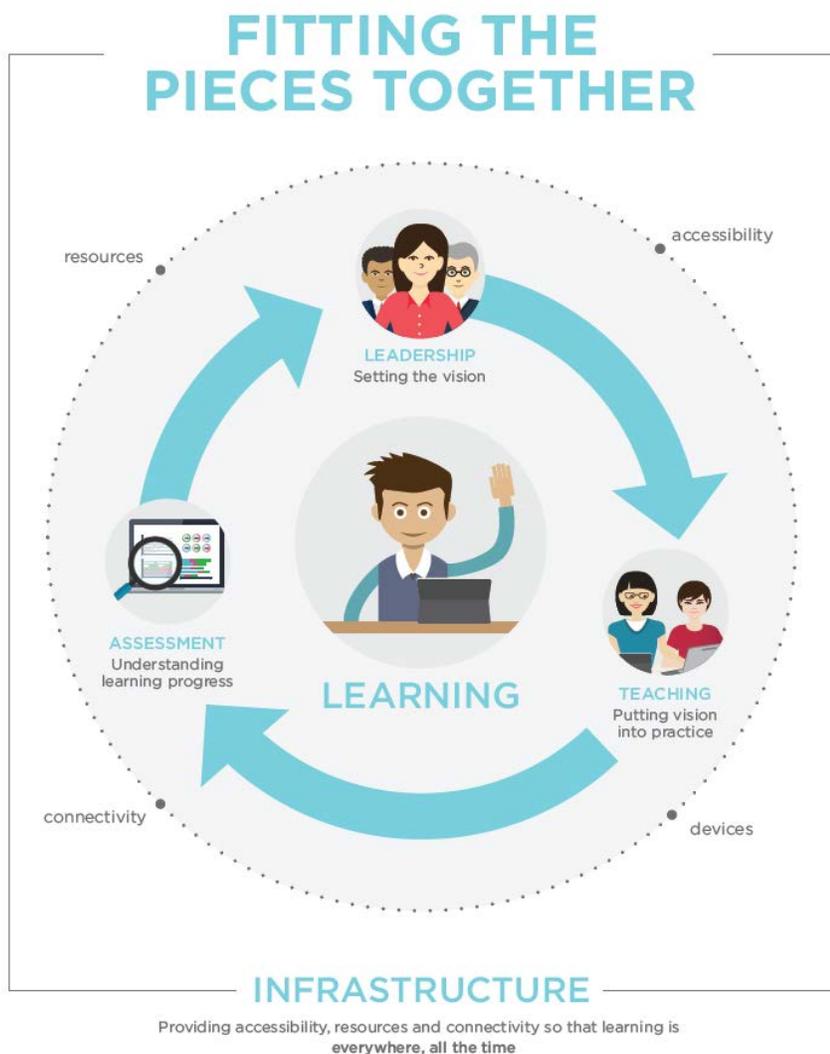
(U.S. Department of Education, Office of Educational Technology 2016)

Chapter 1: Teaching and Learning with Technology

Engaging and Empowering Learning through Technology

Goal: Teachers collaborate to make instructional decisions based on a diverse data set, including student and teacher observations and reflections, student work, formative and summative assessment results, and data from analytics embedded within learning activities and software aided by real-time availability of data visualizations, such as information dashboards.

In 2010, Project RED conducted a survey of technology programs in 1,000 U.S. schools and found that when technology plays an integral role in classrooms, those classrooms are a top model predictor of improved test scores, drop-out rate reduction, course completion and improved discipline (Greaves, Hayes, Wilson, Gielniak, Peterson 2012). Technology increasingly is being used to personalize learning and give students the opportunity for more choice over what and how they learn

1-to-1 computing transforms the classroom from teacher-centered to student-centered by placing the technology in the hands of the students. Continuous access to a computing device for every student leads to increased academic achievement and financial benefits, especially when the technology is implemented correctly.
(Greaves, Hayes, Wilson, Gielniak, Peterson 2012)

and at what pace. This prepares them to organize and direct their own learning, a lifelong skill. The way the technology is used must be aligned to state and/or national standards and meaningfully integrated into the curriculum. When aligned in this way it leads to more engaging and personalized learning and gives teachers the opportunity to embrace inquiry-based instruction like never before. This transformation allows students to drive the learning process while teachers serve as facilitators. Inquiry-based instruction requires a new approach and delivery, as well as changes to the classroom environment. The One-to-One Institute's Project RED found when done with proper support and training, inquiry-based instruction can lead to extraordinary results in student engagement. This same research found that schools, with a 1-to-1 computer ratio where the technology plan was *properly* implemented, outperformed all other schools, including other 1-to-1 schools with poor implementation plans (One to One Institute 2016)

