



GRAND RAPIDS CHRISTIAN SCHOOLS

Technology Plan

2019 - 2021

*"Preparing students to be effective servants of Christ
in contemporary society."*

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DESCRIPTION OF GRAND RAPIDS CHRISTIAN SCHOOLS

WHO WE ARE

Introduction

Grand Rapids Christian Schools (GRCS) is a private, non-profit organization, governed by a parent elected Board of Trustees. As the largest private school association in Michigan and the largest member of Christian Schools International (CSI), Grand Rapids Christian Schools is committed to providing a quality, faith-based education to students in preschool through 12th grade. GRCS nurtures the lives of a spiritually, culturally and economically diverse student body, preparing them to be effective servants of Christ in contemporary society. We hold ourselves to the highest standards as we strive for excellence in education, based on a foundation of faith, a tradition of excellence, and a legacy of success.

Demographics and Staff

Grand Rapids Christian Schools serves about 2200 preschool through high school students in the metropolitan Grand Rapids area. Our campuses extend throughout the city and north into Rockford. GRCS has a teaching staff of 165 teachers. Approximately 18.2% of our student population is identified as qualifying for free/reduced lunch according to the federal government guidelines. Our student population represents 23.36% cultural diversity. Our student population represents over 230 churches and 33 denominations (54% are Christian Reformed and 46% are non-Christian Reformed). Further facts and information can be found on our [website](#).

Student Support System

Grand Rapids Christian Schools seeks to support and celebrate the gifts and abilities of each student. To ensure success for all our students, GRCS offers educational Student Support Services for those who may need assistance beyond the traditional classroom. Student support services serves over 450 children among all our schools with a wide variety of individualized services, including short term tutoring, testing, academic support, inclusion services for special needs students, academically talented support, behavior interventions, and social services. The growth of student support services has increased the need for assistive technologies and other resources.

TECHNOLOGY VISION AND MISSION

District Mission Statement

“Preparing students to be effective servants of Christ in contemporary society.”

Vision

The evolution and dynamics of technology has made a tremendous impact on our daily lives. Technology empowers productivity, promotes efficiencies, and creates opportunities for transforming learning. Technology has become a vehicle to help us in our journey of providing collaborative, data-informed instruction, adapting learning experiences to meet the needs of all learners. Our technology-rich learning environment allows us to transform our approaches to instruction and learning. Our vision for technology is to provide staff and students access to a variety of technologies that will enable them to cultivate an environment where staff and students learn, collaborate, create and innovate together.

Mission

The mission statement at Grand Rapids Christian Schools is to prepare students to be effective servants of Christ in contemporary society. Technology is a powerful, transformational tool that assists in helping us meet our mission statement. Technology is an integral part of our teaching and learning practices allowing us to transform, support and enhance our curriculum and communication. Technology assists us in providing an educational program which recognizes and values the uniqueness and learning needs of all students as they research, design, analyze, compose and communicate while teachers serve as facilitators of instruction, mentors, and coaches.

Executive Summary

This technology plan is intended to provide a comprehensive framework and planning document for the board, superintendent, building administration, building technology staff, teachers, support staff, parents, and students to guide the technology needs and support for the next three years at Grand Rapids Christian Schools. The technology plan addresses technology needs and planning in the categories of teaching and learning, professional development, and in an administrative/organization environment.

TEACHING AND LEARNING

PROFESSIONAL DEVELOPMENT

Professional development is an essential component of the Grand Rapids Christian Schools' plan to integrate technology into curriculum to support teaching and learning. Professional development for teachers, administrators, and other personnel will include awareness of technology standards and the continual development of technology literacies, strategies, and tools that support the integration of technology. GRCS recognizes that just as technology is continually evolving, changing, and growing; so will the strategies for meeting its professional goals.

Technology professional development plans are focused around the following topics:

- Classroom management tools
- Collaboration tools
- Communication tools
- Content area resources and tools
- Formative and summative assessment tools
- Learning management systems
- Productivity and presentation tools
- Digital citizenship

Professional development opportunities are coordinated by the Instruction Office and may be offered at different times and in different formats to maximize the opportunities for teacher participation. GRCS will work to provide a balanced approach of formal professional development opportunities and informal support and training experiences. Trainings for all staff are provided at in-service days and in required staff meetings. Training opportunities are also available through the Kent Intermediate School District with funding for these provided by GRCS as well as through Title funds.

TECHNOLOGY INTEGRATION

Teaching practices are the key to effective instruction. Technology supports a teacher in delivering, scaling, and sustaining effective teaching practices providing tools that can allow a teacher to adapt and engage students with curriculum to meet the needs of all learners. Learning is enhanced by technology and it can transform teaching and learning, increase student engagement and motivation, authenticate learning, and increase critical thinking and collaboration skills.

