Grand Rapids Christian Schools
Technology Plan
2016 - 2019

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

Grand Rapids Christian Schools
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District/School Code Numbers	Technology Plan Information
Grand Rapids Christian High: 41-010-01001	Current Plan Start Date: January 2016
Grand Rapids Christian Middle School: 41-010-09422	Technology Plan End Date: June 2019
Grand Rapids Christian Elementary School: 41-010-00494	**Contact**
Rockford Christian School: 41-210-08570	Director of Technology: Sheila VanderWoude 616-574-5810 svanderwoude@grcs.org
Technology Plan URL: http://www.grcs.org	
Kent Intermediate School District	

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Introduction

District Mission Statement

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

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.

Background

Since its last technology plan was adopted in 2012, GRCS has faced slow and steady growth at all academic levels. As a result, Grand Rapids Christian Middle School (GRCMS) was relocated to a renovated building, the Grand Rapids Christian Elementary School Evergreen program expanded into some of the classrooms vacated by Grand Rapids Christian Middle School, and the district offices are planning to move out of the Grand Rapids Christian Elementary School Iroquois campus so that additional classrooms can be added at that building. Grand Rapids Christian High School (GRCHS) was renovated in 2012-2013 creating an innovative campus.

Demographics and Staff

Grand Rapids Christian Schools serves over 2300 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.

Educational 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 Support Services (ESS) for those who may need assistance beyond the traditional classroom. ESS serves over 450 children among all our school with a wide variety of individualized services, including short term tutoring, testing, academic support, and inclusion services for special needs students. The growth of this program has increased the need for assistive technologies and software.

Grand Rapids Christian Schools

Grand Rapids Christian Elementary School - Iroquois Campus
1050 Iroquois Drive SE
Grand Rapids, MI 49506
(616) 574-6500
Grades PK - 4

Grand Rapids Christian Elementary School - Evergreen Program
1630 Griggs SE
Grand Rapids, MI 49506
(616) 574-5900
Grades PK – 5

Rockford Christian Elementary and Middle School
6060 Belding Rd
Rockford, MI 49341
616-574-6400
Grades PK - 8

Grand Rapids Christian Middle School
2036 Chesaning Dr. SE
Grand Rapids, MI 49506
616-574-6350
Grades 5 - 8

Grand Rapids Christian High School
2300 Plymouth Ave SE
Grand Rapids, MI 49506
616-574-5500
Grades 9-12

Technology Vision and Mission

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.

Curriculum Integration

Grand Rapids Christian Schools (GRCS) has adopted the educational standards and expectations from the 2009 Michigan Educational Technology Standards (METS). See Appendix A. The METS are aligned with the 2007 International Standards for Technology Education (ISTE). While these standards remain relevant in today's world, they are in the process of being updated. The refresh of the ISTE standards for students, is scheduled to be released in June 2016. Skills checklists and other information that assist in assessment and management of expectations are available at http://techplan.edzone.net/METS. These standards provide teachers with an outline of learning expectations that drive educational technology literacy.

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, 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 the migration to the Common Core State Standards while still focusing on our desire for faith integration, GRCS has begun to utilize Curriculum Trak. Curriculum Trak is a web-based platform that facilitates electronic curriculum mapping. It is a tool used by teaching and curriculum staff in our K-8 schools. 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. Learning Management Systems (LMS) – Secondary staff are required to maintain a learning management system to create, deliver, and manage their curricular resources. The learning management systems currently used at GRCS are Moodle and Edify. The LMS:
    - Provides a web-based system for course delivery so that staff, students, and parents 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.

Student Achievement

Empowering teachers to inspire minds and transforming instruction to deepen learning are part of our vision for empowering 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 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 can provide.
3. Teachers will plan and incorporate a technology tool and/or resource in the design, development and delivery of at least two lessons per semester.
4. All secondary teachers will manage their courses in a learning management system providing students and parents with 24/7 access to many course materials.
5. The district will continue to support the one-to-one laptop program in grades five through twelve providing students with opportunities to collaborate, communicate, and explore 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 skills-based instructional classes, following the Michigan Educational Technology Standards as well as integration of this skill based instruction following the content area standards, will be taught to students in grades one through six.
8. Secondary staff will teach technology skills, following the Michigan Educational Technology Standards and the International Society of Technology Education standards, as an integrated tool in their curriculum.