Technology alone does not transform learning; rather, technology helps enable transformative learning.
(National Educational Technology Plan 2016)

Current research, including the National Education Technology Plan 2016, supports a 1-to-1 model over shared devices. This research indicates that daily use of technology is linked to greater educational success. Research by Greaves, et al., supports that the 1-

to-1 computing model transforms the classroom from teacher-centered to student-centered by placing technology in the hands of students. In both classroom environments, the teacher is essential, but in the latter, the teacher has more time for one-on-one student interaction.

Continuous access to a computing device for every student leads to increased academic achievement and financial benefits, especially when the technology is implemented correctly. The greatest financial benefit comes in a reduction in the dropout rate. The number of Project RED schools reporting a reduction in dropouts because of improved technology jumped to 89% when the technology was *properly implemented.* Nationally, 25% of all students drop out of school each year. Project RED estimates that the average dropout-student fails six classes before dropping out. Given an average cost per class of $1,333, the direct avoidable cost is approximately $8000 (Greaves, Hayes, Wilson, Gielniak, Peterson 2012). This benefit alone gives reason to give serious consideration to moving away from the shared model of technology currently in place in MCSD and moving towards a 1-to-1 model where each student is issued a device.

Proper implementation is the foundation for successfully deploying technology in schools and is included in the core of this plan. Moving from our current model of shared technology to a 1-to-1 model will require buy-in from leadership, teachers, students and parents. It will

> *The implementation of best practices is as important as the technology itself…the value of technology in terms of student achievement depends on the quality of its implementation.*
> (Greaves, Hayes, Wilson, Gielniak, Peterson 2012)

require ongoing, high-impact professional learning, hardware and courseware purchases, and increased support that will need to be well planned and budgeted before the plan can be executed. Considerable thought must be given to the development of digital content and curriculum in addition to hardware.

A common thread among the teachers and principals in our Technology Town Hall Meetings was a need for consistent teaching of **digital citizenship** to our students to help them become safe, responsible users of technology. Moving to a 1-to-1 model increases students' connectivity and in turn increases the importance of teaching learners how to become responsible digital citizens. The National Technology Education Plan recommends using a digital citizenship curriculum such as Common Sense Education's Digital Citizenship curriculum that is free to all schools and includes information for parents as well. This spiral curriculum offers grade-appropriate content beginning with our youngest students in Kindergarten and builds with the students through 12th grade (Common Sense Media Inc. 2016). It would be unfair to assume that just because our students are digital natives and because teachers have a basic understanding of how to use technology that they also are expert digital citizens. A critical aspect of ensuring that our students become responsible digital citizens is equipping our

teachers and leaders with the same skills. It would be the responsibility of the Digital Learning Integration Specialists (DLIS) and the Regional Technology Integration Specialists (TIS) to teach our teachers the same responsible use skills and competencies we expect them to teach our students. The parents attending our Town Hall Meetings also expressed a desire to be included in some form of training. It would be the responsibility of the DLIS, TIS, and our school-based instructional technology coaches to work with schools to ensure the students *and* parents are involved in a "get acquainted with your device" training before any device would be allowed to go home with students. These trainings would include proper care of the device and a complete overview of the Responsible Use Agreement that would have to be signed by both the parent and the student.

Our teachers also voiced a need to help with the dilemma of finding ways to differentiate content for the vast learning styles and abilities of the students within their classes. The teachers in our meetings felt, with the right support in place, digital content would offer more flexibility and learning support than the traditional formats because the content can be modified to raise or lower the complexity level giving teachers the opportunity to personalize and customize learning experiences to align with the needs of each student.   Muscogee County currently owns a digital reading and math curriculum for all elementary students that would allow teachers this customization. We are in the process of securing language arts digital content for the secondary students. All MCSD teachers and students also have accounts with Microsoft Office 365 giving them digital access to all productivity tools and storage in their personal One Drive. According to the information we gathered in Technology Town Hall meetings, this digital content is not being maximized for use because we lack sufficient devices for each student to have daily access and we lack the infrastructure to support simultaneous student use. This multi-year technology plan includes action steps to put devices in the hands of our teachers and students and to build a robust network that will allow for dependable wireless access from multiple users.   It also includes a professional learning plan to provide teachers with the training they need to take advantage of and effectively implement the new technologies.

