

# **Educational Technology Plan for Sandusky City SD - 044743**

**School Years:**

**2009-10**

**2010-11**

**2011-12**

**eTech Ohio Certified on May 08, 2009**

**Certification Period: July 1, 2009 - Jun 30, 2012**

*\*created using the eTech Ohio online Technology Planning Tool version 3.0 (TPTv3)*

## **TABLE OF CONTENTS**

### **Pre-Planning**

- 1.0 Establish Technology Planning Committee
- 1.1 Overview of TPT Planning Framework
- 1.2 Review Current Technology Plan
- 1.3 Vision/Mission

### **Curriculum Alignment & Instructional Integration**

- 2.1 How Are You Making Ohio's Technology Standards An Official Part Of Your District's Curriculum?
- 2.2 How Will You Be Using Technology to Improve Teaching and Learning in English/Language Arts?
- 2.3 How Will You Be Using Technology to Improve Teaching and Learning in Fine Arts?
- 2.4 How Will You Be Using Technology to Improve Teaching and Learning in Foreign Language?
- 2.5 How Will You Be Using Technology To Improve Teaching and Learning In Mathematics?
- 2.6 How Will You Be Using Technology to Improve Teaching and Learning in Science?
- 2.7 How Will You Be Using Technology to Improve Teaching and Learning in Social Studies?
- 2.8 How Are You Teaching Students About Technology Itself?

### **Technology Policy, Leadership and Administration**

- 3.1 Analyzing District Education Technology Policies
- 3.2 Analyzing District Leadership
- 3.3 Technology Leader/Coordinator Time Commitments

### **Technology Infrastructure, Management and Support**

- 4.1 Networking, Internet & Telecommunications
- 4.2 Access to Technology
- 4.3 Stakeholder Access to Educational Information & Applications
- 4.4 Educational Software
- 4.5 Security
- 4.6 Technology Support and Management
- 4.7 Total Cost of Ownership

### **Budget and Planning**

- 5.0 Budget

## Pre-Planning

### 1.0 Establish Technology Planning Committee

Assistive Technology/Special Needs Coordinator  
 Board Member  
 Curriculum Coordinator  
 Instructional Integrationist  
 Library/Media Specialist  
 Parent  
 Principal  
 Superintendent  
 Teacher  
 Technology Coordinator  
 Technology Support  
 Treasurer  
 Other

#### Approvers:

Brett Klumber (Technology Coordinator/Director)  
 Chris Zess (Technology Coordinator/Director)  
 William Pahl (Superintendent)  
 Kevin Robertson (Treasurer)

### 1.1 Overview of TPT Planning Framework

eTech Ohio's Technology Planning Tool, strategically addresses technology planning in an educational organization and provides guidance in implementing technology to increase student achievement. Within this technology plan you will find the educational organization's vision and mission statements as well as a plan for the following: ODE Academic Content Standards (ACS) alignment with the ODE Technology ACS, technology integration into the curriculum, technology policy, technology leadership and administration, infrastructure and networking, and budgeting.

The technology planning framework addresses 5 questions adapted from "Asking the Right Questions: Techniques for Collaboration and School Change" by Edie Holcomb. In each phase of the plan, narrative responses describe the educational organization's technology planning in the following manner:

**"Where are we now?"** addresses ASSESSMENT of current status within the educational organization

**"Where do we want to go?"** addresses GOALS for growth in various areas

**"How will we get there?"** addresses PROFESSIONAL DEVELOPMENT necessary to achieve goals

**"How will we know we're getting there?"** addresses the EVALUATION PROCESS that enables the educational organization to MONITOR PROGRESS toward the specified goals.

**"How do we sustain the momentum?"** Addresses ORGANIZATIONAL SUPPORT, EVALUATION and REVISION processes to achieve the goals

As Ohio endeavors to build more agile and effective school improvement plans, this technology plan will be an instrumental tool in fostering quality planning and managing technological changes that will impact the communities where we live.

### 1.2 Review Current Technology Plan

To what goals and strategies does your current plan commit to advance the use of technology to enhance teaching and learning?

Are any of these goals no longer relevant?

What goals and strategies were met, and to what degree of success?

Sandusky's Technology Planning Committee reviewed the current plan in October and November of 2008. The last three years our district focused on refining the infrastructure, providing technology tools to deliver instruction and the necessary training to support those initiatives. The 2006-2009 strategies included:

- Equipping classrooms with upgraded equipment by securing \$375,000 in grants: EETT Grants (5), eTech PD Grants (2), IDEA Grant, Reading First Grant and Foundation Grants (4). [Met]
- Procuring and installing interactive white boards and mounted projectors in all PK-12 core subject classroom, special education classroom, and many career/tech classrooms. [Met]

- Providing continuous teacher training on interactive white boards. [Met]
- Forming instructional teams to create engaging, interactive reading lessons to match the K-6 reading and math series. [Met]
- Creating a shared drive, available district-wide, where teachers may access lessons for their interactive white boards. [Met]
- Providing distributed access to the district website to better communicate with all stakeholders and provide easy access to online resources for students. [Met]
- Replacing curricular software with online content for math and reading, accessible from school or home. [Met]
- Upgrading the email system and established email retention capabilities. [Met]
- Upgrading the online Helpdesk system. [Met]
- Creating curricular units in core areas which integrate the technology standards. [Not Met]

Sandusky's Technology Director, Tech Facilitator, Curriculum Director and Building Tech Specialists meet approximately four times per year to review technology goals and strategies, and discuss needs. Central office administrators and building principals are regularly updated on technology initiatives at administrative meetings and through email. Building Tech Specialists are responsible for communicating with staff members and providing follow-up support after PD. Representatives from all buildings, including teachers, support staff, administrators, and board members serve on the District Technology Committee. Progress is reported to all members at quarterly and annual meetings. The final plan will be posted on the district web site for easy access for all stakeholders.

Please address the following as you plan for the next three years. Be sure to record your conclusions for reflection.

Were there any unexpected outcomes or new needs that emerged?

Which goals and strategies still need to be addressed? How will the technology committee address them?

After reviewing our current technology plan, our committee agreed that our plan needs to be updated to reflect current student and staff needs. SCS teachers have made significant gains in using technology to deliver instructions with the introduction of interactive white boards and projectors across the district. Installing equipment in more than 200 classrooms and training teachers became our primary goal over the last three years.

In addition, training provided through 5 EETT grants helped our K-6 teachers improve their personal technology skills. Now that teachers' basic tech skills are in place, our primary focus will shift to integrating technology skills into units of study which incorporate technology standards in authentic projects or assessments. In addition, the district will continue to focus on providing a rich learning environment, meeting or exceeding Ohio Standards, and strengthening the home-school connection.

Goal 1: Sandusky will focus on developing K-12 curricular units in core subjects which integrate the technology standards to enhance student achievement, as well as to improve student tech skills.

Goal 2: SCS will develop an online learning environment, web based and IVDL, to provide instructional support and new learning opportunities for students anytime anywhere.

Goal 3: The district will ensure that Ohio Academic Standards are met or exceeded in all areas, by using technology to refine curriculum maps, pacing charts, and assessments.

Goal 4: SCS will utilize technology to provide a strong parent-student-school connection.

To support these goals, SCS will replace aging computers and re-image existing computers with updated software. The district will provide more assistive technology software, hardware and training. In addition, the current network will be upgraded to improve the ability to provide services, software and hardware to meet student needs.

PD will continue to be a major component of our plan. We will continue to embed technology training into the regularly scheduled PD focusing on the development of curricular units that integrate the Ohio Tech Standards. SCS will also continue to offer a variety of PD opportunities: train-the-trainer, consultants, eTech Conference, summer workshops, etc.

Sandusky City Schools participated in the Ohio Improvement Process in 2008-09. The Technology Plan will be crafted to support the CCIP goals of student achievement and community connection.

## 1.3 Vision/Mission

### A. Vision

The Sandusky City School District (SCS) will create an environment for learning that not only meets, but exceeds the State Academic Standards. SCS is committed to preparing our students to meet the challenges of the future so that all learners will be productive members of society.

