# Technology Curriculum Integration Plan

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#### **Technology Leadership Team:**

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2015-2016

### **Vision Statement**

Churchill High School will increase options for students in the focused area of science, technology, engineering and math through the increased access and use of technology across the content areas.

Our vision is to facilitate and inspire student learning and creativity on the path to college and career readiness and the mastery of  $21^{st}$  century skills through the integration of technology. We are striving to become a 1:1 personal device school, in that every student has access to technology and that students and families in our community are able to access school technology during non-school hours. Our educational technology vision is adopted directly from the National Educational Technology Standards for Teachers and Students (NETS\*T and NETS\*S):

Effective teachers model and apply the NETS\*S as they design, implement, and assess learning experiences to engage students and improve learning; enrich professional practice; and provide positive models for students, colleagues, and the community.

All teachers should meet standards and performance indicators to facilitate and inspire student learning and creativity and to design and develop digital-age learning experiences and assessments. Teachers should also be expected to model digital-age work and learning, to promote and model digital citizenship and responsibility, and to engage in professional growth and leadership.

From NETS\*S, our vision for students is that they will use technology to create and innovate, communicate and collaborate, research, think critically and problem-solve, demonstrate digital citizenship, and demonstrate understanding of technology operations and concepts.

# **Goals and Objectives**

# **Goals and Objectives for Students:**

### 1. Creativity and innovation

Students demonstrate creative thinking, construct knowledge, and develop innovative products and processes using technology.

- a. Apply existing knowledge to generate new ideas, products, or processes
- b. Create original works as a means of personal or group expression
- c. Use models and simulations to explore complex systems and issues
- d. Identify trends and forecast possibilities

<u>Language Arts:</u> Students use technology, including the Internet, to produce, publish, and update individual or shared writing products in response to ongoing feedback, including new arguments or information. Students write several essays, create presentations, and participate in online feedback, as well as discussion. Students will also use interactive software to build grammar skills including formative and summative assessments. Citation making software is used for research projects.

<u>Social Studies:</u> In social studies classes, students are required to conduct outside research to satisfy requirements for research papers and persuasive essays required in most every class. The department uses google docs and the file management system doctopus to allow students to continually refine their writing based off peer and teacher feedback. We also require students to cite information obtained from online source in their essays in addition to the information found in their textbooks.

#### World Language:

Students use interactive software, videos, applications, online resources in order to create written texts in more authentic situations or create a video letter for actual communications with native speakers of the target language. Students can conduct a research on issues of the countries of which the target languages are spoken applying internet resources and present them digitally in order to share their findings with classmates.

<u>Math Department:</u> Students would use interactive software that corresponds to curriculum. Students design, build and present math problems using videos, Apps, and resources available. iPads would enable students:

- O To improve understanding of some of the mathematical concepts which are important in secondary school mathematics.
- O To improve understanding of the nature of mathematics: what is important, how it is practiced, how mathematical validity is determined.

- O To improve understanding of the historical development of selected topics from secondary school mathematics.
- O To develop an inquiry approach to and an ability to reflect on mathematical concepts.
- O To increase understanding of secondary school students' mathematical thinking and understanding.
- O To increase ability to specify subject matter involved in a specific mathematics topic and make distinctions among them.
- O To increase ability to choose among lessons and curriculum materials based on the intended mathematical subject matter and the current understandings of the students. (i.e. Khan Academy, TED Talks, Apps)
- O To design and create mathematical presentations..

<u>Science Department:</u> Students can access computer modeling software and/or access existing online interactive models to predict and extrapolate ideas and results. Using online systems models (for instance calculating carbon footprints) they can manipulate various inputs and outputs as a way to explore cause and effect. This deepens the understanding and helps generate higher levels of problem solving around scientific challenges.

More specific projects have included creating posters on Endangered Species, using EasyBib software to create citations and the CHS Online Library databases to find information, writing "reflection" essays on the discovery of DNA and writing research papers on modern Biotechnology and applications.

<u>Engineering:</u> Students create CAD models using Autodesk Inventor, SolidWorks or Revit to design 3D models, architectural designs or product improvements. Students use modeling software to run physics simulations, property analysis and generate new ideas and solutions to real world problems. Students use a variety of program languages to program robots, develop apps and write code. Students use spreadsheet formulas to log and analyze statistical data to verify outcomes of their designs or for problem identification.

<u>Rachel Carson Academy</u>: Students record watershed monitoring data from local sites and create spreadsheets and data tables displaying their results throughout the school year.

- \*Students create a final project that chronicles cumulative data results, provides year-end analysis and makes recommendations for improving watershed health.
- \* Students create presentations of research topics in environmental science.

<u>Photography (Art)</u>: Students learn camera functions, digital editing software and photography techniques to create original artwork on a daily basis.

<u>Graphic Design Academy (Art):</u> Students design logos, posters, brochures, t-shirts, flyers for projects and live clients as well as manipulate digital images.

<u>HE/Health Occ:</u> Students create Nutrition projects to present to the class using Easybib for citation accrediting and using pictures in their presentations for comparison and contrasts. Also using various internet sites, for tracking daily and weekly calorie intakes and then presenting the best menu items for a healthy diet. Also using the activity tracker to make sure that calories are equal to calories out for a healthy weight.

<u>AVID</u>: Students write several essays each year, from autobiographical to research papers to college application essays. Citation making software is used for research projects. Students also use technology to create innovative presentation that explore complex systems and issues, as well as identify trends and forecast possibilities.

<u>ESS/ELL:</u> Students use interactive software, videos, assistive technology and translation tools to meet daily goals and demonstrate proficiency.

<u>Library:</u> Student learning will be guided by lo Oregon School Library Standards - adopted by the State Board of Education on January 22, 2015 as follows:

| Information | Standard 1: Use skills, resources, and tools to inquire, think critically and |
|-------------|---|
| Literacy    | gain knowledge  |
|             | Standard 2: Use skills, resources, and tools to draw conclusions, make        |
|             | informed decisions, create new knowledge, and apply knowledge to new          |
|             | situations.   |
|             | Standard 3: Use skills, resources, and tools to create and share work that    |
|             | expresses and demonstrates new understandings                                 |
| Reading     |   |
| Engagement  | Standard 1: Develop an appreciation for reading                               |
|             | Standard 2: Comprehend, interpret and evaluate informational and fictional    |
|             | text  |
|             | Standard 3: Build reading skills and behaviors for life-long learning         |

Specific technologies promoted by library include: use of databases for information needs such as research projects; use of computers for citation making (EasyBib); basic computer skills such as keyboarding, file management, document creation, and printing.

#### 2. Communication and collaboration

Students use digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning of others.

a. Interact, collaborate, and publish with peers, experts, or others employing a variety of digital environments and media

- b. Communicate information and ideas effectively to multiple audiences using a variety of media and formats
- c. Develop cultural understanding and global awareness by engaging with learners of other cultures
- d. Contribute to project teams to produce original works or solve problems

<u>English Language Arts</u>: Students create group projects using Google Docs to work together on notes, papers, and presentations. Students working on Smarter Balanced (OAKS) use computers to write drafts, create revisions, and submit final works.

<u>Social Studies:</u> Students use google docs and the file management system doctopus to create, revise, and finalize research papers and persuasive essays. Group research projects are also created on google docs that allow students to communicate and collaborate with their peers.

<u>World Language</u>: Students can exchange e-mails and messages with students from other countries in the target language. Students can apply the video recording equipment and editing software in order to record one's own speech in the target language for various purposes. For instance, students can report about one's own cultures in the target language in order to introduce these cultures or life-styles to high schools in other countries. Video recording projects in the target language can be used in order to express one's interpretation of literature work of the target language literature as a group project. Students can communicate with students of other countries in the target language applying on-line software such as Skype or Instagram.

<u>Math Department:</u> Students access Synergy, access online notes, and collaborate on math concepts. Students take practice tests for the SAT and Smarter Balanced. Students use videos online to help with math problems (ex: Khan Academy). Accessing and presenting data that is relevant to the success of our planet would make students more globally aware and more responsible.