Chapter 2: Professional Learning

Goal: **In Future Ready schools, leaders ensure the availability of ongoing, job-embedded, and relevant professional learning designed and led by teachers with support from other experts. Clear outcomes for professional learning are developed and align with a vision for student learning.**

Although research indicates that teachers have the biggest impact on student learning out of all other school-level factors, we cannot expect individual teachers to assume full responsibility for bringing technology-based learning experiences into our schools. Teachers and principals need continuous, just-in-time support that includes not only professional development but informal collaboration from mentors and coaches as well. The Project RED research by Greaves et al., indicate educators learn best through the on-the-job application of best practices, reflection with peers, and collaboration on how to implement theories in the classroom. Some districts provide this high-impact professional learning through school-based technology coaches.   These school-based instructional technology coaches are usually classroom teachers who agree to receive a stipend to attend additional technology trainings throughout the year and redeliver to the teachers. This provides in-house instructional technology experts who model effective technology integration and agree to mentor their peers.

This technology-coaching model has been integrated in successful 1-to-1 schools and incorporates district technology coaches who mentor and train school-based technology coaches at the individual sites. The goal is for classroom teachers to receive support in the daily integration of technology into teaching practices. This extended coaching model aims to build capacity on all levels, from curriculum design to lesson implementation. This greatly increases teacher buy-in generating more engaged teachers who are willing to take advantage of the professional learning opportunities.

PROFESSSIONAL LEARNING ACTIVITIES

Professional learning has been the most frequently overlooked component of technology integration since schools began using technology. As long ago as 2000, the U.S. Department of Education tried to set a model expectation by requiring that 25 % of all EETT (Enhancing Education Through Technology) funds be set aside for professional learning.

(Greaves, Hayes, Wilson, Gielniak, Peterson 2012)   (U.S. Department of Education 2016)

Input from MCSD teachers attending our Technology Town Hall meeting support this research. Our teachers are asking for job-embedded professional learning focused on the content they teach. They are requesting training based on their skill level incorporating a scaffolding approach just as they are expected to provide for their students. Teachers indicated they would be willing to take a technology competency assessment, based on International Society for Technology in Education (ISTE) Standards for Teachers, to determine individual skill level allowing the Digital Learning Integration Specialists, Regional Technology Integration Specialists, and school-based instructional technology coaches to effectively align the training to meet specific teacher needs. Using the data provided from the technology assessment, the Digital Learning Integration Specialists will be able to create training material to meet the various levels of the teachers. The training can be delivered face to face or virtually based on desire and need. Teachers and principals will be able to choose from varied learning designs as appropriate to individual skill, goals, needs, and preferences.

In order to see student achievement increase and to realize the cost benefits from technology, all staff, from the district and school leadership to the classroom teacher, must be engaged in and committed to technology. Districts must make professional learning and the effective use of technology high priorities.
(One to One Institute 2016)

Another common concern among teachers was the lack of student accessibility to devices to be able to put into practice the skills and strategies they learn while attending the professional learning classes. Included in this plan are steps to ensure the training takes place as the students and teachers receive devices providing for seamless integration of newly acquired competencies. The school-based instructional technology coaches will be available to mentor these teachers as the new skills are applied.

Because attendance in a face-to-face professional learning class is not always a viable option, MCSD teachers are willing and ready to form professional learning communities to build and share content. Many teachers have attempted a somewhat grassroots effort at this but need assistance in easily storing and sharing the information virtually. This is something that can be accomplished immediately via Canvas Commons with the proper training and will be included in the implementation of the 1-to-1 initiative as each grade level rolls on board. The digital content and material created by the DLIS team, the Content Specialist, and the Academic Coaches can also be shared via Commons. These just-in-time learning resources allows teachers the opportunity to set goals, document progress, and engage in reflective practice.