Sandusky Students need to utilize all available tools to: access, analyze, and communicate information; think critically and creatively; and work cooperatively and productively with others.

Students and staff will have regular availability to technology resources within their building. The district has provided a standard platform, operating system, and software, centralized data storage, centralized e-mail and voice mail, assistive technology devices, and distance learning capabilities.

Student mastery of Ohio Academic Standards will be assured through a well-prepared teaching force. Teachers will utilize technology to identify and align resources that meet curriculum objectives. Improved software and hardware capabilities will facilitate the process.

The district expects all staff be technologically literate. Professional development will be ongoing and utilize a wide variety of training models, including hands-on, on-line tutorials, and distance learning.

Administrative efficiency and communications will be enhanced through system wide e-mail and distributed access to appropriate decision-making data and information. Improved communications among teachers, administrators, parents, and community to build better levels of sharing and understanding. Telecommunications services will greatly enhance teacher/parent communications both generally and in regard to specific student issues and concerns.

Fulfillment of this vision will enable all Sandusky students to reach their academic potential, support teachers in their delivery of the Academic Standards, and through this preparedness, contribute to the future economic development of the city, region, and state.

### B. Mission

The mission of SCS Information Technology Department is to assist students and staff to use information and technology in support of learning and to enhance communication in the 21st Century.

## Curriculum Alignment & Instructional Integration

### 2.1 How Are You Making Ohio's Technology Standards An Official Part Of Your District's Curriculum?

This section is a prerequisite for Sections 2.2 through 2.8 and should be considered as a separate task with a different goal. The goal of this section is to describe how your district is including Ohio Technology Standards into the district's curriculum. Regardless whether your district calls it a "Graded Course of Study," "Curriculum Map," or something else – all districts have some form of documentation that spells out what is expected to be taught. The content standards for technology should be written into these documents so they are interwoven with the content standards for math, science etc. For Educational Service Centers (ESCs), please identify how you are assisting your contracted schools in aligning their curriculum to technology standards.

The academic content standards, known as curriculum, describe what to teach. Technology standards should be embedded within the content from other disciplines in order to deliver the curriculum in a highly effective and motivational way.

- Using the grid below, please indicate the status of your district's efforts to embed Ohio's Technology Standards into the content standards for each curricular area. In the left column, "Where Are We Now?," please select "Not Started," "In Progress," or "Complete" for each curriculum area listed. In the right column, "Where Do We Want To Go?" please select the school year you completed or plan to complete this process.

	Where are we now?	Where do we want to go?
English Language Arts	In Progress	2009-10
Fine Arts	In Progress	2011-12
Foreign Language	In Progress	2011-12
Mathematics	In Progress	2009-10
Science	In Progress	2010-11
Social Studies	In Progress	2010-11
Technology (specific course)	Complete	2008-09
Other Content Areas	In Progress	2011-12

- In the textboxes below, please provide brief but comprehensive descriptions of how you are writing Ohio's Technology Standards into all of your curriculum areas. How are you measuring progress toward that goal, and how will you sustain a culture of technology integration into the future?

#### How will we get there?

The process of aligning the Ohio Technology Standards process will have three phases. School years 2009-2010 will focus on integrating technology standards into both language arts and mathematics. The following year, 2010-2011, the focus will switch to science and social studies. The remaining year of the plan, 2011-2012, will focus on fine arts and all other instructional areas.

Within regularly scheduled core curriculum/instruction full day meetings, teachers in all curriculum departments and grade levels will review technology standards and merge those that pertain to their instruction into their existing curriculum maps. This process is currently in practice and is highly successful. Professional development is conducted in large group session with an interactive whiteboard and in our technology training lab where the revision of maps and pacing charts can be a collaborative process. The emphasis of professional development will include instruction in use of technology within the core areas. Teachers have been trained on use of technology as a teacher delivery system and they have gained considerable skill in this area. The focus will now shift to using technology in cooperative-learning groups in classrooms, and also as a lab solution.

The district will investigate the possibility of reorganizing technology staff to provide Technology Integration Specialists at the elementary level. These staff members will work collaboratively with classroom teachers to support the integration of technology standards into core curricular subjects and help students create authentic projects.

Meetings with department chairs and/or principals (instructional leaders, including building tech specialists) will be held to review and report on instruction using technology, hardware/software needs.

**How will we know we're getting there?**

The Director of Curriculum, Technology Facilitator, and building principals will monitor curriculum alignment of technology standards through the following milestones:

- \* Online registration, attendance sign-in sheets and agendas for all professional development sessions will be kept. (2009-2012)
- \* Revised curriculum maps for all content areas will be moved to an online database giving staff better access to maps. Maps will give evidence of curriculum into which technology standards are embedded and specified. (2009-2010)
- \* Principals' Academies will devote time to review of curriculum maps relative to technology standards and available resources for implementation. (Agendas will list topics covered: 2009-2012)
- \* Lesson and/or unit plans will contain use of technology within strategies listed for student use and will be available online. (2009-2010)
- \* Assessment of student technology skill levels will occur via survey, observation checklist, etc. (2009-2012)
- \* Portfolios samples of student work will be posted online.

**How will we sustain focus and momentum?**

Sandusky City Schools employs a professional development model that cycles grade level teams and department throughout the year in full day sessions to revise maps, refine digital assessments, and brush-up on technology skills. Teachers receive professional development in construction and revision of standards-based curriculum maps, assessment, use of technology for instruction, and best practices.

Technology alignment will be attained through this same process, with the addition (as described above) of working with building level principals and other instructional leaders toward the monitoring of technology use among teachers and students. In addition, teachers will begin collaborating to develop curricular units that culminate in projects which integrate the use of technology.

Evaluation of technology standards use across the curriculum will later be most effectively pursued in discussion with teachers and administrators about lesson and unit plans where technology facilitates learning. Curriculum maps across content areas will be revised in the area of technology use as teachers become more adept at using technology and teaching students to use it in their classes.

## **2.2 How Will You Be Using Technology to Improve Teaching and Learning in English/Language Arts?**

The goal of section 2.2 is to identify the major elements of your district's plans to use technology to enhance teaching and learning in English/Language Arts at the elementary, middle and secondary levels over the next three years.

The primary objective is that you provide a brief description of two or three broad-based practices being utilized by the majority of your district's teachers to use technology to improve teaching and learning at the elementary, middle and secondary levels. For example, if all or most of your fifth through seventh grade English/Language Arts teachers are requiring students to conduct internet research or produce multimedia presentations on a regular basis; this would qualify as a broad-based practice. But if only a fraction of your teachers are regularly using these tools in the classroom – do not portray it as a broad-based practice.

Please feel free to include information about significant technology integration practices which are, by nature, not broad-based. For example, if a high school science teacher is using simulation software to allow students to conduct virtual experiments which are too dangerous to replicate in the classroom or lab; please indicate this in the Science curriculum area at the high school level only.

Using the ACOT Scale and the grid below, indicate your school's current level of effective technology integration in the English/Language Arts instructional process, as well as your target levels for improvement. If your responses fall between whole numbers, such as between 3.0 and 4.0, feel free to use .5 increments such as 3.5.

**Current Levels of Technology Integration in English/Language Arts**

**1.0 Entry** - Learn the basics of using new technology.

**2.0 Adoption** - Use new technology to support traditional instruction.

**3.0 Adaptation** - Integrate new technology into traditional classroom practice. Here, they often focus on increased student productivity and engagement by using word processors, spreadsheets, and graphics tools.

**4.0 Appropriation** - Focus on cooperative, project-based, and interdisciplinary work, incorporating technology as needed.

**5.0 Invention** - Discover new uses for technology tools. Develop spreadsheet macros for teaching algebra for example, or design projects that combine multiple technologies.