Technology Integration Strategies:

1. Learning Commons Team - A key factor for successful use of technology is the willingness to integrate new ideas into the teaching of content areas. The building Learning Commons team (i.e., Library Media Specialist, Technology Integration Specialists/Coaches, learning commons aides and classroom teacher) is a collaborative team that exists to support and direct students in their learning and support teachers in their instruction and communication work. Below are some of the ways the building level learning commons team supports staff:
 - Provide opportunities for teachers to learn new and existing technology and technology integration techniques.
 - Provide access to resources to assist teachers in integrating technology into their curriculum including resource links on the building level learning common's web pages.
 - Introduce current and emerging technologies in the classroom.
 - Develop strategies to improve instruction and deepen learning resulting in increased student achievement that allows and encourages students to actively and collaboratively utilize the power of technology in their learning.
 - Collaborate with staff to develop and support active, hands-on learning opportunities for students so that there is a shift from students as consumers to students as creators.
 - Meet at least two times per year with classroom teachers to ensure technology integration in relationship to the standards.
2. Curriculum Mapping - To help with teaching essential standards while still focusing on our desire for faith integration, GRCS utilizes Curriculum Trak as a curriculum mapping tool. Curriculum Trak:
 - Offers a way to see the big picture while keeping the mapping process simple.
 - Aligns curriculum with instructional standards.

- Encourages a collaborative culture among staff while facilitating curriculum articulation across subjects and grades.
3. Online Classrooms – Secondary staff are required to maintain an online classroom presence to create, deliver, and manage their curricular resources. The online classroom:
- Provides a web-based system for course delivery so that staff and students can access course resources anytime, anywhere.
 - Simplifies the learning process and procedures making it responsive to student’s needs.
 - Creates the opportunity for blended learning.
 - Enhances the opportunity for tracking and recording student progress to more efficiently provide data-driven instruction.

SUPPORTING RESOURCES

District policies and guidelines have been implemented to ensure proper and effective use of technology. Technology policies and guidelines are posted on our [Instructional Technology](#) link on the Grand Rapids Christian School webpage. These include such items as a technology permission slip, device contract and consent form, responsible use policy, device handbook, Google apps for education use, and frequently asked questions.

Grand Rapids Christian Schools provides a variety of technologies for students and teachers to access online resources for academic achievement. These technologies include web-based resources such as MEL, Follett Destiny, Pebble Go, Britannica School, Gale Virtual Reference Library, Opposing Viewpoints in Context, Research in Context, Lexia, and Civil War Database.

Staff receives a great level of support through the building level Technology Integration Specialist (TIS) and the library media specialist. The TIS posts up-to-date web resources on their school’s [Learning Commons web page](#) along with suggested resources for staff, students and parents. The webpage includes common curriculum resources used at each grade level as well as links to subscription-based resources. There are additional resources available in the secure area of our website for staff support such as Curriculum Trak, Campus Press, and GSuite. Staff also has access to check out materials through our local REMC services. Staff include their own classroom resource links through their Moodle classroom, Google Classroom, Google Site, or their Campus Press site.

STUDENT ACHIEVEMENT

Empowering teachers to inspire minds and transforming instruction to deepen learning are part of our vision for equipping teachers with training, technology, and instructional environments that will enable them to put the best and most engaging teaching methods into practice with their students. It is vital that we encourage and empower students to be critical thinkers and problem solvers. We need to build an instructional framework that is data-based, research-driven, and employs a problem-solving approach across all areas of learning for all students, including those with special needs and those who are academically gifted. Our aim is to identify and offer the resources and tools, learning strategies, interdisciplinary connections, and flexible, collaborative learning environments necessary for all students to thrive.

Strategies to Improve Student Achievement Using Technology:

1. Professional learning communities have been developed at GRCS to support productive discussions among teachers about student learning, curriculum and instructional strategies. At the building level, members of the Learning Commons Team will help build teacher capacity within the personal learning community structure for using technology tools to create rich, engaging learning environments.
2. Teachers will use a variety of technology tools for formative and summative assessments to provide data-driven instruction and for using the immediate feedback that these tools offer.
3. Teachers plan and incorporate technology tools and/or resources in the design, development and delivery of their lessons.
4. All secondary teachers will manage their courses in an online classroom providing students with 24/7 access to many course materials.
5. The district will continue to support the one-to-one device program in grades five through twelve providing students with opportunities to collaborate, communicate, and create while using these tools.
6. Instructional technology equipment will be supported at all Grand Rapids Christian schools to allow for interactions between the teacher, the student, and the curriculum.
7. Computer classes, following the Michigan Integrated Technology Competencies for Students (MITECS) and International Society of Technology Education (ISTE) standards as well as integration of skill-based instruction with content area standards, will be taught to students in grades kindergarten through six. See [Appendix A](#).
8. Secondary staff will teach technology skills, following the MITECS and ISTE standards, as an integrated tool in their curriculum.