It is interesting to note that both the students and the parents attending our Town Hall Meetings felt providing professional learning to teachers was a valuable component to the successful implementation of any plan to introduce more technology in our schools. The students indicated that currently, teachers who are more comfortable using technology, allow them to use it more frequently leading to a more engaging environment. The parents felt it

was critical for the teachers to be trained so they would understand how to instructionally use the technology as it was provided to the students.

Leading a technology-transformed school calls for different skills from those needed in a traditional Industrial-age school necessitating the availability of relevant, high-impact professional learning. Based on the input from our local teachers attending the Technology Town Hall meetings, we know the professional learning classes must be offered in various formats and skill levels to match their technology skill set. Only then can we expect to see teachers take advantage of the opportunities to develop the skills and knowledge needed to take full advantage of a technology-rich classroom environment.

Chapter 3:
Leadership
Creating a Culture and Conditions for Innovation and Change

Goal: **Embed an understanding of technology-enabled education within the roles and responsibilities of education leaders at all levels and set visions for technology in learning.**

According to the recent research by Greaves, et al., the single most important factor for success in a technology implementation is leadership. Implementations driven by vision and goals of leaders are much more likely to be successful than implementations driven by the sudden availability of funds. The lack of a clear educational goal is one of the main reasons technology initiatives fail.

Change must be demonstrated and championed at the top.
(Greaves, Hayes, Wilson, Gielniak, Peterson 2012)

In order to see student achievement increase and to realize cost benefits from technology, it is critical to have support from district leaders who must be engaged in and committed to technology. Districts must make professional learning and the effective use of technology high priorities. Time dedicated to professional learning should be guarded and attendance required. Effective use of technology is currently included in the Georgia teacher evaluation process and should be part of the annual goals that are documented and measured. Data from the technology competency assessment will provide a measurement for growth for both teachers and principals that could also be factored in to measure progress toward meeting these individual goals.

Current research indicates, at the school level, the principal's ability to lead change is critical. Until the principal models the desired technology use the anticipated shift in pedagogy stalls. With this in mind, the focus on providing technology for learners should not overshadow the importance of preparing principals to lead effectively with technology. Summer Administrative Technology programs should be implemented to assist principals in both use of technology and use of the available data to inform instruction and champion the movement from teacher-led to student-led instruction. Greaves et al., find when principals receive specialized training, and technology is properly implemented, the benefits increase even more.

Before principals can adequately measure effective use of technology by teachers, they must have a high-level understanding of appropriate use of the technology currently available to teachers in their schools. DLIS and Content Specialists will coordinate an annual Administrative Technology Academy each summer for all MCSD principals. As with teachers, principals would be required to take the Technology Competency Assessment based on the NETS for Administrators. Using the data from the assessments the content for the summer academy will be customized for principals and delivered based on need and competency. The classes will be a combination of face to face and digital and could continue throughout the school year if necessary or desired.

> *For systemic changes in learning and teaching to occur, educational leaders need to create a shared vision for how technology can best meet the needs of all learners and develop a plan that translates that vision into action.*
> (National Educational Technology Plan 2016)

MCSD principals attending our Technology Town Hall meetings and participating in our Technology Advisory Committee realize the positive impact technology can have on instructional practices but agree on the hindrances preventing them, and teachers, from using it consistently today. Most of those –a lack of consistent connectivity, lack of time for professional learning, laptops that will not hold a charge, and a need for more devices – have been addressed in this technology plan along with an action steps to improve the technology making it more dependable.

Chapter 4: Assessment

Measuring for Learning

Goal: **At all levels, the power of technology will be leveraged to measure what matters and use assessment data to improve learning.**

The impact of education technology is not limited to classroom instruction. It can be harnessed for assessment purposes. Technology-enabled assessments support learning and teaching by communicating evidence of learning progress and providing insights to teachers, administrators, families, and most importantly, the learners themselves (National Educational Technology Plan 2016). Various types of assessments are appropriate for different uses at different times. **Summative assessments** can be administered to an entire class, grade level, or grade levels across the district. These results help to determine whether students are meeting standards in a given subject. **Formative assessments** provide information during the instructional process, before summative assessments, to determine what actions to take to help promote further learning. Administering these assessments digitally delivers immediate feedback providing data that can quickly be used to support, adjust, and drive instruction giving the opportunity for more personalized learning for students.