	Where are we now?	Where do we want to go?
Pre-K	2.0	3.5
K-2	2.0	3.5
3-4	2.0	3.5
5-7	3.0	4.0
8-10	3.0	4.5
11-12	4.0	5.0

### How will we get there?

#### LANGUAGE ARTS GOALS:

Goal 1: SCS will focus on developing K-12 curricular units in LA which integrate the technology standards to enhance student achievement, as well as to improve student tech skills.

Goal 2: SCS will develop an online learning environment to provide instructional support and new learning opportunities for students anytime anywhere.

Goal 3: SCS will ensure that LA standards are met by using technology to refine curriculum maps, pacing charts, and assessments.

#### ELEMENTARY LA STRATEGIES:

1. Improve achievement in LA by integrating technology into LA curricular units (word processing, paint/draw programs, online journaling.) (August 2009)
2. Employ Technology Integration Specialists to work hand-in-hand with K-6 teachers, beginning August 2009.
3. \*Train teachers to create interactive lessons using advanced features of SB such as recording lessons and student projects, June 2009-2012.
4. \*Improve reading fluency by video recording students beginning June 2009.
5. \*Improve reading skills by continuing the AR program for independent reading; use STAR Reading tests; use PDAs for DIBELS and TPRI assessments K-3; use Destination Success online content K-6 in reading to differentiate instruction, 2009-2012.

#### MIDDLE SCHOOL LA STRATEGIES:

1. \*Increase reading comprehension by creating engaging lessons and sharing them across the 7-8th grade LA department, 2009-2012.
2. \*Improve writing skills through the use of document cameras to teach the writing process.
3. Enhance writing skills by introducing blogs, wikis, and online journaling in a Moodle online environment, May 2009.
4. Refine the existing reading benchmark assessments using Examview software, June 2009.
5. \*Differentiate reading instruction by utilizing AR program for independent reading; and administer the STAR Reading Assessments three times per year, 2009-2012.

#### HIGH SCHOOL LA STRATEGIES:

1. \*Improve writing skills by teaching the writing process with the use of interactive white boards and document cameras beginning September 2009.
2. Create online courses which introduce tools such as blogs, wikis, and online journaling to enhance writing instruction and integrate 21st century tech tools, May 2009-2012.
3. \*Create reading benchmark assessments in reading using Examview software, grades 9-10, 2010.

#### \*SPECIAL NEEDS:

1. Provide upgrading Kurzweil 3000 assistive software and PD.
2. Install networking software to allow accelerated students, home-bound or SBH students the ability to participate in class from a remote site.
3. Strategies with an asterisk\* will support differentiation.

#### NEEDS ASSESSMENT

Every PK-12 language arts classroom is equipped with an interactive white board, mounted projector, and internet ready computer(s). PK-12 teachers have participated in introductory white board training. K-3 classroom teachers use PDA's to administer DIBELS assessments. Grades 3-8 administer reading benchmark exams using Examview Learning Series. At the middle school level, students input answers over a LAN. K-6 teachers have constructed interactive lessons for their whiteboards to match their reading series available to all teachers via a shared drive. Secondary level LA teachers need to develop similar lessons to engage learners. All teachers use the student labs for basic word processing and research projects. However, our greatest need is to provide support and professional development to integrate the use of technology tools into curricular units will help our students develop the technology standards.

Hardware/Software, Network Services: Upgrade Notebook V.10 software, install document cameras 7-12th grade LA, installing switches at the 7-12 schools, equip 7-8th grade with mobile laptop cart and portable word processors.

Internet: Access to shared drive for lessons, logging into Moodle, online databases, viewing videos, uploading DIBELS data, taking exams via the LAN, are all crucial to LA.

### **How will we know we're getting there?**

#### PROFESSIONAL DEVELOPMENT:

The Curriculum Director and Tech Facilitator will be responsible for planning and conducting PD. Staff will be released by grade level or department for 2 to 4 full days of PD to update curricular maps, refine assessments and learning how to build curricular units which integrate tech tools. K-6 teachers will also participate in embedded classroom PD through the services of the TIS. In addition, staff will benefit from additional tech workshops, online PD offerings, eTech Conference and JIT online videos. Participants register online for all PD activities and sign-in sheets and agendas provide documentation of attendance.

1. Provide continuous training in the use of interactive white board and document cameras to improve writing skills beginning June 2009-2012.
2. Provide training to 7-12th grade teachers to create online courses using Moodle software beginning May 2009-2012.
3. Work with key LA staff to refine the existing benchmark exams in reading using Examview for grades 3-8, June 2009.
4. Train SPED staff on Kurzweil 3000 assistive software to provide assistive technologies for RTI purposes by January 2010.

#### EVALUATION PROCESS

Sandusky City Schools' (7-12th) LA teachers have integrated word processing and basic internet searching into lessons for years. We plan to train teachers to create an online instructional environment so their students can experience other ways to communicate and collaborate with peers: blogs, podcasts, wikis, etc. Initial training on Moodle software will begin in May 2009. By the fall of 2009, we expect that 20% of secondary LA teachers will begin to utilize this mode of instruction, with an additional 5% increase each year. Participation will be measured by the number of courses developed which is monitored by checking the Moodle course catalogue. (<http://moodle.scs-k12.net>)

At the elementary level, teachers regularly use Accelerated Reader, STAR reading, video streaming, Destination Success (reading), DIBELS assessments on PDAs and Examview assessment. They also used interactive white boards to deliver reading lessons that were teacher created and reside on a shared drive. However, there is uneven integration of technology into curricular projects, so student tech skills vary from class to class. Beginning next year, elementary Tech Integration Specialists will provide instruction on basic applications (Word, PowerPoint, Excel), and will collaborate with classroom teachers and the Curriculum Director to create curricular units in LA which integrate the use of technology.

The Director of Curriculum, Technology Facilitator, building principals and teachers will monitor curriculum alignment of technology standards through the following milestones:

1. Attendance sign-in sheets and agendas for all professional development sessions.
2. Monitor curriculum maps and unit development via online database. Maps will give evidence of curriculum into which technology standards are embedded and specified.

3. Lesson and/or unit plans will contain use of technology within strategies listed for student use and can be monitored via the online curriculum database.
4. Assignments completed and assessments taken in EasyTech online tech training for grades 5 and 6 will be monitored at the district level to ensure that tech skills are being met.
5. Tech Integration Specialists will create grade level digital portfolios by posting samples of student work on the Moodle web server.
6. Assessment of student technology skill levels will also occur via survey, observation checklist, etc. (2009-2012)

### **How will we sustain focus and momentum?**

#### **SUSTAINING FOCUS AND MOMENTUM**

For the past six years, Sandusky City Schools has implemented a professional development model that brings together all district teachers, per grade level or department, quarterly in grades K-8, and at least twice per year, more times as needed, in grades 9-12. Teachers receive professional development in construction and revision of standards-based curriculum maps, assessment, use of technology for instruction, and best practices. Technology alignment will be attained through this same process, with the addition of working with building level principals and other instructional leaders toward the monitoring of technology use among teachers and students. Evaluation of technology standards use across the curriculum will later be most effectively pursued in discussion with teachers and administrators about lesson and unit plans where technology facilitates learning. Curriculum maps across content areas will be revised in the area of technology use as teachers become more adept at using technology and teaching students to use it in their classes. One other area which needs mention is that grades K-3 are involved in the Reading First Initiative, which requires use of PDAs, software to support the reading program and data collection/interpretation, and constant analysis of data produced by technology. This initiative requires monthly professional development for all K-3 teachers, speech therapists, Title I and Special Education Interventionists. Tech integration strategies are integrated into their PD. In addition, grades 4-6 are involved in a School Literacy initiative which requires extensive professional development and provides mentor modeling for all teachers. Both of these initiatives support ongoing professional development that will increase and improve the use of technology to implement curriculum. The professional development framework is well established in Sandusky City Schools, and we have every confidence that it will continue as it is a major part of our district Ohio Improvement Plan.