GOALS

ACADEMIC TECHNOLOGY GOALS

Goal 1: Engage and empower a digital learning environment and culture of innovation that promotes data-informed instruction while meeting the needs of all learners.

Objective 1.1: Teachers design, develop, and evaluate learning experiences incorporating contemporary tools and resources to maximize content learning in context, and to develop the knowledge, skills, and attitudes identified in the technology standards.

Strategies	Measures/Evaluation Strategy	Responsibility
Use tools that increase student engagement in learning, productivity, creativity, critical thinking, and innovative activities	<ul style="list-style-type: none">•Students show evidence of their learning through the development of a portfolio that captures snapshots of their digital activities•Teachers and students select appropriate tech tools for the tasks assigned	Building Level Tech and Teaching Staff
Ensure equity and accessibility for all learners	<ul style="list-style-type: none">•Utilize accessibility features such as speech-to-text and text-to-speech options for students•Increased differentiated opportunities using technology for meeting the learning target•In collaboration with media and student support services, increase the audio book collection in conjunction with the text version	Building Level Tech and Teaching Staff
Leverage online collaboration tools	<ul style="list-style-type: none">•Needs assessment at the close of the year that shows teacher growth in collaborative activities	Building Level Tech and Teaching Staff
Establish authentic and/or global connections that engage students in the learning	<ul style="list-style-type: none">•Ensure that global connections occur at least two times at the primary, middle, and high school level for each	Building Level Tech and Teaching Staff

process	student •Increase authentic activities at each level	
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Objective 1.2: Teachers will use technology tools for assessments to collect data to make informed decisions about instruction while meeting the learning needs of individuals, groups, and classes.

Strategies	Measures/Evaluation Strategy	Responsibility
Expand the use of digital formative and summative assessment tools	<ul style="list-style-type: none"> •Document sample uses of video used as an assessment tool (such as screen casting, Flipgrid, Edpuzzle) •Create a report on usage of Synergy assessment •Staff survey on the tech tools used for assessment and frequency of usage 	Building Level Tech and Teaching Staff
Assist teachers in interpreting and disaggregating their data to use it for instructional planning and to differentiate instruction using technology	<ul style="list-style-type: none"> •Staff survey on how efficiently the assessment tools used enabled them to better interpret and use the data •Document sample remediation and instructional strategies that use technology to support differentiation •Schedule time with individuals or teams to discuss next steps 	Building Level Tech, Teaching Staff, and Building Administration

Objective 1.3: Secondary teachers will create robust online classrooms that provide students with 24/7 access to a variety of resources, online activities and interactives, and the opportunity to extend their learning.

Strategies	Measures/Evaluation Strategy	Responsibility
Inform teachers of the expectation of the content of their online classroom	•Teachers show principals what is included in their online classroom during their evaluation process	Teaching Staff and Building Principals
Equip teachers with the skills needed to develop an online	•Increase in the number of teachers who have an active online classroom	Building Level Tech

classroom	presence	
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Goal 2: Prepare students to live as safe, responsible and innovative Christian digital citizens when searching, consuming, creating, and sharing content.

Objective 2.1: Technology staff will create a digital citizenship scope and sequence plan aligned to the technology standards, and share this with building leadership and teaching staff.

Strategies	Measures/Evaluation Strategy	Responsibility
Develop and propose a digital citizenship scope and sequence plan	<ul style="list-style-type: none"> •By late fall of 2019, technology staff will have a draft map of a proposed digital citizenship scope and sequence 	Director of Tech and Building Level Tech
Determine teaching assignments for the digital citizenship content to be taught	<ul style="list-style-type: none"> •By spring of 2020, teachers will be equipped for teaching their assigned components of digital citizenship •Teachers input these curriculum digital citizenship components in their units in Curriculum Trak 	Building Level Tech, Curriculum Staff, and Teaching Staff

Objective 2.2: Staff and students will understand issues related to the appropriate and ethical use of technology, leading to the development of Christian digital citizenship habits.