Communications

In 2008-2009, Grand Rapids Christian School's began to use Blackbaud as their student information management system. The goals of implementation were to eliminate duplication of building efforts, streamline operations, and improve record keeping, and to create a parent portal to access information. Parents and students are now able to access attendance, class schedule, class assignments, class grades, and report cards through the web portal that is real-time and is interfaced directly with the teachers' attendance and gradebook. This has increased communication between staff and parents as well as between parent and child. Implementation of Blackbaud also allows for utilizing email blasts as a form of communication between staff and parents or students and between school administration and parents. Many emails are now sent out which allow parents to have a better understanding of what their child is learning at school.

During the 2011–2012 school year, social networking sites began to play a role in parent and community communications. The district began to use a Facebook page as did each of the district buildings to share upcoming events, stories in the news, and stories in and out of the classrooms. YouTube channels were created to showcase student products and to share special events.

The district has a general information website that is available to the general public. There are also secure areas of the website which can only be accessed through password by staff, parents, and students. This technology plan, as well as other technology policies and procedures, are available on the Grand Rapids Christian School instructional technology website.

Grand Rapids Christian Middle School and Rockford Christian School host laptop orientation and digital citizenship parent nights. These evenings are a great opportunity to discuss the use of the laptop at school and home, but it is also a great time to address parental concerns with technology and to share tips about internet safety and online activity.

One of the additional communication tools being explored for parent communication over the next three years is an alert broadcast messaging system so that parents can be notified quickly and efficiently.

Academic Technology Goals

Goal: Engage and empower learning by utilizing technology to provide learning experiences and environments that are designed to meet the needs of all learners.

Description: *Teachers design, develop, and evaluate authentic 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.*

Objectives:

- Teachers and students will use the technology available to them to give the students more control over their own learning process using elementary databases (examples: PebbleGo and PowerKnowledge) and presentation tools (examples: Keynote and Google Slides) to teach others.
- Teachers will customize and enable personalized learning activities to address students' diverse learning styles, working strategies, and abilities using digital tools and resources.
- Teachers will design authentic learning experiences that have real-world challenges, project-based learning, or global connections using a variety of resources engaging students in collaborative learning.

Goal: Leverage the power of technology to provide data-informed instruction and learning.

Description: *Teachers gather data on student growth using a variety of formative and assessment tools. The ongoing gathering, analyzing, and sharing of data enables continuous improvement of learning and teaching.*

Objectives:

- Teachers will use assessment data to gather and track formative data on students' progress in learning, to provide resources to re-teach and master learning targets, and to inform and adapt their instruction.
- Teachers will know and effectively use at lease three formative assessment tools (examples: Kahoot, Socrative and Nearpod) for gathering student information.
- Teachers will use the interactive and comment capabilities of tools (example: Google Drive) to monitor student progress and to provide timely, effective feedback.
- Teachers will use technology tools (example: Edify) to provide timely and actionable feedback about student learning to improve achievement and instructional practices.

Goal: Understand human, cultural, and societal issues related to technology and practice Christian, legal, and ethical behavior.

Description: *When students research or use social media tools, they actively apply a discerning Christian lens to their online behavior demonstrating appropriate behaviors and creating a positive digital footprint.*

Objectives:

- Students will practice safe, legal, and responsible use of information and technology.
- Students will use proper online etiquette recognizing how to use social media differently for personal or academic purposes.
- Students will exhibit a positive attitude toward technology that supports collaboration, learning, and productivity.
- Students will exhibit leadership for digital citizenship.

Administrative/Organizational Technology Goals

Goal: Create an online classroom presence for resources and communication.

Description: *Learning management systems and websites will be used by staff to provide students and families with technology-rich learning environments that help meet individual needs, help students take charge of their own learning, and maximize student learning of required content.*

Objectives:

- Teachers will employ the use of a learning management system (examples: Moodle, Edify, Google Classroom) that contains assignments, presentations, calendars, classroom web resources, differentiated resources, and more.
- Teachers will standardize on a landing place for students and their families to access online classroom content.
- Learning commons staff will develop websites with easily accessible staff resources to be used for curriculum development.