In addition to regularly scheduled professional development, consultants will be hired on an as need basis to develop advanced skills. For example, in April 2009, a presenter from Sylvania schools will work with all secondary LA teachers to demonstrate how he has been using interactive white boards and document cameras to improve writing. Training will include hands-on time so that teachers can practice using the gallery, record features and the like. Training on "Flip-Cameras" will be held in May 2009. A representative from each building will attend this train-the-trainer workshop to learn how to video record and edit projects. Participants will be required to share their equipment and skills at the building level. In June 2009, another teacher-consultant from Michigan will present a workshop on using PowerPoint as a publishing tool to elementary classrooms. The district will also host advanced training sessions on white boards, graphic tables, and recording lessons throughout the school year, to ensure that our staff continues to advance their technology skills. Title IID and eTech PD dollars are used to finance consultants and stipend teachers for participation in after-hours workshops. In addition, we actively pursue grants and foundations support to provide a wide-variety of training and coaching opportunities for our staff.

## **2.3 How Will You Be Using Technology to Improve Teaching and Learning in Fine Arts?**

The goal of section 2.3 is to identify the major elements of your district's plans to use technology to enhance teaching and learning in Fine Arts at the elementary, middle and secondary levels over the next three years.

The primary objective is that you provide a brief description of two or three broad-based practices being utilized by the majority of your district's teachers to use technology to improve teaching and learning at the elementary, middle and secondary levels. For example, if all or most of your fifth through seventh grade Fine Arts teachers are requiring students to conduct internet research or produce multimedia presentations on a regular basis; this would qualify as a broad-based practice. But if only a fraction of your teachers are regularly using these tools in the classroom – do not portray it as a broad-based practice.

Please feel free to include information about significant technology integration practices which are, by nature, not

broad-based. For example, if a high school science teacher is using simulation software to allow students to conduct virtual experiments which are too dangerous to replicate in the classroom or lab; please indicate this in the Science curriculum area at the high school level only.

Using the ACOT Scale and the grid below, indicate your school's current level of effective technology integration in the Fine Arts instructional process, as well as your target levels for improvement. If your responses fall between whole numbers, such as between 3.0 and 4.0, feel free to use .5 increments such as 3.5.

#### Current Levels of Technology Integration in Fine Arts

1.0 **Entry** - Learn the basics of using the new technology.

2.0 **Adoption** - Use new technology to support traditional instruction.

3.0 **Adaptation** - Integrate new technology into traditional classroom practice. Here, they often focus on increased student productivity and engagement by using word processors, spreadsheets, and graphics tools.

4.0 **Appropriation** - Focus on cooperative, project-based, and interdisciplinary work - incorporating the technology as needed and as one of many tools.

5.0 **Invention** - Discover new uses for technology tools, for example, developing spreadsheet macros for teaching algebra or designing projects that combine multiple technologies.

	Where are we now?	Where do we want to go?
Pre-K	1.5	4.0
K-4	1.5	4.0
5-8	2.5	4.0
9-12	2.5	5.0

#### How will we get there?

GOAL 1: SCS's will broaden the spectrum of Fine Arts instruction by including more opportunities for students and teachers to integrate the use of technology tools.

GOAL 2: SCS will develop an online learning environment, web based and IVDL, to provide instructional support and new learning opportunities for Fine Arts students.

#### ELEMENTARY FA STRATEGIES:

1. Enhance the delivery of instruction by equipping K-6 art classes with an interactive white board, projector, scanner and camera. (2009)
2. Enhance instruction by equipping K-6 music classes with an interactive white board and projector. (2010)
3. Provide introductory and continuous follow-up PD so that Fine Arts teachers can master the basics of interactive white boards, scanners, etc. (2009-2010)
4. Integrate digital art K-6 and video production 4-6 using Kidpix, MovieMaker and other programs into art instruction.

#### MIDDLE SCHOOL FA STRATEGIES:

1. Integrate digital art and music in grades 7-8 by creating digital stories with original music using software like Photo Story 3. (January 2011)

#### HIGH SCHOOL FA STRATEGIES:

1. Enhance the delivery of instruction by equipping high school art classes with an interactive white board, projector, scanner and camera so that online museums, digital museums, etc. can be integrated into art lessons. (2009)
2. Enhance the delivery of instruction by equipping high school music classes with an interactive white board and projector so that websites and online music can be integrated into lessons. (2010)
3. Provide an opportunity for students to write, create and produce music by equipping a new high school Music Academy with appropriate technology (TBD in July 2009).
4. Provide introductory and continuous PD on equipment so that Fine Arts teachers can master the basics of interactive white boards, scanners, etc.
5. Provide a web site where Fine Arts students can create an electronic portfolio beginning January 2010.

#### NEEDS ASSESSMENT:

Technology integration into Fine Arts has not been as systematic or strategic as in core academic disciplines;

however this plan will begin to address those needs. The past three years have seen pockets of broad-based technology integration at the high school and middle school levels. Sandusky High's digital photography classes are filled to capacity each semester and fulfill the college Fine Arts credit requirement. Students learn mechanics of taking good photos, use Photoshop for editing and PowerPoint for presentations. Students in the Commercial Art class explore a variety of media including digital art in a dedicated Mac lab. At the other end of the continuum, the band, orchestra and choir classes have access to one computer per classroom, making it difficult to do much integration. At the middle school level, art classes are equipped with projectors, Smart Boards, and scanners. They take students on virtual tours of museums and deliver lessons via the interactive board. The 7th grade teacher maintains an online museum of student work on "Artsonia's" website. Middle school music classes are equipped for digital music production. Stations are loaded with music composition software. There is an interactive white board, projector and keyboard for the teacher's use. Some K-6 music and art classes have ready access to technology, but not all, so they are not able to integrate tech tools into instruction, and will be a focus of this plan.

Hardware/Software, Network Services: Upgrade to Notebook V.10 software; install switches at the middle and high school; re-image PK-12 computers' equip art and music classes with interactive white boards and projectors, scanners and projectors; and the install and configuration of the Moodle server.

Internet Access: Access to shared drives to access interactive LA lessons and the ability to log into Moodle server to post digital portfolios, view videos, view and create virtual museums are necessary in Fine Arts classes.

### **How will we know we're getting there?**

#### PROFESSIONAL DEVELOPMENT:

In Sandusky City Schools, Fine Arts department chair, Curriculum Director, and Tech Facilitator work collaboratively to identify training needs and plan for PD. The Fine Arts staff will be released as a department for 2 to 4 full days of PD, as they have been in the past. Initial training in September 2009 will focus on learning how to use interactive white boards and how to create lessons with Version 10 Notebook software and will be delivered by the Tech Facilitator. Additionally, art and music teachers will need to learn how to help students build portfolios in Moodle software. (An outside consultant has been hired to present the initial training, May 2009. A district computer teacher will provide on-going training over the next 3 years. Teachers will be shown how to create a basic course shell, upload images and sound files, hyperlinks and the like. In addition, they will learn how to show students how to use the online environment to post their work in an ePortfolio. Using Web 2.0 tools such as blogs, students can critique each other's work, hence improving writing and critical thinking skills. (The first opportunity for this training will take place in May 2009 in an optional weekend workshop. FA teachers may opt to participate then or later during the 2009-2010 school year.) In addition, all staff, including the Fine Arts Department, will benefit from additional tech workshops, online PD offerings, eTech Conference and JIT online videos. Participants register online for all PD activities and sign-in sheets and agendas provide documentation of attendance.

#### EVALUATION PROCESS

The Director of Curriculum, Technology Facilitator, department chair and building principals will monitor curriculum alignment of technology standards through a number of milestones. When the Fine Arts staff meets for their annual full-day PD, they will help evaluate the effectiveness of training, make recommendations for future workshops and share tech integration units of study.