<u>Science</u>: Students use computers to access current science information as a form of gathering critical background information in preparation for labs and lab-based projects. Computer access to current and relevant scientific developments is critical in a field that is constantly changing and evolving. (See more in the next section related to relevant research and information fluency.) Students use google docs to collaborate with lab partners and require spreadsheets for compiling data and generating graphic images to display their results. Presentations are critical for sharing their analyses and conclusions.

<u>Engineering:</u> Students collaborate in virtual design teams with students at other schools using social media and online collaboration tools. Students create digital portfolios that document the engineering design process including a design brief, initial concepts, research, prototypes, evaluation and final solution presentation.

<u>RC:</u> Use of computers allows students to record and compare their watershed monitoring data with their team and classmates. Students write papers and presentations involving their research and reflections and share the results with each other..

<u>Photography (Art):</u> Students work in teams to find, photograph, organize, print, and present examples of design elements.

<u>Yearbook:</u> Students use computers to produce the yearbook.

<u>Layout & Publishing (Art):</u> Students create posters & brochures, web sites, and Powerpoint presentations as individuals and in groups.

<u>Graphic Design Academy (Art):</u> Students work with clients to create functional artwork (logos, brochures, shirt designs, etc.) using software, printers, scanners, etc. Students work as a team to create functional artwork (logos, brochures, shirt designs, etc.) for live clients

<u>HE/Health Occ: Students</u> work in teams, divide tasks and research and communicate back to the team on various topics such as; drugs, tobacco and alcohol, medical research for various STD's and birth control options, using skype and other types of tech communication to share information with medical facilities and community networking partners. Having classroom technology will be beneficial to partner with our advisory board which is made up of community partners in both the medical field and health and fitness world.

<u>AVID</u>: Students use technology to collaborate and communicate with working professionals to set up internships and explore potential career paths. In addition, students collaborate, publish and present work with their peers in a variety of areas including, but not limited to college choices, scholarships, college majors and a variety of other areas of research based on the grade level.

<u>ESS/ELL:</u> Students learn to use Google Docs and other collaboration tools for working in groups. Students will utilize Synergy and be able to monitor and track their grades and progress. ESS students will learn how to save their work effectively.

Read Right: Students work semi-independently in tutoring groups using audio text on iPod Touches to efficiently increase their reading skills.. Supports struggling readers at all levels, notably effective for English Language Learners, students with dyslexia, students with learning disabilities, and general education students who were not able to reach grade level through other methods.

<u>Library</u>: Students learning will be guided by lo Oregon School Library Standards - adopted by the State Board of Education on January 22, 2015 as follows:

| Social<br>Responsibility | Standard 1: Practice ethical behavior to share knowledge (for example in digital communities and group projects)        |
|--------------------------|---|
|                          | Standard 2: Practice ethical behavior when using print and digital resources (for example practicing citing of sources) |
|                          | Standard 3: Participate collaboratively, respectfully and productively as a member of a democratic society              |

### 3. Research and information fluency

Students apply digital tools to gather, evaluate, and use information.

- a. Plan strategies to guide inquiry
- b. Locate, organize, analyze, evaluate, synthesize, and ethically use information from a variety of sources and media
- c. Evaluate and select information sources and digital tools based on the appropriateness to specific tasks
- d. Process data and report results

<u>English Language Arts:</u> Students in Courageous Conversations use CHS Online Library databases to do research for topics of interest to be presented using Keynote or Powerpoint. Citations and notes were made using EasyBib.

<u>Social Studies:</u> Students in a variety of social studies classes are required to conduct research and cite vital and relevant information that cannot be found in their textbooks. In order for student to successfully find, analyze, organize, and cite the most relevant sources, students need access to computers in class.

<u>World Language</u>: Students do WebQuests activities that require them to expose Web pages in the target language in order to collect appropriate and necessary information effectively so that students can complete the task in an assigned time. Students do a research about cultures or issues of the country of which the target language is spoken and present their research in PowerPoint. Students will conduct research on geographical characteristics, cultures, historical events, seasonal events, food, festivals etc. of countries of which the target language is spoken in order to compare and contrast one's world to others.

<u>Math Department:</u> Students access online resources and digital books. Students conduct research for IB and AP projects/classes. Students sign up for LCC (college now classes). Students create and give presentations using numerous applications (Keynote, Powerpoint, Google Slides). Students do projects from teacher-made videos. Students engage in electronic note taking and have e-book access.

<u>Science:</u> Computer access to current and relevant scientific developments is critical in a field that is constantly changing and evolving. Students access current, and in many cases "real-time" data that is being generated from scientific resources such as NOAA, USGS and NASA, to name a few. As a means of *processing data and reporting results*, students use google docs to collaborate with lab partners. Students will also utilize spreadsheets for compiling data and generating graphic images to display their results. Presentations are critical for sharing their analyses and conclusions.

<u>Engineering:</u> Students conduct product research and conduct online surveys to gather information about design concepts. Students use spreadsheet formulas to log and analyze statistical data to verify outcomes of their designs or for problem identification. Students produce frequency distribution charts and histograms to report data collection results and to predict future outcomes.

<u>Rachel Carson Academy</u>: Students research environmental problems and solutions for papers and presentations. Topics include climate change, energy use and resources, soil conservation and more. Students research and map forests by type in Oregon. Students research and map forest ownership in Oregon.

<u>Graphic Design Academy (Art):</u> Students research, organize and evaluate examples of competitor logos in order to study design trends and techniques (both current and historical). Students apply knowledge of copyright, public domain, and fair use in their own original artwork.

<u>Photography (Art):</u> Students research a master photographer and analyze their artwork. Students also address copyright issues specifically associated with social networking.

<u>HE/Health Occ:</u> Students use technology to research, outline, organize, evaluate and theorize various health/medical topics. Both programs including PE use this technology to write papers citing sources (easybib and other college accepted formats) to their respective topics. Using heart monitors and then plugging the data into the computer help analyze student performances.

<u>AVID</u>: Students use technology (specifically easyBib and other library databases) to outline their research, as well as to locate, organize, analyze, evaluate and synthesize information appropriate to the task.

ESS/ELL: Students know how to access valid, reliable online sources.

<u>Read Right:</u>Students work semi-independently in tutoring groups using audio text on iPod Touches to efficiently increase their reading skills.. Supports struggling readers at all levels, notably effective for English Language Learners, students with dyslexia, students with learning disabilities, and general education students who were not able to reach grade level through other methods.

<u>Library</u>: Students in multiple subject areas learn to use databases on CHS Online Library and use EasyBib software to create citations and do electronic note-taking. Students learn to look up books, articles, eBooks and other materials in VIA (catalog). Students access their accounts to find out what books (including textbooks) they have checked out and what fines are owed. The Library Media Specialist will mentor and collaborate with teachers in crafting well designed research projects, scaffolding and assessment criteria.

### 4. Critical thinking, problem solving, and decision-making

Students use critical thinking skills to plan and conduct research, manage projects, solve problems, and make informed decisions using appropriate digital tools and resources.

- a. Identify and define authentic problems and significant questions for investigation
- b. Plan and manage activities to develop a solution or complete a project
- c. Collect and analyze data to identify solutions and/or make informed decisions
- d. Use multiple processes and diverse perspectives to explore alternative solutions

<u>Language Arts:</u> Students will create online portfolio to post writing work samples and to create a digital community where writing progress will be visible and creativity, rhetorical skill and craft will be acknowledged.

<u>Social Studies:</u> Students are instructed how to conduct authentic research, evaluate the credibility of sources, and accurately cite those sources in formal writing. Early on, students are taught how to sift through the vast amount of information located on the internet and select the best information that is valid, relevant, and supports their thesis for research papers, persuasive essays, group project, presentations, and other activities.

<u>World Language</u>: Students research on current issues of other countries of which the target language is spoken in order to discuss causes of the problem and possible solutions in class. Those topics might include global warming and other environmental issues, immigration issues, or globalization etc. Students will create surveys in the target language in order to collect data from people in the country of which the target language is spoken in order to analyze differences and similarities among us.