Strategies	Measures/Evaluation Strategy	Responsibility
Use appropriate research and citation practices	<ul style="list-style-type: none"> •Increased conversation with teachers and questioning through formal and informal observations of teacher citation practices •Survey teachers to see if there has been growth in citation practices for both staff and students 	Building Tech Staff, Teaching Staff, and Building Administration
Grow in awareness and develop prevention strategies for cyberbullying	<ul style="list-style-type: none"> •Visible evidence in building of cyberbullying prevention •Student led initiative to build awareness of cyberbullying 	Building Tech Staff, Teaching Staff, Social Worker, and Building

	<ul style="list-style-type: none">•Develop a plan for addressing cyberbullying issues that occur off campus but the effects are visible in school	Administration
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PROFESSIONAL LEARNING GOALS

Goal 3: Develop a culture of continuous, collaborative, and personalized learning to increase staff technology literacy aligned to the ISTE /MITEC standards that support staff in their daily work and inspires and prepares them to integrate technology with curriculum standards.

Objective 3.1: Provide support to enable educators to continually leverage technology to improve student learning aligned to the technology standards.

Strategies	Measures/Evaluation Strategy	Responsibility
Increase the visibility of the ISTE/MITEC standards	<ul style="list-style-type: none"> • Post the standards in the lounge and in tech/learning commons areas 	Building Level Tech
Meet individually with all teaching staff to help them grow in their use of technology	<ul style="list-style-type: none"> • Building tech staff will meet with each teacher at least 2 times per year to plan and implement at least one area for growing in technology skills, confidence, and/or integration each year • Follow-up reflection will provide measurable data on student learning and the impact this goal had on the teacher's future teaching practice 	Building Level Tech
Share new, innovative, and emerging technologies with staff	<ul style="list-style-type: none"> • Visible evidence of technology tools being used in classrooms for integration, assessment, and communication 	Building Level Tech

Objective 3.2: Plan and lead professional development activities that provide teachers with a variety of pathways to lead and learn in technology integration.

Strategies	Measures/Evaluation Strategy	Responsibility
Conduct a technology needs assessment	<ul style="list-style-type: none"> •Data collected will be reviewed by tech and curriculum staff to determine learning needs for staff 	Director of Tech, Building Level Tech, and Curriculum Staff
Encourage staff members to participate in webinars and other online opportunities	<ul style="list-style-type: none"> •Gather and disseminate availability of learning opportunities 	Director of Tech and Curriculum Staff
Continue to provide sessions for all staff on new and emerging technologies as well as updates and refreshers in a variety of environments	<ul style="list-style-type: none"> •Document attendance lists •Collect comments and notes through exit tickets 	Director of Tech, Building Level Tech, and Curriculum Staff

ADMINISTRATIVE/ORGANIZATIONAL TECHNOLOGY GOALS

Goal 4: Provide effective and efficient communication systems.

Objective 4.1: Implement an alert notification system that can provide responsive communication between school and home starting the 2019-2020 school year.

Strategies	Measures/Evaluation Strategy	Responsibility
Research notification systems	<ul style="list-style-type: none"> Identify a team of principals, tech staff, and administrative assistants to review one or more demos from the final selection of systems 	Director of Tech
Implement a notification system	<ul style="list-style-type: none"> Implement a system summer of 2019 that integrates with Synergy 	Director of Tech

Objective 4.2: Equip the administrative staff on utilization of the notification.

Strategies	Measures/Evaluation Strategy	Responsibility
Train administrative staff on how to use the system	<ul style="list-style-type: none"> At least 2 people from each school will be trained on how to use the selected notification system 	Director of Tech
Develop a best practice usage guide	<ul style="list-style-type: none"> Create and distribute best practices to the notification system users 	Director of Tech

Goal 5: Foster and sustain systems that provide safe and secure learning environments.

Objective 5.1: The technology team will communicate knowledge of our internet filter parent portal with parents, as well as best practices for using school technology devices in the home.

Strategies	Measures/Evaluation Strategy	Responsibility
Continue to provide resources and support for parents to ensure Internet safety	<ul style="list-style-type: none"> • Include tips in home bulletins • Create and post on our website an internet filter user guide • Include information on parent portals in summer mailings 	Director of Tech and Building Level Tech

Objective 5.2: The technology team will review and evaluate products to keep our online environment safe, while providing access to resources and products beneficial for education.

Strategies	Measures/Evaluation Strategy	Responsibility
Annually review our internet filter systems, Responsible Use Policy, and infrastructure	<ul style="list-style-type: none"> • Discuss and collect feedback from building administration • View data and reports collected from monitoring tools 	Director of Tech and GRCS IT

Objective 5.3: Develop a disaster recovery plan establishing connectivity and service to schools in the event of a crisis, emergency or disaster.