1. Attendance sign-in sheets, agendas for all professional development sessions will give evidence to the type and number of workshops offered and the attendance at each. (Annual report to Superintendent)
2. The online registration for professional development workshops lists the number of PD events, objectives, contact hours, dates, etc. (Available online 24X7)
3. The number of online portfolios on the Moodle server will help measure the effectiveness of this initiative. (Available online 24X7)
4. Revised Fine Arts curriculum maps will provide evidence of units into which technology standards are embedded. (Available online 24X7)
5. The number and type of teacher created interactive white board lessons stored in the district shared drive, music and arts folders will help measure the use of these technology tools in Fine Arts classrooms. (Viewable by staff)

6. The number and quality of student electronic portfolios will also be a measure of the effectiveness of training and tech integration. The contents of the Art and Music classes will be viewable to students and staff 24X7.

#### **How will we sustain focus and momentum?**

##### **SUSTAINING FOCUS AND MOMENTUM**

The focus and momentum of Fine Arts teachers will continue as full day tech training will be embedded into professional development work sessions which are scheduled once or twice per year. The PD framework has proven to be very successful at SCS. Teachers will receive professional development in construction and revision of standards-based curriculum maps, the use of technology for instruction and best practices. Evaluation of technology standards use across the curriculum is most effectively pursued in discussion with teachers and administrators about lesson and unit plans where technology facilitates learning. Curriculum maps across content areas will be revised in the area of technology use as teachers become more adept at using technology and teaching students to use it in their classes. The administration of the Survey of Enacted Curriculum (SEC) will take place in fall 2009 and will be another data resource for self-reported use of embedded technology in classrooms.

After Fine Arts classrooms are equipped with interactive boards and initial training has taken place, additional training will be scheduled to help teachers learn more about lesson creation, accessing the shared drive, etc. In addition, art and music teachers will be encouraged to attend the more advanced training sessions that are offered throughout the school year, such as how to record and edit videos, photos. Additionally, continuous support and training will be necessary to establish and maintain ePortfolios and to sustain the momentum.

## **2.4 How Will You Be Using Technology to Improve Teaching and Learning in Foreign Language?**

The goal of section 2.4 is to identify the major elements of your district's plans to use technology to enhance teaching and learning in Foreign Language at the elementary, middle and secondary levels over the next three years.

The primary objective is that you provide a brief description of two or three broad-based practices being utilized by the majority of your district's teachers to use technology to improve teaching and learning at the elementary, middle and secondary levels. For example, if all or most of your fifth through seventh grade Foreign Language teachers are requiring students to conduct internet research or produce multimedia presentations on a regular basis; this would qualify as a broad-based practice. But if only a fraction of your teachers are regularly using these tools in the classroom – do not portray it as a broad-based practice.

Please feel free to include information about significant technology integration practices which are, by nature, not broad-based. For example, if a high school science teacher is using simulation software to allow students to conduct virtual experiments which are too dangerous to replicate in the classroom or lab; please indicate this in the Science curriculum area at the high school level only.

Using the ACOT Scale and the grid below, indicate your school's current level of effective technology integration in the Foreign Language instructional process, as well as your target levels for improvement. If your responses fall between whole numbers, such as between 3.0 and 4.0, feel free to use .5 increments such as 3.5.

#### **Current Levels of Technology Integration in Foreign Language**

- 1.0 **Entry** - Learn the basics of using the new technology.
- 2.0 **Adoption** - Use new technology to support traditional instruction.
- 3.0 **Adaptation** - Integrate new technology into traditional classroom practice. Here, they often focus on increased student productivity and engagement by using word processors, spreadsheets, and graphics tools.
- 4.0 **Appropriation** - Focus on cooperative, project-based, and interdisciplinary work - incorporating the technology as needed and as one of many tools.
- 5.0 **Invention** - Discover new uses for technology tools, for example, developing spreadsheet macros for teaching algebra or designing projects that combine multiple technologies.

	Where are we now?	Where do we want to go?
Pre-K	N/A	N/A
K-4	N/A	N/A
5-8	N/A	N/A
9-12	3.0	4.5

### How will we get there?

GOAL 1: SCS will improve student achievement in Foreign Language by integrating the use of technology to enhance instruction.

GOAL 2: SCS will develop an online learning environment, web based and IVDL, to provide instructional support and new learning opportunities for FL learners.

Elementary FL Strategies: N/A

Middle School FL Strategies: N/A

High School FL Strategies: To increase teacher expertise in developing engaging interactive Foreign Language lessons using interactive white boards and to investigate the use of other technologies such as podcasting to improve reading, writing and speaking skills in Foreign Language classes.

1. Investigate IVDL for delivery of instruction in languages not currently available in the district.
2. \*Create lessons which include advanced techniques: recording speech linked to objects, use the Teacher Toolkit of activities to create self-correcting tasks, etc., beginning June 2009.
3. \*Upload lessons and notes to an online course environment (Moodle) to give students access to instructional resources from school or home beginning June 2009.
4. Utilize blogs, electronic journals, wikis to increase writing skills in an online course environment (Moodle) beginning June 2009.
5. \*Investigate the use of podcast as a way for students to improve speaking skills. Recordings can be uploaded to the online class (Moodle) by June 2010.
6. \*Equip FL classrooms with digital recorders and headphones by June 2010.

Special Needs 9-12 Goals: Goals with "\*" indicate strategies which will help students with special needs. Our goal is to give students access to digital resources to support their ability to learn a foreign language. Specifically, once teachers are trained to record their whiteboard lessons and upload them to their online course, students will have the ability to practice skills with their tutors, intervention specialists or with parents from school or home. The addition, once digital recorders and headphone technologies are in place, students will have the added benefit of practicing speaking and listening skills.

### NEEDS ASSESSMENT

Sandusky's Foreign Language teachers use a variety of digital resources to enhance teaching and learning. Two years ago, each classroom was equipped with an interactive white board, projector, and graphics tablet. In addition, they have access to updated text books and instructional resources available on CDs and online. The current need is to perfect teacher expertise in developing engaging interactive lessons, beyond the basic skill level. In addition, training and equipment is needed to give students the opportunity to practice their conversational skills via podcasts.

Hardware/Software, Network Services: Provide digital recording devices for student use. Upgrade Notebook V.10 software. Acquire an additional IVDL system.

Internet Access: Teachers need access to a shared drive where FL lessons are stored, the ability to log into a Moodle server to upload podcast, use of online foreign language web sites and the ability to post grades via our online grade book program. These steps are all central to the delivery of integrated instruction in a Foreign Language classroom.

### How will we know we're getting there?

PROFESSIONAL DEVELOPMENT:

The Curriculum Director, Tech Facilitator and FL department head will be responsible for planning and conducting PD. Foreign Language staff will be released as a department for 2 to 4 full days of PD, as they have been in the past. Initial training will focus on perfecting lesson development on interactive white boards and lesson creation using the latest version of software which includes advance tools. Training will also include how to create a teacher web page using Moodle software. Teachers will learn how to create a basic course shell, upload lessons, notes, hyperlinks, etc. In addition, they will learn how to use an online environment to improve student writing skills using Web 2.0 tools such as podcasts, blogs, wikis and online journals, all of which will help improve reading, writing and conversation skills. (The first opportunities for this training will take place in May 2009 in an optional weekend workshop. FL teachers may opt to participate then.)

Once teachers have developed online courses, podcasting will be investigated. Equipment will need to be procured and software installed on student computers. Teachers will be trained to show students how to record conversations, convert them to mp3 files, and then upload them to the online course for both listening and speaking practice. This initiative will take place in 2010-2011.

In addition, staff will benefit from additional tech workshops, online PD offerings, eTech Conference and JIT online videos. Participants register online for all PD activities and sign-in sheets and agendas provide documentation of attendance.

#### EVALUATION PROCESS:

A transparent accountability system will help ensure that goals and strategies are addressed. Progress toward these goals and objectives will be measured by several measures:

1. Interactive white board lessons are stored in a shared drive accessible to everyone in the district. Department chairs and administrators can check the quality and quantity of lessons as they are created and archived in this drive. Use of a district-developed rubric for lesson construction ensures that teachers build lessons that meet district expectations and ODE standards. June 2009
2. The online course catalogue is also accessible to everyone. As courses are developed, teachers, principals and central office personnel will be able to monitor progress. <http://moodle.scs-k12.net> . By June 2010 there will be at least 15 courses developed, with a 5% increase annually.
3. Data tools within Moodle software will make it possible to measure the number of times students and staff log into and use blogs, wikis and other online tools. This measure will be recorded annually beginning June 2010.
4. A built-in metric system in Moodle will make it possible to know how often podcasts and similar applications were used. This measure will be recorded annually beginning June 2010.
5. Sign-in sheets and the online registration system are used to document participation in professional development activities.