Goal: Supply an ongoing, robust professional development model to increase staff technology literacy to support their use of skills and tools for 21st century learning environments.

Description: *All staff will participate in professional growth activities that will promote the use of emerging technologies and resources to support learning f all students.*

Objectives:

- Integrate technology in the curriculum utilizing its power to transform education.
- Leverage Google Apps for Education in the classroom for communication and collaboration.

Goal: Provide effective and efficient communication systems.

Description: *A variety of systems of communications will be utilized in order to streamline operations. This includes course information, attendance, grades, homework, and activities.*

Objectives:

- Teachers will input data classroom information into the GRCS web portal (Faculty Access for the Web) to ensure upcoming assignment due dates, grades, and attendance will be viewable for students and their parents in a timely manner.
- Technology staff will explore the implementation of an alert messaging system that can provide responsive communication between school and home.
- Technology staff will fully implement Google Apps for Education (GAFE) transitioning away from Microsoft Exchange for GRCS staff.

Goal: Provide technology support systems that offer secure and safe learning environments.

Description: *Technology staff and administration will provide and support technology resources needed to protect our staff and students online and in their schools.*

Objectives:

- Technology staff will actively monitor internet activity using internet filtering software and weekly suspicious searches reports.
- Technology staff will ensure that security cameras are available and functioning where needed.
- Technology staff will research and install a new telephone system.

Professional Development

Professional development is an essential component of the Grand Rapids Christian Schools (GRCS) plan to integrate technology into the curriculum along with integrating the use of technology into lesson design to support teaching and learning. Professional development for teachers, administrators, and learning commons personnel will include awareness of ongoing state and national standards addressing technology competencies as well as development of technology skills and strategies necessary to integrate technology into practice. GRCS recognizes that just as technology is continually evolving, changing, and growing; so will the strategies for meeting its professional goals.

Because technology enhances the productivity and professional practices of GRCS staff, new staff will receive orientation by the GRCS Director of Technology on email, attendance, grading software, voice mail, etc. New staff are assigned a mentor teacher who will assist them in becoming familiar with the software resources and hardware tools available in their building to enhance teaching and learning.

Each of the Grand Rapids Christian Schools has a part to full time Technology Integration Specialist (TIS). The TIS works with the library media specialist as part of the learning commons team to integrate technology into the curriculum. The TIS also provides daily support and ongoing trainings for technology.

Technology professional development plans are focused around the following topics:

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

Professional development opportunities will be 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.

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, laptop contract and consent form, responsible use policy, laptop 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 "distant 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, Aleks, 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 IGOR (data warehouse), Curriculum Trak, Campus Press, and Moodle. Staff also has access to check out materials through our local REMC services. Staff include their own classroom resource links through their Moodle, Google Classroom, Google Site, Campus Press site, Edify, or on their wikis.

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 district network specialist
- 1 full time district technology support services specialist
- 1 full time, school year director of technology
- 5 technology integration specialists (ranging from .3 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 at the schools with a one-to-one program

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. A leased T1 and cable line is used to provide connectivity for Rockford Christian School. All buildings have wired and wireless (802.11 g standard) network access.

We have the following server and appliance platforms:

- VMWare – 4 servers, hosting 21 virtual servers (Windows 2008r2/2012r2)
- Eight non-VM servers running Windows 2008r2/2012r2
- Email – Microsoft Exchange
- Imaging and management platforms: Fog (for Windows) and Casper (for Mac/iOS)
- Firewall: Cisco ASA 5510 and 5520
- Internet filtering software: Smoothwall
- Email SPAM filtering device: Barracuda
- Server based Applications include: Stoneware, RECTRAC, Meal Magic, Blackbaud suite of products, Exchange 2010, Web HelpDesk, Avast (antivirus)
- Hosted applications: Campus Press, Moodle, Edify

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. We operate on a five year desktop refreshment plan and a four year laptop refreshment cycle for all district computers. A web-based HelpDesk system provides quick reporting and resolution of technology issues.

Our phone system is a Northern Telecom Option 11 phone system with a networked PBX in each building. Voicemail is provided to district employees. Our phone system is outdated and needs to be updated to a system that includes Voice Over IP (VoIP). 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 phone system, updating the desktops and laptops at Rockford Christian and Grand Rapids Christian Elementary - Iroquois campus, updating older switches, and updating older servers. We also need to develop a disaster recovery plan.