<u>Math Department:</u> Students access online resources and digital books. Students conduct research for IB and AP projects/classes. Students sign up for LCC (college now classes). Students create and give presentations using numerous applications (Keynote, Powerpoint, Google Slides). Students do projects from teacher-made videos. Students engage in electronic note taking and have e-book access.

<u>Science</u>: As the world of science evolves and new challenges are discovered student access to information and modern technology is critical in defining *authentic problems* and investigating *significant questions*. Real time data and current developments of science can be accessed,

researched and analyzed. Students can then experiment and research with various programs and online resources, represent and analyze data using data and modeling software, and then make informed, current and relevant decisions and use problem solving strategies to approach complex issues.

<u>Engineering:</u> Students use a digital Gantt chart for project management. Students design and utilize a decision matrix to narrow down design concepts and select an approach to a solution.

<u>Rachel Carson Academy</u>: Students create a final project that highlights year-end cumulative data results, provides year-end analysis and makes recommendations for improving watershed health based on the data they collected.

<u>Photography (Art)</u>: Students adjust manual camera settings (ISO, aperture, and shutter speed) to achieve desired photographic outcomes and effects.

<u>Graphic Design Academy (Art)</u>: Advanced students follow the design process (research, brainstorm, sketch, narrow, refine, rough, revise, comprehensive) to take concepts from idea to finished product using both technology and pencil & paper. Students generate a process book in both digital and printed form.

<u>HE/Health Occ:</u> Using technology to research family medical history, researching modern stem cell research, the use of marijuana and how it will and is affecting our society, being able to compare work internships with other types of jobs and reflect back with a project presented to the class along with a student portfolio, all with the use of technology.

<u>ESS/ELL:</u> Students use online tools, apps, and other digital media to work on and finish projects. Students also use those same tools and assistive technology for translation and project development.

<u>AVID</u>: Students use technology to enhance their critical thinking while conducting research and managing projects through the use of google docs and other online resources. Students work collaboratively to identify real world problems and use technology to research solutions and present their findings. Students also create online portfolios allow them to set goals and track their academic progress, seeking solutions when current methods are unsuccessful.

<u>Read Right:</u>Students work semi-independently in tutoring groups using audio text on iPod Touches to efficiently increase their reading skills.. Supports struggling readers at all levels, notably effective for English Language Learners, students with dyslexia, students with learning disabilities, and general education students who were not able to reach grade level through other methods.

<u>Library</u>: Students learning will be guided by Oregon School Library Standards - adopted by the State Board of Education on January 22, 2015 as follows:

| Technology  | Standard 1: Use a variety of digital environments and formats to support   |
|-------------|--|
| Integration | information literacy (databases, websites, software)   |
|             | Standard 2: Use a variety of digital environments and formats to enhance reading engagement (eBooks, audiobooks, speech to text, text to speech tools) |
|             | Standard 3: Practice ethical behavior when using technology  |

### 5. Digital citizenship

Students understand human, cultural, and societal issues related to technology and practice legal and ethical behavior.

- a. Advocate and practice safe, legal, and responsible use of information and technology
- b. Exhibit a positive attitude toward using technology that supports collaboration, learning, and productivity
- c. Demonstrate personal responsibility for lifelong learning
- d. Exhibit leadership for digital citizenship

<u>Language Arts:</u> Students will receive training

reading support with the use of eBooks, audiobooks, text to speech, and translation as needed.

<u>Social Studies:</u> Students learn how to responsibly use technology in the classroom and are also taught how to best sift through the vast amount of information on the internet. In our digital society, it is important for students to know how sort through information found online to discard irrelevant, or outright wrong information, from valid and accurate information.

<u>World Language:</u> Students will understand digital ethics and practice them at both school and home. Students can understand the limitation in internet based translation systems and use them wisely.

<u>Math Department:</u> Students access online resources and digital books. Students conduct research for IB and AP projects/classes. Students sign up for LCC (college now classes). Students create and give presentations using numerous applications (Keynote, Powerpoint, Google Slides). Students do projects from teacher-made videos. Students engage in electronic note taking and have e-book access.

<u>Science</u>: Students will evaluate and think critically about the information that is posted related to science. With many science topics that are controversial and open up conversations of ethics, slant and even research funding sources, students will seek out the best, current relevant science

information and will evaluate and verify scientific validity and objectivity. They will be able to differentiate among credible science and opinion that sometimes poses as science. This will help students think critically and objectively as they move on as citizens of the digital world. Students will be able to collaborate with others as they engage in problem solving and investigations.

<u>Engineering:</u> Students will evaluate sources of information including determining the source, date of publication, intended audience and establish a means to rank credibility. Students explore the history and workings of the Internet, and issues of security, privacy, and democracy are considered. Students debate policy questions about the ownership and control of digital data and examine the implications for creative industries and consumers.

<u>Rachel Carson Academy:</u> Students share learning about environmental science topics with their class. Students practice correct source citations and research practices.

<u>Graphic Design Academy (Art):</u> Students apply knowledge of copyright, public domain, and fair use in their own original artwork. Students use industry standard software (Illustrator, Photoshop, InDesign, scanning software, etc.).

<u>Photography (Art):</u> Students use industry standard software (Photoshop, Bridge, etc.) and online apps including Instagram, Pintrest, and Hipstamatic.

<u>Layout & Publishing (Art):</u> Students use consumer-level software (Pages, Keynote, online website generators such as Wix and Weebly).

<u>HE/Health Occ:</u> Using the various technology will enhance the level of integrity each student must have to work responsibly and collaboratively. Training will be done in the classroom and by the librarian who will guide students through reputable sites and decipher between credible and fictional information. When creating a project, students will be able to use online apps, pages, keynote, google docs, and others such web designs to help make presentations more professional.

<u>AVID</u>: AVID students learn how to advocate and practice safe, legal and responsible uses of technology through regular electronic communication with their teachers, as well as other community members. Through regular use of technology, AVID students develop and exhibit a positive attitude towards the use of technology and a lifelong desire for learning.

<u>ESS/ELL:</u> Digital citizenship, training on online safety, digital footprint awareness.

Read Right: TBD

<u>Library: Library: Students learning will be guided by lo Oregon School Library Standards - adopted by the State Board of Education on January 22, 2015 as follows:</u>

| Social<br>Responsibility | Standard 1: Practice ethical behavior to share knowledge (for example learning to cite sources)  |
|--------------------------|--|
|                          | Standard 2: Practice ethical behavior when using print and digital resources by expliciting teaching concepts such as plagiarism, citing sources, and fair use |
|                          | Standard 3: Participate collaboratively, respectfully and productively as a member of a democratic society (for example in digital communities)                |

### 6. Technology operations and concepts

Students demonstrate a sound understanding of technology concepts, systems, and operations.

- a. Understand and use technology systems
- b. Select and use applications effectively and productively
- c. Troubleshoot systems and applications
- d. Transfer current knowledge to learning of new technologies

<u>Language Arts:</u> Students will receive reading support with the use of eBooks, audiobooks, text to speech, and translation as needed. Dictation tools, apps or software will be made available to students to optimize learning experiences and skill building.

<u>Social Studies</u>: Students learn how to use various technological systems in social studies classes. The department uses EasyBib to facilitate organization, use, and correct citing of online academic sources in research papers and persuasive essays. Students have access to the file management doctopus, where students can submit work and find classroom materials online. Students also learn how to use and filter various informational databases for the best and most relevant research.

<u>World Language:</u> Students will be able to use any given internet based classroom learning resources such as Google Apps, Edmodo, Synergy, Class Website fluently. Students will be able to understand how to obtain support when they encounter technological problems during their school work. Students will be able to use language support systems in order to type the alphabet letters of the target language (e.g., Spanish and Japanese.)

<u>Math Department:</u> Students access online resources and digital books. Students conduct research for IB and AP projects/classes. Students sign up for LCC (college now classes). Students create and give presentations using numerous applications (Keynote, Powerpoint, Google Slides). Students do projects from teacher-made videos. Students engage in electronic note taking and have e-book access.