The group responsible for evaluating these outcomes includes the Curriculum Director, Instructional Technology Facilitator, Tech Director, as well as the department chair. The foreign language department will be engaged in discussions regarding progress made toward these goals at each department professional development release day, which are scheduled once or twice each year. Goals and strategies will be reviewed, updated and/or modified as needed during those bi-annual meetings.

#### **How will we sustain focus and momentum?**

##### SUSTAINING FOCUS AND MOMENTUM:

Technology integration is an essential element of foreign language instruction and will remain a routine part of classroom teaching. FL teachers have been using CDs and websites to augment lessons for several years. Over the past two years, interactive white boards, projectors and graphics tablets have been introduced into their classrooms and are now considered basic tools of instruction. The professional development opportunities that are planned for the next few years will add new elements to the teaching and learning process. Once teachers master the advanced techniques of Smart Notebook software and begin developing shared lessons, their lessons will be even more engaging to students. With the addition of online courseware (Moodle), students will be able to access foreign language instruction 24-7. In addition, they will be able to improve their reading and writing skills in a collaborative environment (wikis, blogs), and their conversation skills (podcasts) as well.

Because FL teachers receive embedded professional development in construction and revision of standards-based curriculum lessons, use of technology for instruction, and best practices, we can ensure the continued use of technology in instruction. FL teachers will also be encouraged to improve their skills and investigate

new technologies via after-school training provided by the district, eTech online PD offerings, WVIZ and NWOET training, and video distance learning PD opportunities.

## 2.5 How Will You Be Using Technology To Improve Teaching and Learning In Mathematics?

The goal of section 2.5 is to identify the major elements of your district's plans to use technology to enhance teaching and learning in Mathematics at the elementary, middle and secondary levels over the next three years.

The primary objective is that you provide a brief description of two or three broad-based practices being utilized by the majority of your district's teachers to use technology to improve teaching and learning at the elementary, middle and secondary levels. For example, if all or most of your fifth through seventh grade Mathematics teachers are requiring students to conduct internet research or produce multimedia presentations on a regular basis; this would qualify as a broad-based practice. But if only a fraction of your teachers are regularly using these tools in the classroom – do not portray it as a broad-based practice.

Please feel free to include information about significant technology integration practices which are, by nature, not broad-based. For example, if a high school science teacher is using simulation software to allow students to conduct virtual experiments which are too dangerous to replicate in the classroom or lab; please indicate this in the Science curriculum area at the high school level only.

Using the ACOT Scale and the grid below, indicate your school's current level of effective technology integration in the Mathematics instructional process, as well as your target levels for improvement. If your responses fall between whole numbers, such as between 3.0 and 4.0, feel free to use .5 increments such as 3.5.

### Current Levels of Technology Integration in Mathematics

1.0 **Entry** - Learn the basics of using the new technology.

2.0 **Adoption** - Use new technology to support traditional instruction.

3.0 **Adaptation** - Integrate new technology into traditional classroom practice. Here, they often focus on increased student productivity and engagement by using word processors, spreadsheets, and graphics tools.

4.0 **Appropriation** - Focus on cooperative, project-based, and interdisciplinary work - incorporating the technology as needed and as one of many tools.

5.0 **Invention** - Discover new uses for technology tools, for example, developing spreadsheet macros for teaching algebra or designing projects that combine multiple technologies.

	Where are we now?	Where do we want to go?
Pre-K	1.0	3.5
K-2	1.5	3.5
3-4	2.0	3.5
5-7	3.0	4.0
8-10	3.0	4.5
11-12	3.0	5.0

### How will we get there?

GOAL 1: SCS's will improve student achievement in mathematics by integrating the use of technology to enhance instruction.

GOAL 2: SCS will develop an online learning environment to provide instructional support for students anytime anywhere.

GOAL 3: SCS will ensure that mathematics standards are met or exceeded, by using technology to refine curriculum maps, pacing charts, and assessments.

GOAL 4: SCS will utilize technology to provide a strong parent-student-school connection.

Elementary Math Strategies:

1. Hire Technology Integration Specialists at the elementary level to work with K-6 teachers to integrate the use of technology into unit projects and to build student tech skills by August 2009.
2. \*Provide continuous training in the use of interactive white boards so that teachers advance their skills beginning June 2009 throughout 2012.
3. \*Refine existing benchmark assessments in math using Examview Learning Series, grades 3-6th and administer over a LAN..

**Middle School Math Strategies:**

1. \*Equip and train middle level math classrooms with response systems (Senteo) to provide instant assessment capabilities.
2. Provide continuous training in the use of interactive white boards so that teachers advance their skills (record lessons, Teacher Toolkit, etc.) beginning June 2009.
3. \*Refine the existing Examview benchmark assessments in math grades 7-8 used over the LAN.
4. \*Train key 7-8th grade teachers to create core lessons in Notebook software which focus on engaging students in problem solving in mathematics skills by June 2010.

**High School Math Strategies:**

1. \*Train 9-12th grade teachers to create online courses using Moodle software to provide a place to store class notes and recordings giving students the opportunity for reinforcement, enrichment, and acceleration of math skills.
2. \*Equip and train secondary math classrooms with response systems (Senteo) to provide instant assessment capabilities.
3. \*Train key 9-12th grade teachers to create core lessons in Notebook software which focus on engaging students in problem solving skills.
4. Create Examview benchmark assessments in math grades 9-12 and train teachers to use reports to inform instruction based on that data.

Special Needs PK-12 Goals: Goals marked with an asterisk "\*" are especially designed to help differentiate instruction for students with identified special needs.

**NEEDS ASSESSMENT:**

Teachers of mathematics have dramatically changed their way of teaching since interactive white boards were added to their classrooms in 2006. Every PK-12 math classroom is equipped with a Smart Board, projector and an AirLiner (7-12) and teachers have participated in introductory training. At the elementary level, teams of teachers are in the process of transferring math materials into Notebook format. These lessons are stored in a shared drive, accessible to all, providing a common framework of instruction across elementary grades and schools. All students in grades 2-6th use FasttMath to improve math computation, and Destination Math for concept development, in classroom centers and the computer lab. Examview Benchmark assessments in math are administered 3 times per year in grades 3-6th. At the middle and high school levels, all teachers utilize their interactive whiteboards. Benchmark exams are given via a LAN, 3 times per year at grades 7 and 8. Common math lessons have yet to be developed in math for grades 7-12. All levels utilize the online resources available through their textbooks, as well as those suggested in the IMS. While substantial gains have been made in the use of technology to deliver math instruction, we need to continue to develop teacher and student technology skills.

Hardware/Software, Network Services: Purchase Senteo response systems. Purchase and install updates on: Destination Math, Fastt Math. EasyTech, Smart Notebook and Examview software. PK-12 computers will be re-imaged.

**How will we know we're getting there?****PROFESSIONAL DEVELOPMENT:**

Training will be coordinated by the district Math Coach, Curriculum Director and Tech Facilitator. Most PD will be delivered during release days for grade levels or department, scheduled throughout the school year.

Elementary TISs will provide mentor/coaching continuously.

Consultants will be hired as needed, to provide PD on new technologies and techniques, such as Moodle and Senteo training. All SCS staff are encouraged to participate in eTech online training, WVIZ and NWOET workshops and video distance learning PD.

1. IT Facilitator will provide continuous training for K-12 math teachers in the use of interactive white board to improve math skills beginning June 2009-2012.
2. Curriculum Director will assemble representatives of K-6 math teachers to refine math benchmark assessments and pacing charts with the assistance of math consultant. June 2009.
3. IT Facilitator will train teachers and students in grades 3-6 to use a LAN to complete Examview assessments and print reports beginning August 2009-June 2010.