As noted in the NETP there are many benefits to moving from traditional paper and pencil assessment methods to digital measurement:

- **Timing**- assessments can be embedded in learning throughout rather than at the end of the unit.
- **Accessibility**- assessments can be aligned to UDL and adjusted to meet the needs of all learners i.e.; increased font size, text to speech options, bilingual dictionaries, glossaries and more.
- **Pathways**- whereas traditional assessments follow a fixed path, digital assessments can be adaptive to student learning.
- **Feedback**-results from digital assessments are typically provided in real time as opposed to a delayed response from paper and pencil.
- **Item Types**- most paper and pencil test items are multiple choice whereas digital assessments can be enhanced to include a wide variety of question types to include graphic response, equation response, performance-based, and constructed response.
- **Learning Dashboards**- provide the ability to integrate information from assessments, learning tools, educator observations and other sources to provide comprehensive visual representations of student learning progress in real time. Administrators, teachers, students, and parents can customize these dashboards for use with secure logins for security.

Measuring student learning is a necessary part of every teacher's work but technology-enabled assessments reduce the time, resources, and disruption to learning that paper and pencil assessments demand. It also provides immediate, real-time data that can be easily shared with students and parents through visual dashboards making the data interpretation easier.

Although data from technology-based assessments and data systems hold great potential, they are meaningful only when educators use them effectively. (National Educational Technology Plan 2016)

The shift from teacher-led instruction to student-led is largely dependent on the real-time data technology-enabled assessments provide. With proper training, teachers can use individual student data to create unique learning paths for students. Although data from technology-based assessments and data systems hold great potential, they are only meaningful when educators use them effectively (National Educational Technology Plan 2016). Because proper interpretation and application of data is critical it will be included as part of the ongoing professional learning provided to both teachers and principals.

MCSD is fortunate in that the digital courseware currently being used in our schools provides both summative and formative assessment opportunities and would be a valuable data set to use in offering personalized instruction to students. However, as we heard in our Town Hall Meetings, we currently do not have enough devices for students to have quick access to take the assessments as frequently as needed. Providing devices to each student eliminates the problem of access but greatly increases the need for technical support. Teachers and students will need to be able to depend on the availability of the device for daily instruction and for assessment. As the number of devices increase in each school so will the need for onsite technical support (discussed in more detail in Chapter 5).

In our Technology Town Hall Meetings we discussed the option of creating Student Technology Support teams that could help with low level troubleshooting of devices. We found, in many of our schools, this is already a common practice. There was strong interest in our middle and high schools for assistance in formalizing a "Student Technology Club" that would assist teachers before and after school with minor troubleshooting issues. The Division of Information Services Technology Support Specialists would meet with these student groups periodically to offer tips and training.

Chapter 5: Infrastructure and Support
Enabling Access and Effective Use

Goal: **All students and educators will have access to a robust and comprehensive infrastructure when and where they need it for learning.**

Learning, teaching and assessment enabled by technology require a robust infrastructure. The 2016 National Educational Technology Plan suggests the following are essential components of an infrastructure capable of supporting transformational learning experiences:

- **Ubiquitous connectivity**- persistent access to high-speed Internet in and out of school
- **Powerful learning devices**-access to mobile devices that connect learners and educators to the vast resources of the Internet and facilitate communication and collaboration
- **High quality digital learning content**- digital learning content and tools that can be used to design and deliver engaging and relevant learning experiences
- **Responsible Use Policies (RUPs)**- guidelines to safeguard students and ensure that the infrastructure is used to support learning

While it is evident from the recent Project RED research that *effectively implemented* technology has great gains on student achievement, funding this technology is a common problem for all school districts. The National Education Technology Plan suggests a 1-to-1 technology model might free up funds to help absorb the costs associated with this model. As technology enables new learning opportunities and experiences, it can also render existing processes and tools obsolete, freeing up funds to pay for technology. The cost of digital devices has decreased dramatically, while the availability of high-quality interactive educational tools and apps have increased. Many 1-to-1 schools are freeing up funds for digital resources by transitioning away from textbooks to **openly licensed educational resources**. These resources may be used, modified, and shared without paying any licensing fees or requesting permission.