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Appendix A: 2009 Education Technology Standards Students PK - 2

Creativity and Innovation—By the end of grade 2 each student will:

1. Use a variety of digital tools (e.g., word processors, drawing tools, simulations, presentation software, graphical organizers) to learn, create, and convey original ideas or illustrate concepts

Communication and Collaboration—By the end of grade 2 each student will:

1. Work together when using digital tools (e.g., word processor, drawing, presentation software) to convey ideas or illustrate simple concepts relating to a specified project
2. Use a variety of developmentally appropriate digital tools (e.g., word processors, paint programs) to communicate ideas to classmates, families, and others

Research and Information Literacy —By the end of grade 2 each student will:

1. Interact with Internet based resources
2. Use digital resources (e.g., dictionaries, encyclopedias, graphs, graphical organizers) to locate and interpret information relating to a specific curricular topic, with assistance from teachers, school library media specialists, parents, or student partners

Critical Thinking, Problem Solving, and Decision Making —By the end of grade 2 each student will:

1. Explain ways that technology can be used to solve problems (e.g., cell phones, traffic lights, GPS units
2. Use digital resources (e.g., dictionaries, encyclopedias, search engines, web sites) to solve developmentally appropriate problems, with assistance from teachers, parents, school media specialists, or student partners

Digital Citizenship —By the end of grade 2 each student will:

1. Describe appropriate and inappropriate uses of technology (e.g., computers, Internet, e-mail, cell phones) and describe consequences of inappropriate uses
2. Know the Michigan Cyber Safety Initiative's three rules (Keep Safe, Keep Away, Keep Telling)
3. Identify personal information that should not be shared on the Internet (e.g. name, address, phone)
4. Know to inform a trusted adult if he/she receives or views an online communication which makes him/her feel uncomfortable, or if someone whom he/she doesn't know is trying to communicate with him/her or asking for personal information

Technology Operations and Concepts —By the end of grade 2 each student will:

1. Discuss advantages and disadvantages of using technology
2. Be able to use basic menu commands to perform common operations (e.g., open, close, save, print)
3. Recognize and name the major hardware components in a computer system (e.g., computer, monitor, keyboard, mouse, printer)
4. Discuss the basic care for computer hardware and various media types (e.g., CDs, DVDs)
5. Use developmentally appropriate and accurate terminology when talking about technology
6. Understand that technology is a tool to help him/her complete a task, and is a source of information, learning, and entertainment
7. Demonstrate the ability to navigate in virtual environments (e.g., electronic books, games, simulation software, web sites)

2009 Education Technology Standards Students 3 – 5

Creativity and Innovation —By the end of grade 5 each student will:

1. Produce a media-rich digital project aligned to state curriculum standards (e.g., fable, folk tale, mystery, tall tale, historical fiction)
2. Use a variety of technology tools and applications to demonstrate his/her creativity by creating or modifying works of art, music, movies, or presentations
3. Participate in discussions about technologies (past, present, and future) to understand these technologies are the result of human creativity

Communication and Collaboration—By the end of grade 5 each student will:

1. Use digital communication tools (e.g. e-mail, wikis, blogs, IM, chat rooms, videoconferencing, Moodle, Blackboard) and online resources for group learning projects
2. Identify how different software applications may be used to share similar information, based on the intended audience (e.g. , presentations for classmates, newsletters for parents)
3. Use a variety of media and formats to create and edit products (e.g., presentations, newsletters, brochures, web pages) to communicate information and ideas to various audiences

Research and Information Literacy—By the end of grade 5 each student will:

1. Identify search strategies for locating information with support from teachers or library media specialists
2. Use digital tools to find, organize, analyze, synthesize, and evaluate information
3. Understand and discuss that web sites and digital resources may contain inaccurate or biased information
4. Understand that using information from a single Internet source might result in the reporting of erroneous facts and that multiple sources should always be researched

Critical Thinking, Problem Solving, and Decision Making —By the end of grade 5 each student will:

1. Use digital resources to access information that can assist in making informed decisions about everyday matters (e.g., which movie to see, which product to purchase)
2. Use information and communication technology tools (e.g., calculators, probes, videos, DVDs, educational software) to collect, organize, and evaluate information to assist with solving problems
3. Use digital resources to identify and investigate a state, national, or global issue (e.g., global warming, economy, environment)