4. Math consultant will gather key math teachers 7-8th grade to refine Examview benchmark assessments. June 2009.
5. Consultant will provide demonstrations of Senteo response systems for 7-12 math teachers (May 2009) and training in August-September 2009.
6. IT Facilitator will provide training on how to create an online course using Moodle software, upload videos, class notes, etc. beginning in May 2009, and continuously through 2012.

#### EVALUATION PROCESS:

The Director of Curriculum, Technology Facilitator, department heads and math coach will monitor curriculum alignment of technology standards and attendance in professional development through the following measures:

1. Attendance sign-in sheets and agendas for all professional development sessions will be kept on file. (2009-2012)
2. Lesson and/or unit plans will contain use of technology within strategies listed for student use and can be monitored by all staff via the online curriculum database, January 2010-2012.
4. Elementary Tech Integration Specialists will create grade level digital portfolios by posting samples of student work on the Moodle web server. The number and type of items will serve as a means to measure growth and are visible to all staff. (2010-2012)
5. The catalogue of 7-12 math courses on the Moodle server will give evidence to the number of courses, lessons, videos and notes math teachers have posted, beginning August 2009.
6. Assessment of 4-6th grade students' tech skills will be monitored through their EasyTech accounts, 2009-2012.
7. Building administrators will be updated and their input about integration effectiveness sought at administrative meetings on a regular basis. In addition, they will receive at least two hours of review of program strategies and progress at Principals' Academy during the second semester of each year.

The review of goals is a regular part of grade level and department professional development days. It goes without saying that the needs of the math course will evolve over time, therefore goals, training, and resource acquisition will need to be monitored and adjusted continuously.

#### **How will we sustain focus and momentum?**

##### SUSTAINING FOCUS AND MOMENTUM:

Sandusky City Schools' goal to improve student achievement in math and to ensure that technology integration remains embedded into teaching and learning practices is an integral part of our district's CIP and Ohio School Improvement Plan. The district's model brings together all district teachers, per grade level or department, quarterly in grades K-8, and at least twice per year in grades 9-12. Teachers receive professional development in construction and revision of standards-based curriculum maps, assessment, use of technology for instruction, and best practices. The district's practice of weaving technology PD into regularly scheduled instructional PD has been very effective and will continue in the future. Evaluation of technology standards' use across the curriculum is effectively pursued with teachers and administrators in discussion about lesson and unit plans where technology facilitates learning. Curriculum maps will be revised to show integration as teachers become more adept at using technology to present lessons and incorporate it into student projects.

Consultants will be hired on an as-needed basis to develop advanced skills. For example, in June 2008, a presenter from the University of Akron worked with teachers to demonstrate advanced techniques of using interactive white boards. Training included hands-on time so that teachers could practice using the gallery, record features and the like. Since then, two math teachers from the middle school and high school level have become very skilled in using the record feature to create lessons for substitutes, for remediation, as well as for direct instruction. In May 2009, these teachers will begin training other math teachers to employ the techniques they've learned. Also in May 2009, a consultant from NCOESC will provide PD on how to create an online course where teachers can upload recordings and class notes, and use the embedded communication tools to strengthen writing across the math curriculum. To ensure that our math teachers continue to advance their technology skills, Title IID and eTech PD dollars will be utilized to hire consultants and pay stipend teachers for participation in after-hours workshops.

The professional development framework is well established in Sandusky City Schools and we have every confidence that it will continue as it is a major part of our district Ohio Improvement Plan.

## 2.6 How Will You Be Using Technology to Improve Teaching and Learning in Science?

The goal of section 2.6 is to identify the major elements of your district's plans to use technology to enhance teaching and learning in Science at the elementary, middle and secondary levels over the next three years.

The primary objective is that you provide a brief description of two or three broad-based practices being utilized by the majority of your district's teachers to use technology to improve teaching and learning at the elementary, middle and secondary levels. For example, if all or most of your fifth through seventh grade Science teachers are requiring students to conduct internet research or produce multimedia presentations on a regular basis; this would qualify as a broad-based practice. But if only a fraction of your teachers are regularly using these tools in the classroom – do not portray it as a broad-based practice.

Please feel free to include information about significant technology integration practices which are, by nature, not broad-based. For example, if a high school science teacher is using simulation software to allow students to conduct virtual experiments which are too dangerous to replicate in the classroom or lab; please indicate this in the Science curriculum area at the high school level only.

Using the ACOT Scale and the grid below, indicate your school's current level of effective technology integration in the Science instructional process, as well as your target levels for improvement. If your responses fall between whole numbers, such as between 3.0 and 4.0, feel free to use .5 increments such as 3.5.

### Current Levels of Technology Integration in Science

- 1.0 **Entry** - Learn the basics of using the new technology.
- 2.0 **Adoption** - Use new technology to support traditional instruction.
- 3.0 **Adaptation** - Integrate new technology into traditional classroom practice. Here, they often focus on increased student productivity and engagement by using word processors, spreadsheets, and graphics tools.
- 4.0 **Appropriation** - Focus on cooperative, project-based, and interdisciplinary work - incorporating the technology as needed and as one of many tools.
- 5.0 **Invention** - Discover new uses for technology tools, for example, developing spreadsheet macros for teaching algebra or designing projects that combine multiple technologies.

	Where are we now?	Where do we want to go?
Pre-K	1.0	3.5
K-2	1.0	3.5
3-5	2.0	3.5
6-8	2.5	4.0
9-10	2.5	4.5
11-12	2.5	5.0

### How will we get there?

- GOAL 1: SCS will develop an online learning environment for science classes to provide instructional support and new learning opportunities for students anytime anywhere.
- GOAL 2: SCS will ensure that science standards are met or exceeded, by using technology to refine curriculum maps, pacing charts, and assessments.
- GOAL 3: SCS's goal is to improve student achievement in science by integrating the use of technology to enhance instruction at all grade levels.
- GOAL 4: SCS will utilize technology to provide a strong parent-student-school connection.

#### Elementary Science Strategies

1. Provide training on Flip video cameras to K-6 science staff to improve student oral presentation and integrate their use into multimedia presentation skills beginning May 2009.
2. Integrate science video distance learning programs into the K-6 science curriculum resources by June 2010.
3. Create science units which integrate technology in culminating student projects, grades 3-6th, continuously 2009-20112.

#### Middle School Science Strategies:

1. Refine science benchmark assessments in Examview Learning Series to ensure their alignment to Ohio Academic Standards for grades 7-8 by January 2010.

2. Administer assessments using the CPS Response System over a LAN by January 2010.
3. \*Ensure that 7-8th grade science teachers are capable of delivering engaging, interactive lessons using interactive white boards using the Teacher's Toolkit and AirLiner graphics tablet by June 2010.
4. Create science units which integrate technology into student projects continuously 2009-2012.

#### High School Science Strategies:

1. \*Provide an online environment (Moodle) and training for science teachers in grades 9-12th so that students can access science notes, recordings and videos from school or home by June 2010.
2. \*Provide continuous training on interactive white boards and AirLiners for all science teachers 9-12th by December 2009.
3. Create science benchmark assessments using Examview Learning Series and CPS response systems for all science students 9-12th by June 2012.
4. \*Ensure that high school science teachers are capable of delivering engaging, interactive lessons using interactive white boards using the Teacher's Toolkit and AirLiner graphics tablet by June 2010.

Special Needs PK-12 Goals: Goals with "\*" are especially designed to help differentiate instruction for students with identified special needs. With texts online, the Kurzweil software makes it possible for at-risk students to hear their text read. The online Moodle web site will contain archived recordings and class notes which can be access by students, tutors and parents 24x7. Use of interactive white boards makes possible another vehicle for archiving and giving students access to in-class lessons for review, remediation or make-up.