<u>Science:</u> In addition to critical classroom projects that utilize computers as research tools, data analysis and presentation of results, students will access online curriculum resources. As 4j

adopts new science curriculum materials and textbooks, many of the textbook adoption options have amazing online reading support services, interactive textbook options and relevant updates as the field of science changes over time. Student access to computers will help our students meet the goals and benchmarks of the Next Generation Science Standards (NGSS) as adopted by the state of Oregon, particularly as they relate to Cross-Cutting concepts in technology.

<u>Engineering:</u> Students demonstrate proficiency in CAD modeling software, including the use of geometric relationships to model complex objects, use of dimensioning standards to produce working drawings, and assembly of parts into functional models. Students demonstrate proficiency in programming software using Agile methodology to define, strategize, code and test their designs.

<u>Rachel Carson Academy</u>: Students demonstrate mastery of Keynote, Google Docs, Google Presentation, internet searching and Easy Bib citations through the regular use of technology in classes.

<u>Graphic Design Academy (Art):</u> Students learn industry-standard software skills which extend beyond the classroom and develop career skills in relation to ever-changing and improving software.

<u>Photography (Art):</u> Students learn industry-standard software skills which extend beyond the classroom and develop career skills in relation to ever-changing and improving software.

<u>HE/Health Occ:</u> Students learn using a variety of technology applications how to transcribe medical data when given scenarios on patient status/diagnosis. Learning this medical information can then be applied in the classroom when given situations on how to move a medical patient, take diagnostic readings, care for certain injuries/wounds. In PE utilizing heart monitors and inputting the results into the med program, can give a person a better status on their cardiovascular condition.

<u>AVID</u>: AVID students learn and develop their ability to use a variety of technology applications including google docs, naviance, keynote, easybib, garage band and photoshop to name a few. Students learn to select the appropriate application for the task, troubleshoot problems, and transfer current knowledge to other technology applications.

<u>ESS/ELL:</u> Students learn to use assistive apps and the ability to look for, use, and share new technology. We will be having the ESS tech rep come in weekly to train students how to use assistive technology.

Read Right: N/A

<u>Library:</u> The Library Media Specialist will:

--model effective strategies for developing multiple literacies

- --evaluate, promote, and use existing and emerging technologies to support teaching and learning, supplement school resources, connect the school with the global learning community, communicate with students and teachers, and provide 24/7 access to library services
- --provide guidance in software and hardware evaluation, and developing processes for such evaluation
- --understand copyright, fair use, and licensing of intellectual property, and assisting users with their understanding and observance of the same
- --organize the CHS Online Library collection for maximum and effective use

# **Goals and Objectives for Teachers:**

### 1. Facilitate and inspire student learning and creativity

Teachers use their knowledge of subject matter, teaching and learning, and technology to facilitate experiences that advance student learning, creativity, and innovation in both face-to-face and virtual environments.

- a. Promote, support, and model creative and innovative thinking and inventiveness
- b. Engage students in exploring real-world issues and solving authentic problems using digital tools and resources
- c. Promote student reflection using collaborative tools to reveal and clarify students' conceptual understanding and thinking, planning, and creative processes

d. Model collaborative knowledge construction by engaging in learning with students, colleagues, and others in face-to-face and virtual environments

**LA:** Teachers will use technology to enhance student engagement and inspire student learning when introducing new works of literature, authors or genres. Teachers will engage students in exploring the real world issues presented in the literary works and associated time periods through research based exploration using a variety of online resources. Teachers will promote student reflection using collaborative tools such as google docs to assess student learning. Teachers will use technology to provide emersion into the content through a variety of multimedia venues.

**SS**: Teachers use technology, including google docs, to instruct student how to find relevant and valid information, organize information digitally, cite appropriate sources to defend arguments, submit assignments, and locate digital classroom materials. The Social Studies department also crafts SLGO's related to student's search and use if evidence for defending arguments.

**WL:** Teachers will use technologies in order to provide authentic, contextualized interactive tasks with a native speaker of the target language.

Teachers will construct a web activity in which students engage in web-based research on different aspects of cultures of the target language.

Teachers will use video and audio resources in order to present socio-linguistic elements of the target language/culture.

Teachers will use Google Docs, Drop Box etc. in order to promote collaborative learning in the classroom.

**MATH:** Teachers build interactive videos that ask students to go through a series of mini math problems to solve a larger math problem. Technology allows teachers to access curriculum and information from outside community resources (Data, videos, University material...) to facilitate student learning.

**SCI:** Teachers will provide information in a variety of formats as they lead students through investigations. Presentation software will be used, as well as online resources (including, but not limited to eBooks, Library databases and Easybib for research). Teachers will also access current and developing science as it relates and changes. Using online data resources and scientific journals, teachers can share and lead students into investigating topics, solving problems and analyzing data. Teachers will model and lead students to thinking critically about online information resources, evaluating sound science vs. opinion.

**ENGR:** Teachers will present powerpoints of crucial information using the Mondopad or other projection technology. Teachers will monitor student computer use with LanSchool or similar software and demonstrate protocols by simulating the teacher screen to all student computers. Teachers provide shared Google folders for collaborative file sharing and documentation of student work. Teachers use an online Learning Management System (LMS) to deploy

assessments of student learning. Teachers provide interactive web-based resources to study key terms and vocabulary using Quizlet.com or similar tools.

**Rachel Carson Academy:** Teachers use maps, charts and video to teach current environmental issues to students. Teachers create projects for students that ask them to address real world environmental problems, such as improving watershed health in their community. Use of technology allows teachers to use access curriculum from outside community resources (Lane County, OSU, UO, LCC) to facilitate student learning.

**HE: Teachers** will use technology to present lectures, promote and support real world situations in both the health and PE world. Teachers will promote student thinking and creativity by giving real world situations, studies, research theories, and debate issues for them to then use technology to help problem-solve and really look outside the norm box!

**Graphic Design Academy:** Teacher uses screen capture software to create step-by-step video tutorials and online instruction to aid students at different paces. Teacher arranges for students to use their knowledge of software and design skills in order to work on live design jobs for live community clients.

**PHOTOGRAPHY - ART:** Teacher uses web resources to provide students with historical context as well as technological content as it relates to modern digital cameras and post-production.

**AVID:** Teachers will use technology to promote, support and model creative thinking by providing real world examples that students can use to build upon when creating their own work. Teachers will engage students in exploring real-world issue and problem solving through the use of digital tools such as google docs, easybib, as well as other online library databases. Teachers will use google docs to promote student reflection and collaboration on a variety of real world topics, including each student's own academic success. Teachers will model collaborative learning through the use of the AVID online forum and resources.

**ESS/ELL:** Teachers will use speech to text programs to encourage development of student writing skills. Teachers will use iPAD apps for graphic organizers, vocabulary games and vocabulary builders to increase writing fluency.

**RR:** Through development of strong reading skills, students will be inspired to continue learning and be more confident to express themselves publicly.

**Library:** The Library Media Specialist, as information specialist, provides leadership and expertise in the selection, acquisition, evaluation, and organization of information resources and technologies in all formats, as well as expertise in the ethical use of information. The LMS ensures equitable access and responsible use of information in accordance with district policy, developing and maintaining a collection of resources appropriate to the curriculum, the learners, and the

teaching styles and instructional strategies used within the school community while supporting teachers' creativity and availability of resources.

### 2. Design and develop digital age learning experiences and assessments

Teachers design, develop, and evaluate authentic learning experiences and assessments incorporating contemporary tools and resources to maximize content learning in context and to develop the knowledge, skills, and attitudes identified in the Standards•S.

- a. Design or adapt relevant learning experiences that incorporate digital tools and resources to promote student learning and creativity
- b. Develop technology-enriched learning environments that enable all students to pursue their individual curiosities and become active participants in setting their own educational goals, managing their own learning, and assessing their own progress
- c. Customize and personalize learning activities to address students' diverse learning styles, working strategies, and abilities using digital tools and resources
- d. Provide students with multiple and varied formative and summative assessments aligned with content and technology standards, and use resulting data to inform learning and teaching

**LA:** Teachers will use google docs and other online databases to promote student learning and creativity. For example, when students respond to a piece of literature they may have the opportunity to do so in writing, through a professional presentation or through a visual piece of art, all of which utilize technology to provide multiple and varied formative and summative assessments.. Teacher will use assistive technology such as audio books or text to speech to customize and personalize the learning activity for diverse learning styles.