Strategies	Measures/Evaluation Strategy	Responsibility
Develop a plan to minimize interruptions to normal operations, to establish alternative means of operation, and to provide for a smooth and rapid restoration of service	<ul style="list-style-type: none"> • Document external vendors with their contact information and support for re-establishing service • Document application profiles with their name, critical level, manufacturer, and run data • Document inventory with manufacturer, description, model, and serial number • Document backup strategy • Document emergency response 	GRCS IT

	<p>procedures, backup operation procedures, and recovery action procedures</p> <ul style="list-style-type: none">• Document risk management with a brief description of potential consequences and remedial actions for flood, fire, tornado, electrical failure, sabotage,	
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RESOURCES

TECHNOLOGY STAFF

We have three district level technology positions, and a variety of building level technology education and tier one support positions at GRCS.

- 1 full time director of technology
- 1 full time district network specialist
- 1 full time district technology support services specialist
- 5 technology integration specialists (ranging from .2 FTE at the elementary to .7 FTE at the middle school to 1.0 FTE at the high school)
- Technology aides with various hours to support the technology integration specialist and to provide help desk coverage

STUDENT AND TEACHER DEVICES

All five of our district schools are equipped with multiple technology tools for teacher and student use. Classroom teachers have a laptop assigned to them and the availability of a teacher iPad. They also have one or more projectors in their rooms, Apple TV's, and document cameras. Items that are used less consistently are available to be signed out at the building level. This includes things like external DVD drives, presentation remotes, tripods, microphones, and green screens.

Our elementary schools have shared iPad carts, shared laptop carts, and two of our three elementary schools also have a computer lab. Devices are also available in the library for student usage. Desktops are scattered throughout the elementary buildings for paraprofessionals to use.

Our middle schools and high schools are one to one with technology devices. From grade seven on up, students are allowed to take home their devices. Students in grade five are issued an iPad. This device will travel up with the student through the eighth grade. Currently students in grades six through eight have a laptop, but this cycle is being phased out and the iPad as the middle school device is being phased in starting in 2019-2020. High school students continue to be issued a laptop that travels up with them through each grade.

Our current device life cycle is approximately four to seven years. Our one to one student devices are on a four-year life cycle. Students have the option to purchase their device at the close of the cycle. Those devices not purchased are sold to others in our community. Staff devices typically are refreshed on a five-year cycle. Desktops are refreshed every six to eight years.

INFRASTRUCTURE

Effective educational use of technology requires up-to-date technological tools and the technical support which allows for consistent, planned use by staff, students, administrators, and parents. As resources become available, each school will be provided with the necessary hardware and software to implement the vision of this plan. The goal of Grand Rapids Christian Schools is to continue to improve on our technology infrastructure facilitating the use of wired and wireless computing devices in each of our school buildings while supporting technology integration in the classroom.

Currently, GRCS's infrastructure includes single mode fiber linking Grand Rapids Christian Elementary School – Iroquois campus, Grand Rapids Christian Elementary School – Evergreen campus, Grand Rapids Christian Middle School and Grand Rapids Christian High School. Rockford Christian School is connected via an internet-based VPN between sites. All buildings have wired and wireless (802.11 gacx standard) network access.

We have the following server and appliance platforms:

- VMWare – 8 servers, hosting 21 virtual servers (Windows 2008r2/2012r2/2016)
- Eight non-VM servers running Windows 2008r2/2012r2/2016
- Email – GSuite
- Imaging and management platforms: JAMF Pro (for Mac/iOS)
- Firewall: Cisco ASA 5508-X and 5525-X with FirePower
- Internet filtering software: Securly
- Server based Applications include: Stoneware, RECTRAC, Meal Magic, Blackbaud suite of products, Edupoint Synergy, Web HelpDesk, ShoreTel/MiTel
- Hosted applications: Campus Press and Blackbaud Financial Edge and Raiser's Edge

All hardware and software purchases must meet district standards. The review, evaluation, and purchase of hardware and software is a collaborative process between the building Technology Integration Specialists, District Network and Technology Support Specialists, and the Director of Technology. A web-based Help Desk system provides quick reporting and resolution of technology issues.

Our phone system is a ShoreTel/MiTel IP based phone system networked throughout the district. Voicemail is provided to district employees. Key staff members are equipped with cell phones providing greater accessibility in case of emergency and routine communications needs. There are also 2-way radios in each building.

Our future hardware needs include updating our staff laptops at our PK-8 schools over the next 3 years, updating 5th and 9th grade devices yearly, updating iPads, updating projectors at Rockford Christian School and both Grand Rapids Christian Elementary school campuses, and updating older switches, older servers, and older access points.

APPENDICES

APPENDIX A: MICHIGAN INTEGRATED TECHNOLOGY COMPETENCIES FOR STUDENTS BY AGE BAND

AGE BAND ARTICULATION: AGES 4–7

1. 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.