In September 2015 U.S. Secretary of Education, Arne Duncan, challenged schools to begin this process by replacing just one book as a first step in appreciating the cost savings and developing an understanding of what would be necessary to implement such a change school- or district-wide

INFRASTRUCTURE AND SUPPORT

Learning, teaching, and assessments enabled by technology require a robust infrastructure. Key elements of this infrastructure include high-speed connectivity and devices that are available to teachers and students when they need them. Aside from wires and devices, a comprehensive learning infrastructure includes digital learning content and other resources as well as professional development for educations and educational leaders.

(National Educational Technology Plan 2016)

(National Educational Technology Plan 2016). In addition to the cost savings this would provide, openly licensed materials can be more accurate than traditional textbooks simply because they can be continually updated as content changes and it allows teachers the freedom to more easily tailor or customize the learning materials to meet student needs.

In our local Town Hall Technology Meetings teachers indicated they would be willing to give up a textbook as long as they had access to share materials with each other and with their students. Many of them indicated they are already pulling resources from other places because the textbooks are not current.   Many of the students in these meetings were also in support of moving away from a traditional textbook to digital resources. These students also indicated the textbooks that are being assigned today are used as an extra resource rather than a primary source.

In 2015 MCSD purchased Canvas, a Learning Management System. Canvas is the platform needed for teachers to deliver digital content to their students. It also allows teachers to create and share content with peers via the Canvas Commons. The parents in our Town Hall Meetings were concerned their students would not have the material available at home if they didn't have access to the internet there. This could be avoided by allowing the student to download the material before leaving the school. The student would be able to work on the content at home and upload it to Canvas the next day at school.

The new paradigm of student-centered learning and individualized instruction creates a need for new materials, devices, and classroom designs. A lack of appropriate network infrastructure and a shortage of materials inhibits the usefulness of the devices. Before the devices are purchased for a 1-to-1 implementation, it is critical to have the appropriate infrastructure in place and to have the content prepared for the teachers and students well in advance of the deployment of the devices. MCSD has taken this school year to begin addressing those infrastructure needs beginning with an assessment of the network needs in our schools and developing a plan to begin installing the necessary upgrades. The Division of Information Services has also taken this year to test various mobile devices to find a viable option for student use. The next step will be for the Digital Learning Integration Specialists, Content Specialists, and Academic Coaches to begin building the digital content for each content area before the first phase of the 1-to-1 implementation begins and much of this work has already begun.

Successfully implemented 1-to-1 programs also include a "building responsibility" program to plan for additional support staff in the schools as they reach a 1-to-1 capacity as well as a gradual release of the devices to the students before they take full ownership. This approach ensures the down time for each device is minimized as the support personnel is on site to quickly resolve technical issues and instructional technology coaches are on site to assist with instruction and implementation. The gradual release approach gives the schools and support staff time to meet with the students and their parents to help them understand the Responsible Use Policy and general care and protection for the device before the student takes

the device home for the first time. It also gives the district time to fully assess the level of support needed in a 1-to-1 environment and determine the appropriate number of support staff necessary to support a successful program.

Implementation Plan

In Georgia, Senate Bill 89 encourages local boards of education to provide instructional materials and content to be in digital or electronic format and to provide student devices to each student in grades three and higher to access that material and content by July 1, 2020. With that in mind, MCSD began the planning stages for a robust infrastructure in FY16 and piloting possible student devices that could be affordably implemented over the next 4 years. With the Senate Bill 89 goal in mind, we have developed the following plan to become a 1-to-1 district by 2020.

MCSD Technology Plan 2017-2020

Activity	Owner	Start Date	Completion Date
Plan for, budget, purchase, and begin installing a network infrastructure that will support 1-to-1 in each school.	Data Center Operations (DCO)	7/1/2016	8/30/2017
Pilot and select the devices for students and teachers that are robust yet affordable for a 1-to-1 implementation.	Teaching Learning & Support (TLS)	7/1/2017	6/30/2018
Determine the implementation model and select the pilot school/grades and teachers.	CIO/TLS	7/1/2017	6/30/2018
Extend the Technology Advisory Committee to include community members and students in addition to principals, teachers, and technology support that will meet regularly to discuss the health and future of technology in our schools.	Senior Director, TLS	7/1/2018	6/30/2020
Administer Levels of Teaching Innovation (LoTi) Digital Age Survey to all Teachers and Leaders	Senior Director, TLS	10/1/1017	2/1/2018
Using the data from the LoTi Assessment, begin building professional learning modules for teachers and leaders.	Senior Director, TLS Executive Director, TLA	2/1/2018	6/30/2020

Glossary of Terms

Authentic Learning- experiences that place learners in the context of real-world experiences and challenges.