**SS:** The social studies department uses technology to instruct students on how to best use and access that technology. Proper use of technology is a skill that all students must master to succeed in the workforce and in college. Some programs currently in use, such as doctopus, expose students to online technology systems that are used in in post-secondary education.

**WL:** Teachers can utilize online resources to evaluate student reading, writing, listening and speaking skills to evaluate students' progress and their proficiency levels.

Teacher will direct student projects in which students research a content area of their choice by utilizing a variety of electronic resources and then present their projects to the entire class. Teacher will construct a web activity in which students engage in web-based research on different aspects of cultures of the target language.

Teacher will use videoconferencing in order to connect students with classrooms around the world and individuals outside the classroom.

**MATH:** Students would be able to watch interactive videos that ask them to go through a series of smaller math problems to answer a bigger real world situation. They would have the ability to

collect and chart data to analyze the impact of cause and effect. Students would analyze and present findings they are passionate about. Incorporating math with the digital tools available.

**SCI:** Teachers will provide eBooks to enhance and support the diverse learners in science classes. Online resources provided with the new science book curricula provide support for English Language Learners, scaffolding information for different skill levels, as well as enrichment opportunities. Teachers will lead and provide students with interactive online resources that enable students to explore and learn at their own pace and skill level.

Teachers can assess student learning using digital tools like google doc quizzes, clickers and collaborative documentation of group work.

**ENGR:** Teachers use Mondopads to video conference with other classrooms or for virtual tours or guest speakers. Teachers connect students to real-world clients and enable students to model solutions in CAD that meet the client's criteria. Teachers provide open-ended design challenges with possible outcomes that incorporate student imagination and creativity.

**Rachel Carson Academy-** Students use technology to participate in the statewide Envirothon competition where they must produce a movie that shows their response to solving a real world resource management problem--such as mapping, inventorying and making recommendations to improve urban forests. This allows students to practice analysis skills and exercise creativity.

**HE:** The teacher may create projects/assignments that support the curricula taught and then by using different technological support can use translation programs for ELL learners, audiobooks, or dragon speech to help research and write reports for students that may have learning difficulties

**Graphic Design Academy:** Teacher creates assignments and project that are centered around real-world application of software skills and design fundamentals such as poster design, brochure design, and advertising. Teacher uses web resources for stock photography, font selection, image research, color scheme planning, software & technique tutorials.

**PHOTOGRAPHY - ART:** Teacher creates assignments and project that are practical for both DLSR users and "point & shoot" users. Teacher designs curriculum that teaches technical content as well as allows for creative concepts and artistic expression.

**AVID:** Teachers will use google docs and other online databases to promote student learning and creativity. For example, when students respond to a topic of current discussion and exploration, they may have the opportunity to do so in writing, through a professional presentation or through a visual piece of art, all of which utilize technology to provide multiple and varied formative and summative assessments.. Teacher will use assistive technology such as audio books or text to speech to customize and personalize the learning activity for diverse learning styles.

**ESS/ELL:** Students will use technology resources like Khan Academy, the iPad app for the accuplacer (practice taking LCC placement exam), and various other digital academic tools to continue to learn. (These tools will vary based on subject and level )

**RR:** Fluidity with creation and use of digital audio files integral to the program will be a fantastic improvement!

**Library:** As an instructional partner the Library Media Specialist works with teachers and other educators to build and strengthen connections between student information and research needs, curricular content, learning outcomes, and information resources.

### 3. Model digital age work and learning

Teachers exhibit knowledge, skills, and work processes representative of an innovative professional in a global and digital society.

- a. Demonstrate fluency in technology systems and the transfer of current knowledge to new technologies and situations
- b. Collaborate with students, peers, parents, and community members using digital tools and resources to support student success and innovation
- c. Communicate relevant information and ideas effectively to students, parents, and peers using a variety of digital age media and formats
- d. Model and facilitate effective use of current and emerging digital tools to locate, analyze, evaluate, and use information resources to support research and learning

**LA:** Teachers will use a variety of digital tools including easybib and our online library search engines to model and facilitate effective uses of digital tools to locate, analyze and evaluate information using research as the basis for learning. Teachers will also use a variety of digital tools including synergy and remind 101 to effectively communicate with students and their families.

**SS**: The department currently collaborates and shares material using online systems such as google docs. Also, use of the file management system doctopus will allow teachers to post curriculum (such as readings and other assignments) online so student have access to the materials at any time.

**WL:** Teachers will participate in tech related workshops and trainings in order to continue to improve technology skills and share our knowledge of such skills within a department. Teachers will use websites, on-line grading book systems or other technology related resources in order to articulate our programs with students and their guardians/parents.

**MATH:** Teachers would collaborate to ensure effective modeling to students through innovative lesson plans. Data collection and analysis would be modeled to support student growth with technology.

**SCI:** Teachers will effectively collaborate and communicate with students and parents through consistent use on online grading and communication tools such as Synergy. Teachers will be able to keep students and their families informed through this helpful online tool. Teachers will model and teach specific skills related to online research, gathering and analysis of information, and effective communication of scientific studies and findings in order to support critical thinking and problem solving within the specific field of Science.

**ENGR:** Teachers participate in digital online learning community with other PLTW teachers as well as regional CTE instructors. Teachers stay connected to industry partners and higher education collaborators through an advisory committee and College Now articulation.

**Rachel Carson:** Teachers use technology daily to model proper use of presentation formats and research skills.

**HE: Teachers** collaborate and share material using on-line systems such as google docs. Teachers will create online web pages so students can at any time get class information and assignments and stay on top of grades with Synergy.

**Graphic Design Academy:** Teacher creates and delivers curriculum via online tutorials and web site in addition to printed material. Teacher uses industry standard software to deliver online curriculum, assignment examples, and class web sites. Teacher promotes student reflection using collaborative tools such as google docs to assess student learning.

**PHOTOGRAPHY - ART:** Teacher accounts for current trends in DLSR camera usage as well as the rapidly changing smart phone cameras and apps. Teacher uses industry standard post-production software. Teacher promotes student reflection using collaborative tools such as google docs to assess student learning.

**AVID:** AVID teachers collaborate and share material using online systems such as google docs. Teachers will use the file management system doctopus which allows teachers to post curriculum (such as readings and other assignments) online so student have access to the materials at any time. In addition, teachers will use doctopus as a running portfolio for students to set and reflect on their goals, as well as to store their important pieces of work such as college application essays, etc. Teachers will also use a variety of digital tools including synergy and remind 101 to effectively communicate with students and their families.

**ESS/ELL:** ESS Students will use siri and google docs in conjunction to aid in writing activities.

**RR:** Fluidity with creation and use of digital audio files integral to the program will be positive modeling for students who will then participate.

**Library:** The Library Media Specialist will work to:

- -- ensure that students and staff are effective users of ideas and information
- --empower students to be critical thinkers, enthusiastic readers, skillful researchers, and ethical users of information
- --instill a love of learning in all students and ensure equitable access to information
- --collaborate with classroom teachers and specialists to design and implement lessons and units of instruction, and assess student learning and instructional effectiveness
- --provide the leadership and expertise necessary to ensure that the school library program (SLP) is aligned with the mission, goals, and objectives of the school and the school district, and is an integral component of the learning/instructional program

### 4. Promote and model digital citizenship and responsibility

Teachers understand local and global societal issues and responsibilities in an evolving digital culture and exhibit legal and ethical behavior in their professional practices.

- a. Advocate, model, and teach safe, legal, and ethical use of digital information and technology, including respect for copyright, intellectual property, and the appropriate documentation of sources b. Address the diverse needs of all learners by using learner-centered strategies providing equitable access to appropriate digital tools and resources
- c. Promote and model digital etiquette and responsible social interactions related to the use of technology and information
- d. Develop and model cultural understanding and global awareness by engaging with colleagues and students of other cultures using digital age communication and collaboration tools
- **LA:** Teachers will advocate, model and teach safe, legal, and ethical uses of digital information by teaching proper research and writing skills such as the understanding of plagiarism and how to properly cite sources. Teachers will address the diverse needs of students by providing all learners with equitable access to appropriate digital tools and resources including audio books and text to speech when appropriate.
- **SS:** Online sources are essential for research, but also allow the teacher to quickly connect current events and ground-breaking research with classroom curriculum. This allows teachers to facilitate students to connect concepts learned in the classroom to current events and issues. Teachers can model how to appropriate use technology in the classroom and allow students to see how technology can aid them in their post-secondary endeavors.