1.a With guidance from an educator, students consider and set personal learning goals and utilize appropriate technologies that will demonstrate knowledge and reflection of the process.

1.b With guidance from an educator, students learn about various technologies that can be used to connect to others or make their learning environments personal and select resources from those available to enhance their learning.

1.c With guidance from an educator, students recognize performance feedback from digital tools, make adjustments based on that feedback and use age-appropriate technology to share learning.

1.d With guidance from an educator, students explore a variety of technologies that will help them in their learning and begin to demonstrate an understanding of how knowledge can be transferred between tools.

2. Digital Citizen

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

2.a Students practice responsible use of technology through teacher-guided online activities and interactions to understand how the digital space impacts their life.

2.b With guidance from an educator, students understand how to be careful when using devices and how to be safe online, follow safety rules when using the internet and collaborate with others.

2.c With guidance from an educator, students learn about ownership and sharing of information, and how to respect the work of others.

2.d With guidance from an educator, students demonstrate an understanding that technology is all around them and the importance of keeping their information private.

3. 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.

3.a With guidance from an educator, students use digital tools and resources, contained within a classroom platform or otherwise provided by the teacher, to find information on topics of interest.

3.b With guidance from an educator, students become familiar with age-appropriate criteria for evaluating digital content.

3.c With guidance from an educator, students explore a variety of teacher-selected tools to organize information and make connection to their learning.

3.d With guidance from an educator, student explore real-world issues and problems and share their ideas about them with others.

4. Innovative Designer

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

4.a With guidance from an educator, students ask questions, suggest solutions, test ideas to solve problems and share their learning.

4.b Students use age-appropriate digital and non-digital tools to design something and are aware of the step-by-step process of designing.

4.c Students use a design process to develop ideas or creations, and they test their design and redesign if necessary.

4.d Students demonstrate perseverance when working to complete a challenging task.

5. 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.

5.a With guidance from an educator, students identify a problem and select appropriate technology tools to explore and find solutions.

5.b With guidance from an educator, students analyze age-appropriate data and look for similarities in order to identify patterns and categories.

5.c With guidance from an educator, student break a problem into parts and identify ways to solve the problem.

5.d Students understand how technology is used to make a task easier or repeatable and can identify real-world examples.

6. 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.

6.a With guidance from an educator, students choose different tools for creating something new or for communicating with others.

6.b Students use digital tools to create original works.

6.c With guidance from an educator, students share ideas in multiple ways-visual, audio, etc.

6.d With guidance from an educator, students select technology to share their ideas with different people.

7. 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.

7.a With guidance from an educator, students use technology tools to work with friends and with people outside their neighborhood, city and beyond.

7.b With guidance from an educator, students use technology to communicate with others and to look at problems from different perspectives.

7.c With guidance from an educator, students take on different team roles and use age-appropriate technologies to complete projects.

7.d With guidance from an educator, students use age-appropriate technologies to work together to understand problems and suggest solutions.

AGE BAND ARTICULATION: AGES 8–11

1. 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.

1.a Students develop learning goals in collaboration with an educator, select the technology tools to achieve them, and reflect on and revise the learning process as needed to achieve goals.

1.b With the oversight and support of an educator, students build a network of experts and peers within school policy and customize their environments to enhance their learning.

1.c Students seek feedback from both people and features embedded in digital tools, and use age-appropriate technology to share learning.

1.d Students explore age-appropriate technologies and begin to transfer their learning to different tools or learning environments.

2. Digital Citizen

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

2.a Students demonstrate an understanding of the role an online identity plays in the digital world and learn the permanence of their decisions when interacting online.

2.b Students practice and encourage others in safe, legal and ethical behavior when using technology and interacting online, with guidance from an educator.

2.c Students learn about, demonstrate and encourage respect for intellectual property with both print and digital media when using and sharing the work of others.

2.d Students demonstrate an understanding of what personal data is, how to keep it private and how it might be shared online.

3. 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.

3.a Students collaborate with a teacher to employ appropriate research techniques to locate digital resources that will help them in their learning process.

3.b Students learn how to evaluate sources for accuracy, perspective, credibility and relevance.

3.c Using a variety of strategies, students organize information and make meaningful connections between resources.

3.d Students explore real-world problems and issues and collaborate with others to find answers or solutions.

4. Innovative Designer

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

4.a Students explore and practice how a design process works to generate ideas, consider solutions, plan to solve a problem or create innovative products that are shared with others.

4.b Student use digital and non-digital tools to plan and manage a design process.