Blended Learning- classes where a portion of the traditional face-to-face instruction is replaced by web-based online learning.

Digital Citizenship- a concept which helps teachers and parents understand what students should know to use technology appropriately. It is a way to prepare students to use technology safely and responsibly.

Digital Natives- a person born or brought up during the age of digital technology and therefore familiar with computers and the Internet from an early age.

Digital Immigrant- a person born or brought up before the widespread use of digital technology.

Formative Assessments- frequent, instructionally embedded checks for understanding that provide quick, continual snapshots of student progress across time.

Gamification- an educational approach to motivate students to learn by using video game design and game elements in learning environments.

Inquiry-based instruction- a constructivist approach that engages students in investigation of real-world questions that they choose, but within a thematic context provided by the teacher.

Openly licensed educational resources are teaching, learning, and research resources that reside in the public domain or have been released under a license that permits their use, modification, and sharing with others. Open resources may be full online courses, digital textbooks or more granular resources such as images, videos, and assessment items.

Personalized Learning is the tailoring of education and learning environments in order to try meet the different learning needs of students. Typically, technology is used to facilitate personalized learning environments.

Summative Assessments measure student knowledge and skills at a specific point in time, often administered to a common group of students to determine whether students are meeting standards.

Transformational Change is a fundamental break with current practices that sparks an irreversible new system. It requires new knowledge and skills for successful implementation. It does not mean doing new or different things in an old system; it is the inception of a whole new system.

Universal Design for Learning- a set of principles that give all individuals equal opportunities to learn. It provides a blueprint for creating instructional goals, methods, materials, and

assessments that work for everyone-not a single, one-size-fits-all solution but rather flexible approaches that can be customized and adjusted for individuals.

Virtual Learning- a Web-based platform for the digital aspects of courses of study.

Muscogee County School District Acceptable Use Policy

For purposes of this document, a user is anyone who is authorized to gain access to the MCSD Network, Internet, or Intranet. Unauthorized use or access is prohibited.
The Network is the connection between the WAN (Wide Area Network), the LANs (Local Area Networks) and the technology components at a school or building.

"Technology" refers to district issued or privately owned wireless and or/portable electronic handheld equipment that includes, but is not limited to, existing and emerging mobile communication systems and smart technologies, portable internet devices, Personal Digital Assistants, handheld entertainment systems or portable information technology systems that can be used for word processing, wireless Internet access, image capture/recording, sound recording and information transmitting, receiving, storing, etc.

Internet: Only the internet gateway provided by the District may be accessed while on campus. Personal devices with internet connectivity, such as but not limited to, cell phones/cell network adapters, are not permitted to be actively used to access outside internet sources at any time.

Security and Damages
Personal Devices: responsibility to keep personal devices secure rests with the individual owner. MCSD is not liable for any personal device stolen or damaged on school district premises. If a device is stolen or damaged, it will be handled through the administrative office similar to other personal artifacts that are impacted in similar situations. It is recommended that skins (decals) and other custom touches be used to physically identify individually owned devices. Additionally, protective cases for technology are encouraged.
District Issued Devices for School Use: use of school computers is a privilege that is earned by abiding by the rules described in MCSD Student Behavior Code. Failure to use the computer properly and respectfully can result in the privilege being revoked and possible disciplinary action. The parent will be notified.