**WL:** Teachers will communicate with students about the ethical use of technologies in educational settings.

Teachers can construct a web activity in which students engage in a web-based research on different aspects of cultures of the target language.

Teacher will use videoconferencing in order to connect students with classrooms around the world and individuals outside the classroom.

**MATH:** Appropriate digital etiquette and responsible use of information would be a necessary part of learning. Copyright infringement, documentation of sources and social responsibility are topics that would be discussed.

**SCI:** Teachers will be able to *provide equitable access to appropriate digital tools and resources* especially with the increased access to computers and technology in the classroom. Teachers will be able to scaffold assignments through direct access to online resources which will help to *address the diverse needs of all learners.* Teachers currently engage the diversity of learners in science classrooms with a variety of tools and activities and will be able to enhance and enrich the learning of all students through digital resources.

**ENGR:** Teachers monitor student computer use and utilize LanSchool management software to send individual or group messages to student computer screens or to share screens with the class in order to promote and model responsible use.

**Rachel Carson:** Teachers have explicitly taught proper use of citations in research papers and presentations this year to promote ethical use of others ideas and writing.

**HE:** Teachers will model appropriate digital etiquette through communication with students and parents. Teachers will model and advocate for the use of safe and legal digital information. Rules and standards will be in place and taught so students know the proper way use the tech information. Enforcing the district policy on plagiarism and teaching the proper way to cite sources. With the use of technology, a plethora of programs become available to diverse learners.

**Graphic Design Academy:** Teacher uses industry leading royalty-free paid stock photography subscription for instruction and for student projects. Teacher instructs students in copyright and fair use issues.

**PHOTOGRAPHY - ART:** Teacher instructs students in copyright and fair use issues.

**AVID:** Teachers will promote and model appropriate digital etiquette through their digital communication with students and parents. Teachers will advocate, model and teach safe, legal, and ethical uses of digital information by teaching proper research and writing skills such as the understanding of plagiarism and how to properly cite sources. Teachers will address the diverse needs of students by providing all learners with equitable access to appropriate digital tools and resources including audio books and text to speech when appropriate.

**ESS/ELL:** In teaching SPED students how to access assistive technology (such as voice to text and read-aloud technology), we level the playing field for all students, and create opportunities for students with learning disabilities to achieve next to to their peers.

**Library:** The Library Media Specialist will:

--create and maintain in the school library a teaching and learning environment that is inviting, safe, flexible, and conducive to student learning

--select and use effective technological applications for management purposes

### 5.Engage in professional growth and leadership

Teachers continuously improve their professional practice, model lifelong learning, and exhibit leadership in their school and professional community by promoting and demonstrating the effective use of digital tools and resources.

- a. Participate in local and global learning communities to explore creative applications of technology to improve student learning
- b. Exhibit leadership by demonstrating a vision of technology infusion, participating in shared decision making and community building, and developing the leadership and technology skills of others
- c. Evaluate and reflect on current research and professional practice on a regular basis to make effective use of existing and emerging digital tools and resources in support of student learning d. Contribute to the effectiveness, vitality, and self-renewal of the teaching profession and of their school and community
- **LA:** Teachers will use software to collaborate on curriculum design, (scope and sequence), sharing of demonstration projects and work samples, skill building (i.e. grammar and composition), creating digital communities with each other and with students, and to lead the school in writing goals.
- **SS**: Teachers will collaborate and share documents, classroom materials, activities, etc. using online resources. There are many digital sources and tools used by teachers in the classroom; consistent access to computers and the internet can allow teachers to better collaborate with each other and their students.

**WL:** Teachers will participate in tech related workshops and trainings in order to continue to improve our tech skills and share our knowledge of such skills within a department. Teachers will apply research based instructions and resources for effective teaching in second language learning/teaching.

**MATH:** Teachers in the department would collaborate to bring our collective knowledge to the classroom. Taking advantage of district wide workshops and other members of the staff would keep us growing and make us effective teachers when using technology.

**SCI:** Teachers will continue to develop relationships with our partner school science team in Japan and will be able to further collaborate cross-culturally using digital tools and resources. This will enable teachers to collaborate and share experiences and teaching strategies with the partner school, as well as local community partners in science to enhance the learning experiences and opportunities for students.

**ENGR:** Teachers attend PLTW classroom and continued online professional development training. Teacher participate in professional learning communities and attend OACTE conferences. Teachers collaborate with industry partners to stay current in technology and content.

**RC:** Through community and other Career Technical Education partnerships, teachers will continue to develop new and enhance existing opportunities for students. Teachers will explore opportunities with existing College Now partnerships at Lane Community College involving GLOBE data sharing and potential opportunity in GIS online mapping skills.

**HE:** Teachers will collaborate and share documents, assignments, classroom materials and activities with on-line resources (scope and sequence). Also we would have the ability to share our studies with community partners and vise versa.

**Graphic Design Academy:** Teacher is member of NAPP (National Association of Photoshop Professionals). Teacher continues to work on professional free-lance graphic design and photography jobs. Teacher is member of Teacher subscribes to industry leading Photoshop magazine and uses articles with students. Teacher is member of organizing group for district wide arts celebration.

**PHOTOGRAPHY - ART:** Teacher continues to work on professional free-lance photography jobs. Teacher is advisor of student art club. Teacher will attend yearbook seminars and professional development yearbook training.

**AVID:** Teachers will use software to collaborate on curriculum design, (scope and sequence), sharing of demonstration projects and work samples, (i.e. college applications, entrance essays, scholarships), creating digital communities with each other and with students, and to lead the school in the WICOR AVID standards.

**ESS/ELL:** Teachers in ESS will continue to learn about new technology available from various sources, including but not limited to the district assistive technology representative. Kelley Wilson is willing to come in and give a 20 min presentation to all staff on assistive technology. She will be in a CHS classroom weekly during the 2015-16 school year, helping teach students and the classroom teacher about how to use the tech available. This growth allows students and teachers to grow in our tech based world.

**RR:** Teachers will stay abreast of the use of audio files as used by the ReadRight company and increase applications here at Churchill.

#### **Library:** The Library Media Specialist will:

- --participate in the curriculum development process at both the building and district level to ensure that the curricula include the full range of literacy skills (information, media, visual, digital, and technological literacy) necessary to meet content standards and to develop lifelong learners
- --collaborate with teachers and students to design and teach engaging inquiry and learning experiences and assessments that incorporate multiple literacies and foster critical thinking --participate in the implementation of collaboratively planned learning experiences by providing group and individual instruction, assessing student progress, and evaluating activities --join with teachers and others to plan and implement meaningful experiences that will promote a love of reading and lifelong learning (for example: may use eBooks, internet sources, and audiobooks)
- --provide and plan professional development opportunities within the school and district for and with all staff, including other Library Media Specialists

# **Goals and Objectives for Administrators:**

### 1. Visionary leadership

Educational Administrators inspire and lead development and implementation of a shared vision for comprehensive integration of technology to promote excellence and support transformation throughout the organization.

- a. Inspire and facilitate among all stakeholders a shared vision of purposeful change that maximizes use of digital-age resources to meet and exceed learning goals, support effective instructional practice, and maximize performance of district and school leaders
- b. Engage in an ongoing process to develop, implement, and communicate technology-infused strategic plans aligned with a shared vision
- c. Advocate on local, state and national levels for policies, programs, and funding to support implementation of a technology-infused vision and strategic plan

**Admin and tech support:** The Churchill administrative team will recruit teachers for the technology team that meets prior to the start of the school year to review and revise the school technology goals. One teacher from every department will report on how the department intends to meet the tech goals outlined in the plan. Teachers will discuss the incorporation of technology into their curriculum and instruction and make formal tech requests for the following year. We will examine our 3-year technology integration goals and review funding sources to meet the demands.