4.c Students engage in a cyclical design process to develop prototypes and reflect on the role that trial and error plays.

4.d Students demonstrate perseverance when working with open-ended problems.

5. 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.

5.a Students explore or solve problems by selecting technology for data analysis, modeling and algorithmic thinking, with guidance from an educator.

5.b Students select effective technology to represent data.

5.c Students break down problems into smaller parts, identify key information and propose solutions.

5.d Students understand and explore basic concepts related to automation, patterns and algorithmic thinking.

6. 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.

6.a Students recognize and utilize the features and functions of a variety of creation or communication tools.

6.b Students create original works and learn strategies for remixing or repurposing to create new artifacts.

6.c Students create digital artifacts to communicate ideas visually and graphically.

6.d Students learn about audience and consider their expected audience when creating digital artifacts and presentations.

7. 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.

7.a Students use digital tools to work with friends and people from different backgrounds or cultures.

7.b Students use collaborative technologies to connect with others, including peers, experts and community members, to explore different points of view on various topics.

7.c Students perform a variety of roles within a team using age-appropriate technology to complete a project or solve a problem.

7.d Students work with others using collaborative technologies to explore local and global issues.

AGE BAND ARTICULATION: AGES 12–14

1. 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.

- 1.a Students articulate personal learning goals, select and manage appropriate technologies to achieve them, and reflect on their successes and areas of improvement in working toward their goals.
- 1.b Students identify and develop online networks within school policy, and customize their learning environments in ways that support their learning, in collaboration with an educator.
- 1.c Students actively seek performance feedback from people, including teachers, and from functionalities embedded in digital tools to improve their learning process, and they select technology to demonstrate their learning in a variety of ways.
- 1.d Students are able to navigate a variety of technologies and transfer their knowledge and skills to learn how to use new technologies.

2. Digital Citizen

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

- 2.a Students manage their digital identities and reputations within school policy, including demonstrating an understanding of how digital actions are never fully erasable.
- 2.b Students demonstrate and advocate for positive, safe, legal and ethical habits when using technology and when interacting with others online.
- 2.c Students demonstrate and advocate for an understanding of intellectual property with both print and digital media-including copyright, permission and fair use-by creating a variety of media products that include appropriate citation and attribution elements.
- 2.d Students demonstrate an understanding of what personal data is and how to keep it private and secure, including the awareness of terms such as encryptions, HTTPS, password, cookies and computer viruses; they also understand the limitations of data management and how data0collection technologies work.

3. 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.

3.a Students demonstrate and practice the ability to effectively utilize research strategies to locate appropriate digital resources in support of their learning.

3.b Students practice and demonstrate the ability to evaluate resources for accuracy, perspective, credibility and relevance.

3.c Students locate and collect resources from a variety of sources and organize assets into collections for a wide range of projects and purposes.

3.d Students explore real-world issues and problems and actively pursue and understanding of them and solutions for them.

4. Innovative Designer

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

4.a Students engage in a design process and employ it to generate ideas, create innovative products or solve authentic problems.

4.b Students select and use digital tools to support a design process and expand their understanding to identify constraints and trade-offs and to weight risks.

4.c Students engage in a design process to develop, test and revise prototypes, embracing the cyclical process of trial and error and understanding problems or setbacks as potential opportunities for improvement.

4.d Students demonstrate an ability to persevere and handle greater ambiguity as they work to solve open-ended problems.

5. 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.

5.a Students practice defining problems to solve by computing for data analysis, modeling or algorithmic thinking.

- 5.b Students find or organize data and use technology to analyze and represent it to solve problems and make decisions.
- 5.c Students break problems into component parts, identify key pieces and use that information to problem solve.
- 5.d Student demonstrate an understanding of how automation works and use algorithmic thinking to design and automate solutions.

6. 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.

- 6.a Students select appropriate platforms and tools to create, share and communicate their work effectively.
- 6.b Students create original works or responsibly repurpose other digital resources into new creative works.
- 6.c Students communicate complex ideas clearly using various digital tools to convey the concepts textually, visually, graphically, etc.
- 6.d Students publish or present content designed for specific audiences and select platforms that will effectively convey their ideas to those audiences.

7. 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.

- 7.a Students use digital tools to interact with others to develop a richer understanding of different perspectives and cultures.
- 7.b Students use collaborative technologies to connect with others, including peers, experts and community members, to learn about issues and problems or to gain broader perspective.
- 7.c Students determine their role on a team to meet goals, based on their knowledge of technology and content, as well as personal preference.

7.d Students select collaborative technologies and use them to work with others to investigate and develop solutions relate to local and global issues.