Student Responsible Use Agreement:
The use of technology to provide educational material is a necessity today. Computer use is no longer an option that students can opt out of but a necessity for our 21st Century learning environments. Muscogee County uses a web-based learning management solution (LMS) that permits students to participate in an online learning environment in a format with which they are already familiar. Students log into the LMS with a district provided username and password so the activity can be monitored for safety and compliance. Students and parents will actively participate in the *Responsible Use* trainings at the start of school and agree to abide by the following acceptable use guidelines:

- Adhere to the Student Code of Conduct as well as all Board policies, particularly Internet Acceptable Use (Policy IFBG) and Internet Safety (Policy IFBGE).
- Take full responsibility of personal or district issued mobile devices and keep it with himself or herself at all times.
- Keep all devices in silent mode while on the school campuses and while riding school buses.
- Access the computer with the assigned student user name and password and use the device for instructional purposes only.

- Be respectful of others and never use the device to record, transmit or post photographic images or video of a person, or persons on campus or while attending school-sponsored events unless it is a teacher requirement for a school assignment. Permission to photograph or video another person must be obtained even in the case of school assignments.
- Be respectful of other students' work and never copy, change, or remove another student's work from the device, the school network, the Internet, or any of the eLearning solutions used by MCSD.
- Make comments and discussion responses that are helpful and respectful and directly related to the purpose of the original post.
- Immediately inform a teacher or administrator whenever anything on the Internet is encountered that may be inappropriate or a violation of school policies.
- As required by Children's Online Privacy Policy Agreement (COPPA), never share personal information (or another student's) online.
- Comply with teacher request to shut down the device, close the screen, or put away.
- Use the school's connection to the internet without bypassing it so that the content filters can be applied to the connected device.
- Take care of the equipment being careful not to bring on the premises any Virus, Trojan, or program designed to damage, alter, destroy, or provide access to unauthorized data, and/or to participate in acts of "hacking" or bypassing the network security.
- Submit the device to be examined any time it is suspected of causing problems or is the suspected source of an attack or virus infection.
- Back up files on personal media or One Drive accounts in the case of loss of data on the issued device.
- Ensure the device is fully charged prior to bringing it to school each day.
- Use the MCSD-issued email account responsibly adhering to all the guidelines in Board Policy IFBG.
- Report any damage or problems with the device to a teacher who will create a work order for the device to be checked by a MCSD technician only as per the Property and Risk Management protocol.
- Grant permission for student's photograph and publication of student work and name to be published on the school and/or district websites and released to local news agencies for publication concerning school/district events.

Sanctions for Misuse

Use of the Internet and any district issued or personally owned devices is contingent upon compliance with state and federal laws, district regulations, and the user responsibilities outlined in this document.

- Violations may result in loss of some or all privileges.
- Specific disciplinary actions involving student misuse will be determined in accordance with Board of Education Policies and the Muscogee County School District Behavior Code.

Student's Last Name _____ **First Name** _____ **Middle Initial** _____

School Year _____ **Student #** _____

PARENT CONSENT FOR STUDENTS _UNDER_ AGE 18

As the parent or guardian of this student, I understand that access to the Network and Internet is designed for educational purposes and that my student's school and MCSD have taken precautions to control controversial material; however, I also recognize it is impossible to restrict access to all such materials and I will not hold the school or MCSD responsible for materials acquired, viewed, or transmitted on the Network or Internet. I agree to abide by any changes in the AUP as approved by the Board. I understand that any violation may revoke my access and privileges or invoke disciplinary action and/or appropriate legal action.

I have read and agree to the AUP ☐

_____   _____

Parent/Guardian Name (Please Print)   **Parent Guardian Signature**   **Date**

STUDENTS AT _LEAST 18 YEARS_ OF AGE OR ADULTS

As a user of the Network or Internet, I hereby agree to comply with this AUP and any Board-approved changes for the MCSD Network or Internet. I will use the Network and Internet in a responsible fashion while honoring all rules, policies, and restrictions. I understand that any violation may revoke my access and privileges or invoke disciplinary action and/or appropriate legal action.

I have read and agree to the AUP ☐

_____   _____

Student Name (Please Print)   **Student Signature**   **Date**

PERMISSION FOR PUBLICATION OF PICTURE AND/OR STUDENT WORK

(Must be signed by parent/guardian **or** student if over 18 years of age)

I grant permission of the following:

• Publication of any student work on the school and or district website	Yes	No
• Student name to be published on the school and or district website	Yes	No
• Student photograph published on the school and/or district website	Yes	No
• Student information released to local news agencies for publication concerning school/district events	Yes	No

_____   _____

Signature   **Date**

References

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