### 2. Digital age learning culture

Educational Administrators create, promote, and sustain a dynamic, digital-age learning culture that provides a rigorous, relevant, and engaging education for all students.

- a. Ensure instructional innovation focused on continuous improvement of digital-age learning
- b. Model and promote the frequent and effective use of technology for learning
- c. Provide learner-centered environments equipped with technology and learning resources to meet the individual, diverse needs of all learners
- d. Ensure effective practice in the study of technology and its infusion across the curriculum
- e. Promote and participate in local, national, and global learning communities that stimulate innovation, creativity, and digital age collaboration

**Admin and tech support:** CHS administration will strategically place technology throughout the building to ensure the greatest amount of student access to technology for instructional purposes. We will meet with teachers regarding access in classrooms and audit classroom technology to ensure functioning equipment and accessibility. We will use technology during every meeting and with every team to model the best practices of communication and

collaboration through technology. We will meet with our Media Specialist, tech teacher and tech support regularly to discuss current technology needs within the building.

### 3. Excellence in professional practice

Educational Administrators promote an environment of professional learning and innovation that empowers educators to enhance student learning through the infusion of contemporary technologies and digital resources.

- a. Allocate time, resources, and access to ensure ongoing professional growth in technology fluency and integration
- b. Facilitate and participate in learning communities that stimulate, nurture and support administrators, faculty, and staff in the study and use of technology
- c. Promote and model effective communication and collaboration among stakeholders using digital age tools
- d. Stay abreast of educational research and emerging trends regarding effective use of technology and encourage evaluation of new technologies for their potential to improve student learning

**Admin and tech support:** Churchill admin will work collaboratively with CHS teachers to develop a leadership role in the school leadership plan that focuses on instructional technology. The paid position will collaborate with administration to create professional development training for staff during teaching and learning meeting times once every two months. The administrative team will collaborate with the district technology leadership team to request trainings that meet the needs of teachers.

### 4. Systemic improvement

Educational Administrators provide digital age leadership and management to continuously improve the organization through the effective use of information and technology resources.

- a. Lead purposeful change to maximize the achievement of learning goals through the appropriate use of technology and media-rich resources
- b. Collaborate to establish metrics, collect and analyze data, interpret results, and share findings to improve staff performance and student learning
- c. Recruit and retain highly competent personnel who use technology creatively and proficiently to advance academic and operational goals
- d. Establish and leverage strategic partnerships to support systemic improvement
- e. Establish and maintain a robust infrastructure for technology including integrated, interoperable technology systems to support management, operations, teaching, and learning

**Admin and tech support:** CHS admin will continue to develop the STEM program at CHS by hiring HQ teachers in the area of technology. We will continue to integrate computer engineering classes into our course catalog and develop digital citizenship among our students.

### 5. Digital citizenship

Educational Administrators model and facilitate understanding of social, ethical and legal issues and responsibilities related to an evolving digital culture.

- a. Ensure equitable access to appropriate digital tools and resources to meet the needs of all learners
- b. Promote, model and establish policies for safe, legal, and ethical use of digital information and technology
- c. Promote and model responsible social interactions related to the use of technology and information
- d. Model and facilitate the development of a shared cultural understanding and involvement in global issues through the use of contemporary communication and collaboration tools

**Admin and tech support:** Administration will continue to support student learning in the responsible use of technology. Admin will advocate for the use of technology with all struggling learners (ELL, 504, and students with IEPs). Administration will prioritize instructional strategies that support differentiation and curriculum accommodations.

During student discipline investigations, administrators will create a safe use of technology contract to be signed when working on issues of harassment and bullying. Students will continue to develop a greater understanding of social media and the potential for dangerous or harmful uses of technology.

## **Existing Resources**

See technology audit per Jake Reents (June 26, 2015).

# **New Resources/Implementation Timeline**

| Dept | Current Tech<br>Allocation   | Technology<br>Received<br>2014-15 | New Tech<br>Request 2015-16    | Timelin<br>e | PD                                     | Funding<br>Source       |
|------|--|-----------------------------------|--------------------------------|--------------|--|-------------------------|
| LA   | Dunbar: COW G Hurlocker: COW E Hoffman: COW M Scurlock: COW A Ogden: COW O Stewart: COW ? TBA: COW ? | M (36 Airs)<br>O (36 Airs)        | 1 COW (Stewart)                | Fall 2015    | Teaching and<br>Learning<br>Wednesdays | Future<br>Bond/Grant    |
| SS   | Kelley: COW? Iacovetta: COW N Alderman: COW? Sterling: COW?  | N (36 Airs)                       | 1 COW 36 Airs<br>(Kelley-AVID) | Fall 2015    |  | Round 4B:<br>Crossroads |
| WL   | Newton: COW H  | H (reassigned)                    | 5 iPads                        | Fall 2015    |  | Building Tech           |

|                           | Montes: COW H<br>Suzuki: COW H<br>Tofte: COW H  |  | 4 Digital Voice<br>Recorders   |                           |   | funds   |
|---------------------------|---|--|--|---------------------------|---|---|
| MA                        | Soderholm: COW P/iQ<br>Schirmer: COW P/iQ<br>Wile: ?<br>Blackburn: ?<br>Chabriel: ?<br>Wilson: COW ?<br>Grossberg: COW A    | A (32 Airs)<br>P (36 Airs)<br>iQ (35 Minis)              | 5 Minis (to<br>complete cart)  | Winter<br>2016            | Teaching and<br>Learning<br>Wednesdays                        | Building Tech<br>Funds  |
| SCI                       | Crews: COW C/iJ Mitchell: COW C/iJ Bender: COW L/iJ Lemay: COW L/iJ Miller: Netbooks Ruggiero: COW I Thompson: ? TBA: COW ? | L (36 Airs)<br>iJ (30 iPads)                             | 1 COW (36 Airs)<br>(Miller)  | Fall 2015                 | Teaching and<br>Learning<br>Wednesdays                        | Future<br>Grant/Bond  |
| ENG/<br>STEM              | Thompson: ?<br>(Round 4A)<br>Wilder: COW K  |  | 1 COW (36<br>MacBookPro<br>w/Bootcamp)(Tho<br>mpson)<br>21"+ monitor   | Fall 2015                 | Teaching and<br>Learning<br>Wednesdays                        | Round 4A:<br>Crossroads<br>Building tech<br>fund  |
| Rachel<br>Carson          | Haberman: COW I<br>Ruggiero: COW I  |  |  |                           |   |   |
| Health<br>/Healt<br>h OCC | TBA: COW? (Round 4B, Shared with Digital Media/ART)   |  | 1 COW (36<br>Macbook Pro<br>w/Bootcamp)  | Fall 2015                 |   | Round 4B:<br>Crossroads   |
| ART                       | Kruziki: COW F Eagen: iMac Lab Mudd: COW F Squires: COW ? (Round 4B, shared with Health OCC)                                | Reassigned<br>Short Throw<br>and SMART<br>Board To Eagen | 6 Digital Point and<br>Shoot Cameras<br>\$500/ea (Digital<br>Photo and<br>Yearbook)<br>32 Desktops for<br>Graphic Design Lab | Fall 2015 Fall 2016       | Teaching and<br>Learning<br>Wednesdays                        | Graphic Design: Future Bond Funding New projector set-up: Building tech funds/District tech budget Cameras: Art budget and Building technology fund |
| AVID                      | Ogden: COW O<br>Iacovetta: COW N<br>Crews: COW C/iJ<br>Kelley: COW N  | 0 (36 Airs)  | COWs available<br>during AVID<br>classes   |                           | Teaching and<br>Learning<br>Wednesdays                        |   |
| SpEd/<br>ELL              | LC:<br>Kaanapu: COW B<br>Kerner: COW B<br>TBA: COW B  | 5 Teacher MBP<br>and 5 Teacher<br>iPads (ESS)            | 1 COW (trade-in<br>20 B for 36 Airs)   | Winter/<br>Spring<br>2016 | Teaching and<br>Learning<br>Wednesdays<br>or possible<br>case | iPad Airs: CHS<br>Coffee<br>Cart/Building<br>Tech fund  |