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APPENDIX B: RESPONSIBLE USE POLICY

GRCS TECHNOLOGY RESPONSIBLE USE POLICY

PREAMBLE

Our world belongs to God. Technology resources are powerful tools, and teamed with skillful teachers, can be used to effectively prepare students to be effective servants of Christ in contemporary society. The use of school provided technology is a privilege, not a right, and staff and students at Grand Rapids Christian Schools (GRCS) are expected to use the technology to support and enhance education and communication. In order to facilitate a safe and functional Christian educational environment, members of the GRCS community are expected to adhere to the policy as outlined below.

SCOPE

Individuals (“users”) covered by this policy include all authorized users including but not limited to staff, teachers, students, subcontractors and visitors. It includes all GRCS technology resources such as servers, desktops, laptops, tablets, printers, projectors, cameras, software, apps and internet access. As responsible caretakers of all that God has entrusted to us, we expect users to apply this policy to the use of GRCS technology resources both on GRCS campuses and off-site, including the use of personal devices when at GRCS sponsored activities.

RESPONSIBILITIES

- a. All users are expected to engage with GRCS technology resources in ways that are God-honoring, responsible, ethical, and legal. Use of technology resources must be in compliance with federal and state laws.
- b. As children of God created in His image, all users are expected to avoid unethical internet usage and inappropriate use of social media such as cyberbullying. Users should report such behaviors to GRCS staff.
- c. All users are required to use technology resources in accordance with the GRCS code of conduct in addition to any other relevant GRCS guidelines. Violations include but are not limited to harassment, defamation, threatening or discriminatory behavior, and accessing obscene material.
- d. Plagiarism and copyright infringement through technology resources is strictly prohibited.

- e. Attempted or actual modification of restrictions or protections without authorization from technology staff is strictly prohibited.
- f. Users are permitted to download and install relevant and appropriately licensed programs provided they have received approval from technology staff.
- g. Unsolicited mailings (e.g. spam, forwards) are prohibited.
- h. Business activities, such as advertising or buying and selling of goods and services using GRCS technology resources are prohibited.
- i. Users agree to take reasonable precautions, to maintain and to protect GRCS technology resources. Users agree to abide by care instructions as outlined in any guides, manuals or verbal instructions that come with technology resources given by technology staff.
- j. Users agree never to attempt to damage, destroy or otherwise physically abuse GRCS technology resources.
- k. Users agree to manage their individual use of technology resources in ways that do not detrimentally affect other users (e.g. not streaming music, not monopolizing printers, etc).
- l. Users agree never to connect unapproved devices to the GRCS network.
- m. Users agree not to hold GRCS liable for losses or damages incurred by failure or malfunction of technology resources.
- n. Any damage to or malfunction of technology resources, whether accidental or not, is to be reported promptly and with full disclosure to technology staff.

SAFETY AND PRIVACY CONSIDERATIONS

- a. Users agree to use only approved logins to access accounts and to keep their own login information secure.
- b. Users agree not to share any GRCS login/account data with any person or organization unless approved or requested by administration or technology staff.
- c. Users agree to protect and maintain their accounts by logging out or locking the computer. Users will monitor and report unusual activity on their technology resources.
- d. Users agree not to access, modify, or destroy other users' information.
- e. Users agree not to allow use of GRCS technology resources by unauthorized persons such as family and friends.

- f. GRCS will provide education and training to students on (1) safe and appropriate online behavior, such as interacting with other individuals on social networking sites, and (2) cyber-bullying awareness and responses.
- g. Users agree that all electronic files stored on school resources, including e-mail messages, are property of GRCS.
- h. Users agree that GRCS administration and technology staff reserve the right to monitor and inspect files stored on school resources for conformity with policies, licensing standards and state or federal law. Users understand and agree that any files accessed, created, or stored on school resources are not private.
- i. Users understand and agree that GRCS has implemented technology measures that block/filter internet access to visual images that are obscene, illegal or otherwise harmful to minors. Users (and their parent/guardians) are nevertheless advised that users may gain access to unauthorized websites, and GRCS cannot guarantee that users will not access websites that they (or their parents/guardians) would find inappropriate, offensive, objectionable or controversial. Users (and their parents/guardians) agree not to hold GRCS liable for any such material that they may find as a result of using GRCS's technology resources.
- j. To promote student safety and ensure compliance with this policy, internet, network and other technology-related activities will be monitored or restricted using filtering, passive supervision technologies and periodic checks by technology staff.

DISCIPLINARY ACTION

Violation of any part of the above policy may result in restriction or suspension of access to technology resources, notification of law enforcement, financial restitution, or other disciplinary measures as determined by GRCS administration.

Policy reviewed and approved by the Board of Trustees - Revised June 2014

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