Digital Citizenship —By the end of grade 5 each student will:

1. Discuss scenarios involving acceptable and unacceptable uses of technology (e.g., file-sharing, social networking, text messaging, cyber bullying, plagiarism)
2. Recognize issues involving ethical use of information (e.g., copyright adherence, source citation)
3. Describe precautions surrounding personal safety that should be taken when online
4. Identify the types of personal information that should not be given out on the Internet (name, address, phone number, picture, school name)

Technology Operations and Concepts—By the end of grade 5 each student will:

1. Use basic input and output devices (e.g., printers, scanners, digital cameras, video recorders, projectors)
2. Describe ways technology has changed life at school and at home
3. Understand and discuss how assistive technologies can benefit all individuals
4. Demonstrate proper care in the use of computer hardware, software, peripherals, and storage media
5. Know how to exchange files with other students using technology (e.g., network file sharing, flash drives)

2009 Education Technology Standards Students 6 – 8

Creativity and Innovation —By the end of grade 8 each student will:

1. Apply common software features (e.g., spellchecker, thesaurus, formulas, charts, graphics, sounds) to enhance communication with an audience and to support creativity
2. Create an original project (e.g., presentation, web page, newsletter, information brochure) using a variety of media (e.g., animations, graphs, charts, audio, graphics, video) to present content information to an audience
3. Illustrate a content-related concept using a model, simulation, or concept-mapping software

Communication and Collaboration —By the end of grade 8 each student will:

1. Use digital resources (e.g., discussion groups, blogs, podcasts, videoconferences, Moodle, Blackboard) to collaborate with peers, experts, and other audiences
2. Use collaborative digital tools to explore common curriculum content with learners from other cultures
3. Identify effective uses of technology to support communication with peers, family, or school personnel

Research and Information Literacy —By the end of grade 8 each student will:

1. Use a variety of digital resources to locate information
2. Evaluate information from online information resources for accuracy and bias
3. Understand that using information from a single Internet source might result in the reporting of erroneous facts and that multiple sources should always be researched
4. Identify types of web sites based on their domain names (e.g., edu, com, org, gov, net)
5. Employ data-collection technologies (e.g., probes, handheld devices, GPS units, geographic mapping systems) to gather, view, and analyze the results for a content-related problem

Critical Thinking, Problem Solving, and Decision Making —By the end of grade 8 each student will:

1. Use databases or spreadsheets to make predictions, develop strategies, and evaluate decisions to assist with solving a problem
2. Evaluate available digital resources and select the most appropriate application to accomplish a specific task (e, g., word processor, table, outline, spreadsheet, presentation program)
3. Gather data, examine patterns, and apply information for decision making using available digital resources
4. Describe strategies for solving routine hardware and software problems

Digital Citizenship —By the end of grade 8 each student will:

1. Provide accurate citations when referencing information sources
2. Discuss issues related to acceptable and responsible use of technology (e.g., privacy, security, copyright, plagiarism, viruses, file-sharing)
3. Discuss the consequences related to unethical use of information and communication technologies
4. Discuss possible societal impact of technology in the future and reflect on the importance of technology in the past
5. Create media-rich presentations on the appropriate and ethical use of digital tools and resources
6. Discuss the long term ramifications (digital footprint) of participating in questionable online activities (e.g., posting photos of risqué poses or underage drinking, making threats to others)
7. Describe the potential risks and dangers associated with online communications

Technology Operation and Concepts – By the end of grade 8 each student will:

1. Identify file formats for a variety of applications (e.g., doc, xls, pdf, txt, jpg, mp3)
2. Use a variety of technology tools (e.g., dictionary, thesaurus, grammar-checker, calculator) to maximize the accuracy of technology-produced materials
3. Perform queries on existing database
4. Know how to create and use various functions available in a database (e.g., filtering, sorting, charts)
5. Identify a variety of information storage devices (e.g., CDs, DVDs, flash drives, SD cards) and provide rationales for using a certain device for a specific purpose
6. Use accurate technology terminology
7. Use technology to identify and explore various occupations or careers, especially those related to science, technology, engineering, and mathematics
8. Discuss possible uses of technology to support personal pursuits and lifelong learning
9. Understand and discuss how assistive technologies can benefit all individuals
10. Discuss security issues related to e-commerce