|               | PS:<br>Halemeier: COW D<br>TBA: COW D                                     | 1 Network<br>Printer (CHS)<br>15 iPad Airs<br>(CHS)<br>Reassigned Calf<br>(20 MB)<br>ELL:<br>5 iPad minis<br>(CHS) |  |           | management<br>periods | ESS funding   |
|---------------|---|--|--|-----------|-----------------------|---|
| Read<br>Right |   |  | 12 iPod Touch,<br>8GB  | Fall 2015 |                       | Building Tech<br>Fund/EEF<br>Grant  |
| Library       | 25 PC desktops  | 2 iPod Touch<br>2 iPod Nano  | 25 iMac Desktop  | Fall 2016 | Anytime               | Future<br>Grant/Bond  |
|               | Developed responsible<br>use policy for students<br>(affordable printing) |  |  |           |                       | none needed   |
|               |   |  | Develop<br>responsible use<br>policy for school<br>staff and train staff<br>on procedures and<br>create a staff<br>agreement |           |                       | none needed   |
|               |   |  | Complete projector<br>mounts for all<br>remaining free<br>standing<br>projectors and<br>projectors on carts                  |           |                       | Future Bond<br>funding/grant<br>writing<br>Building Tech<br>funds<br>District Safety<br>Funds |
| STAFF         | Iacovetta<br>Hoffman<br>Stewart<br>4 additional (new FTE)                 | 7 MBP  |  | Fall 2015 | No PD<br>required     | Building tech<br>fund   |

### **Action Plan for Students and Teachers**

**For all students 9-12:** Students are entering high school with the skills to apply NETS Technology Standards. Teachers must continue facilitating the application of skills across all content areas.

### Across all content areas, especially English Language Arts and Social Studies

- 1.) Keyboarding: ie. posture, key location, speed and accuracy
- 2.) General Skills: ie. open/close applications, save and print files, log on/off server

- 3.) Word Processing: ie. enter text, create and format tables, create bulleted and numbered lists, use error correction tools
- 4.) Concept/Idea Mapping: ie. select.create graphic organizers
- 5.) Citation making software (EasyBib)
- 6.) Grammar skill building software

#### Across all content areas, especially Fine Arts and STEM

- 7.) Equipment Use: ie. know how to operate LCD projectors, document cameras, digital cameras, digital camcorders
- 8.) Graphics: ie. use drawing tools to create illustrations, capture images from the internet, use digital camera to import pictures
- 9.) Presentation: ie. create slideshows with text and images, add effects for text images and transitions, use sound, create hyperlinks
- 10.) Multimedia: ie. record voice, create podcasts using pictures, voice, sound effects, music, create a basic movie project

#### Across all content areas, especially Math and Science

11.) Spreadsheets and Databases: ie. enter data into rows and columns, format for printing, create graphs and charts, evaluate data

#### Across all content areas

- 12.) Internet Use: ie. know and follow the (newly developed) Acceptable Use Policy for Technology, create a website, create email accounts, bookmark and tag websites
- 13.) Communication: ie. Skype, social networking, academic chat

### **Professional Development**

One Wednesday late start per month will be dedicated to mini workshops on technology for staff development. Our Media Specialist and Tech Leadership teacher will collaborate with the tech team representatives to create and provide these trainings. Department representatives will regularly report to Curriculum Council on the integration of technology in their classrooms. Trainings are also available on a regular basis at the district office.

#### **Trainings of interest:**

iPad/iPod instructional use

iBooks

Applications for education

**Google Applications** 

Instructional technology tools for higher classroom engagement (Padlet, Prezi, etc.)

Virtual classrooms

iLife Applications

Synergy

**Smartboards** 

Digital and Video Cameras in the classroom

Microsoft Office Suite

### **Maintenance & Security**

- O Computer "malfunctions" will be reported to the building TSS for analysis, troubleshooting, and repair.
- O Each year, before school begins, all student computers are "cloned" from a "pure" master computer prepared by the building TSS.
- O Each year, before school begins, all students computers are physically cleaned by the building TSS. Batteries are inspected and replaced as needed.
- O Physically damaged computers are reported to the building TSS, who analyses the damage and repairs as needed. If repairs are not possible, the TSS coordinates with 4J CIS Technology Repair.
- O SmartBoards will be cleaned as needed according to 4J CIS guidelines
- O Projector maintenance
  - filters will be cleaned as needed by building TSS and filter timer reset
  - lamps will be replaced when burned out by building TSS and lamp timer reset
- How will current and new hardware be secured?
  - O Meraki (tracking and securing)
  - O Discuss feasibility of establishing a "barn" at CHS?
  - O Discuss staff policy for staff computers; create staff agreement
    - 4] desktop ticketing system
  - O Discuss staff policy for student computers; create staff agreement; train staff on policy
    - Student Acceptable Use Policy / Positive Behavior Support integration
    - Each student is assigned a number
    - Each student always uses their assigned number regardless of COW cart used
    - All COWs placed back in their cart, in their numbered slot, before students are allowed to leave the classroom

O Entire building is secured and alarmed each night.

# **Funding Projections**

| Traditional Funding Sources:   | Grant Funding Sources:<br>(Molly Hammans and Kay<br>Fullerton) | Creative Funding Sources:   |
|--|--|---|
| Technology Fee Account<br>\$6,000 (approximately<br>\$20k/year)<br>Coffee cart account \$3,000<br>(\$9,000/yr) | Selco Grant<br>EEF   | Papa's Pizza Coupons<br>Safeway Script<br>Lancer Parent Association |

| Departm<br>ent       | Request                                 | ЕТА                  | Cost    | Crossroads<br>Priority | Funding                |
|----------------------|---|----------------------|---------|------------------------|------------------------|
| Language<br>Arts     | 1 COW (36)                              | 12/1/2015            | =39,600 | #4                     | Future<br>Bond/Grant   |
| Social<br>Studies    | 1 COW (36)<br>(shared with<br>AVID)     | 12/1/2015            | =39,600 | #3                     | Future<br>Bond/Grant   |
| World<br>Language    | 5 iPads<br>4 Digital Voice<br>Recorders | 9/1/2016<br>9/1/2015 |         |                        |                        |
| Math                 | 5 iPad Minis                            | 9/1/2015             | =1,645  |                        | Building Tech<br>Funds |
| Science              | 1 COW                                   | 12/1/2015            | =39,600 |                        | Future<br>Bond/Grant   |
| Engineeri<br>ng/STEM | 1 MBP COW (36)                          | 9/1/2015             | ~45,000 | #1                     | Crossroads<br>Round 4A |
| Rachel<br>Carson     |   |                      |         |                        |                        |

| Health/H<br>ealth OCC           | 1 MBP COW (36)<br>(shared with<br>Digital Media)  | 9/1/2015 | ~45,000                            | #2 | Crossroads<br>Round 4B                             |
|---------------------------------|---|----------|------------------------------------|----|--|
| Arts and<br>Foreign<br>Language | 6 Digital Point and Shoot Cameras (Digital Photography) 32 iMac Desktops (Graphic Design) | 9/1/2015 | =3,000<br>~38,400                  |    | Building Tech<br>Fund, Art<br>Department<br>Budget |
| AVID                            |   |          |                                    |    |  |
| Special<br>Educatio<br>n        | 1 COW (trade-in<br>20 from B COW<br>for 36 Airs)  | 9/1/2016 | =39,500???                         |    | Possible ESS,<br>Future<br>Bond/Grant              |
| Read<br>Right                   | 12 iPod Touch,<br>8GB   | 9/1/2015 | ~2,400                             |    | Building Tech<br>Fund<br>ESS Department<br>Funds   |
| Library                         | 25 iMac Desktops  | 9/1/2016 | ~30,000                            |    | Future<br>Bond/Grant                               |
| All staff                       | Projector ceiling mounts/short throws   | 9/1/2015 | 35 @<br>~1,500/<br>each<br>=52,500 |    |  |