2009 Education Technology Standards Students 9 – 12

Creativity and Innovation —By the end of grade 12 each student will:

1. Apply advanced software features (e.g. built-in thesaurus, templates, styles) to redesign the appearance of word processing documents, spreadsheets, and presentations
2. Create a web page (e.g., Dreamweaver, iGoogle, Kompozer)
3. Use a variety of media and formats to design, develop, publish, and present projects (e.g., newsletters, websites, presentations, photo galleries)

Communication and Collaboration —By the end of grade 12 each student will:

1. Identify various collaboration technologies and describe their use (e.g., desktop conferencing, webinar, listserv, blog, wiki)
2. Use available technologies (e.g., desktop conferencing, e-mail, videoconferencing, instant messaging) to communicate with others on a class assignment or project
3. Collaborate in content-related projects that integrate a variety of media (e.g., print, audio, video, graphic, simulations, and models)
4. Plan and implement a collaborative project using telecommunications tools (e.g., ePals, discussion boards, online groups, interactive web sites, videoconferencing)
5. Describe the potential risks and dangers associated with online communications
6. Use technology tools for managing and communicating personal information (e.g., finances, contact information, schedules, purchases, correspondence)

Research and Information Literacy —By the end of grade 12 each student will:

1. Develop a plan to gather information using various research strategies (e.g., interviews, questionnaires, experiments, online surveys)
2. Identify, evaluate, and select appropriate online sources to answer content related questions
3. Demonstrate the ability to use library and online databases for accessing information (e.g., MEL, Proquest, Infosource, United Streaming)
4. Distinguish between fact, opinion, point of view, and inference
5. Evaluate information found in selected online sources on the basis of accuracy and validity
6. Evaluate resources for stereotyping, prejudice, and misrepresentation
7. Understand that using information from a single internet source might result in the reporting of erroneous facts and that multiple sources must always be researched

8. Research examples of inappropriate use of technologies and participate in related classroom activities (e.g., debates, reports, mock trials, presentations)

Critical Thinking, Problem Solving, and Decision Making —By the end of grade 12 each student will:

1. Use digital resources (e.g., educational software, simulations, models) for problem solving and independent learning
2. Analyze the capabilities and limitations of digital resources and evaluate their potential to address personal, social, lifelong learning, and career needs
3. Devise a research question or hypothesis using information and communication technology resources, analyze the findings to make a decision based on the findings, and report the results

Digital Citizenship —By the end of grade 12 each student will:

1. Identify legal and ethical issues related to the use of information and communication technologies (e.g., properly selecting and citing resources)
2. Discuss possible long-range effects of unethical uses of technology (e.g., virus spreading, file pirating, hacking) on cultures and society
3. Discuss and demonstrate proper netiquette in online communications
4. Identify ways that individuals can protect their technology systems from unethical or unscrupulous users
5. Create appropriate citations for resources when presenting research findings
6. Discuss and adhere to fair use policies and copyright guidelines

Technology Operation and Concepts – By the end of grade 12 each student will:

1. Complete at least one online credit, or non-credit, course or online learning experience
2. Use an online tutorial and discuss the benefits and disadvantages of this method of learning
3. Explore career opportunities, especially those related to science, technology, engineering, and mathematics and identify their related technology skill requirements
4. Describe uses of various existing or emerging technology resources (e.g., podcasting, webcasting, videoconferencing, online file sharing, global positioning software)
5. Identify an example of an assistive technology and describe its potential purpose and use
6. Participate in a virtual environment as a strategy to build 21st century learning skills
7. Assess and solve hardware and software problems by using online help or other user documentation
8. Explain the differences between freeware, shareware, open source, and commercial software
9. Participate in experiences associated with technology-related careers
10. Identify common graphic, audio, and video file formats (e.g., jpeg, gif, bmp, mpeg, wav, wmv, mp3, avi, pdf)
11. Understand and discuss how assistive technologies can benefit all individual
12. Demonstrate how to import/export text, graphics, or audio files
13. Proofread and edit a document using an application's spelling and grammar checking functions

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
GR_DOCS 1809291v1