#### NEEDS ASSESSMENT:

Currently our science classes are all equipped with interactive white boards and mounted projectors. Introductory training is complete, but continuous PD will be offered to ensure that all science teachers are proficient using this equipment to deliver instruction. Benchmark assessments in science have been created, but need to be refined K-8. Assessments will need to be created for science 9-12. Our greatest challenge is to create science units of study which integrate technology and culminate in student projects which authentically demonstrate tech skill development.

At the elementary level, we plan to utilize the support of Tech Integration Specialists to assist teachers in learning how to use technology in student projects, such as video production.

Hardware/Software, Network Services: Flip cameras, upgrade Examview Learning Management system, maintain accounts management for Holt online texts, upgrade Smart Notebook software to version 10, install Moodle server, image PK-12 computers June-December 2009 and replace 300 computers. Install new switches at the middle and high school.

Internet Ac

#### **How will we know we're getting there?**

##### PROFESSIONAL DEVELOPMENT:

The Curriculum Director and Technology Facilitator will be responsible for PD and will work in cooperation with science department heads, teacher-trainers and consultants toward that end. Professional development will continue to be delivered through release days for grade levels or departments, plus after-school, weekend workshops and summer courses will be offered. The PD schedule will be developed in June and will be posted online annually by August 2009-2012. K-6 teachers will also participate in embedded classroom PD through the services of the elementary Tech Specialist, IT Facilitator and Curriculum Director. In addition, staff will benefit from additional tech workshops, online PD offerings, eTech Conference and JIT online videos. Participants register online for all PD intradistrict activities and sign-in sheets of each district PD provide documentation of attendance.

1. IT Facilitator and Supplementary Center personnel will train Building Tech Specialists on the operation and use of mobile Polycom Systems so IVDL programs can be integrated into science curriculum.
2. IT Facilitator will train K-6 science teachers on the use of Flip video cameras and Movie Maker software beginning August 2009.
3. IT Facilitator will train K-12 science teachers on the advanced techniques for using interactive white boards: recording lessons, using the Teacher Toolkit, building common lessons which are posted in a shared server beginning in June 2009. A core of common lessons will be required to be taught by science teachers at each grade level, K-8.

4. Curriculum Director will work with teams of K-6 science teachers to select and incorporate a minimum of one Video Distance Learning program into the science curriculum maps per grade level by June 2010.
5. Curriculum Director, IT Facilitator and Tech Integration Specialists will collaborate with teachers on building units which integrate the use of technology into student projects 2009-2012.
6. Curriculum Director and IT Facilitator will train K-12 science teachers to create and refine benchmark assessment in Examview software beginning June 2009-2010.
7. IT Facilitator will train 7-10 grade science teachers on how students use CPS to take assessments.
8. A consultant will provide initial training on Moodle software in May 2009. Follow-up training will be provided by the IT Facilitator and a Building Tech Specialist, 2009-2012.
9. Building Tech Specialists will begin training staff on AirLiner and recording features of Notebook software in May 2009.

#### EVALUATION PROCESS:

The review of goals is a regular part of grade level and department professional development days. The needs of the science department will evolve overtime; therefore goals, training, and resource acquisition will need to be monitored and adjusted continuously.

The Director of Curriculum, Technology Facilitator, and Science Department Chair, will monitor curriculum alignment of technology standards and attendance in professional development through the following measures:

1. Attendance sign-in sheets and agendas for all professional development sessions will be kept on file. (2009-2012)
2. Lesson and/or unit plans will contain use of technology within strategies listed for student use and can be monitored by all staff via the online curriculum database, January 2010-2012.
3. Elementary Tech Integration Specialists will create grade level digital portfolios by posting samples of student work on the web server. The number and type of items related to science will serve as a means to measure growth and are visible to all staff. (2010-2012)
4. The catalogue of 7-12 science courses on the Moodle server will give evidence to the number of courses, lessons, videos and notes science teachers have posted, beginning August 2009. Within one year, 20% of secondary science teachers will have created Moodle courses to augment their science curriculum.

#### How will we sustain focus and momentum?

##### SUSTAINING FOCUS AND MOMENTUM:

Sandusky City Schools' professional development model brings together all district teachers, per grade level or department, quarterly in grades K-8, and at least twice per year, more times as needed, in grades 9-12. Professional development is focused on the construction and revision of standards-based curriculum maps, assessment, use of technology for instruction, and best practices. Technology alignment will be attained through this same process, with the addition of work with building level principals and other instructional leaders toward the monitoring of technology use among teachers and students. Evaluation of technology standards' use across the curriculum will be most effectively pursued in discussion with teachers and administrators about lesson and unit plans where technology facilitates learning. Curriculum maps across content areas will be revised in the area of technology use as teachers become more adept at using technology and teaching students to use it in their classes.

In addition to regularly-scheduled professional development, consultants will be hired on an as-needed basis to develop advanced skills. For example, in May 2009, a consultant will work with K-12 teachers to on "Flip-Cameras". A representative from each building will attend this train-the-trainer workshop to learn how to video record and edit projects. Participants will be required to share their equipment and skills at the building level. The district will host advanced training sessions on white boards, graphic tablets, and recording lessons throughout the school year, to ensure that our staff continues to advance their technology skills. The professional development framework is well established in Sandusky City Schools, and we have every confidence that it will continue as it is a major part of our district Ohio Improvement Plan.

## 2.7 How Will You Be Using Technology to Improve Teaching and Learning in Social Studies?

The goal of section 2.7 is to identify the major elements of your district's plans to use technology to enhance teaching and learning in Social Studies at the elementary, middle and secondary levels over the next three years.

The primary objective is that you provide a brief description of two or three broad-based practices being utilized by the majority of your district's teachers to use technology to improve teaching and learning at the elementary, middle and secondary levels. For example, if all or most of your fifth through seventh grade Social Studies teachers are requiring students to conduct internet research or produce multimedia presentations on a regular basis; this would qualify as a broad-based practice. But if only a fraction of your teachers are regularly using these tools in the classroom – do not portray it as a broad-based practice.

Please feel free to include information about significant technology integration practices which are, by nature, not broad-based. For example, if a high school science teacher is using simulation software to allow students to conduct virtual experiments which are too dangerous to replicate in the classroom or lab; please indicate this in the Science curriculum area at the high school level only.

Using the ACOT Scale and the grid below, indicate your school's current level of effective technology integration in the Social Studies instructional process, as well as your target levels for improvement. If your responses fall between whole numbers, such as between 3.0 and 4.0, feel free to use .5 increments such as 3.5.

### Current Levels of Technology Integration in Social Studies

1.0 **Entry** - Learn the basics of using the new technology.

2.0 **Adoption** - Use new technology to support traditional instruction.

3.0 **Adaptation** - Integrate new technology into traditional classroom practice. Here, they often focus on increased student productivity and engagement by using word processors, spreadsheets, and graphics tools.

4.0 **Appropriation** - Focus on cooperative, project-based, and interdisciplinary work - incorporating the technology as needed and as one of many tools.

5.0 **Invention** - Discover new uses for technology tools, for example, developing spreadsheet macros for teaching algebra or designing projects that combine multiple technologies.

	Where are we now?	Where do we want to go?
Pre-K	1.0	3.5
K-2	1.5	3.5
3-5	2.5	3.5
6-8	2.5	4.0
9-10	2.5	4.5
11-12	2.5	5.0

### How will we get there?

GOAL 1: SCS will improve student achievement in Social Studies by integrating the use of technology to enhance instruction at all grade levels.

GOAL 2: SCS will develop a web based learning environment to provide instructional support and new learning opportunities utilizing 21st century skills.

GOAL 3: SCS will ensure that Social Studies standards are met or exceeded, by using technology to refine curriculum maps, pacing charts, and assessments.

#### Elementary SS Strategies:

1. \*Integrate the use of SS CDs, DVDs, online text, and multimedia presentations and other resources that accompany the newly-purchased text books for K-6 by January 2010.
2. \*Train K-6 teachers on how to create SS lessons using the advanced features of Smart Notebook software, such as Record and Teacher Toolkit by January 2009.
3. Create benchmark assessments aligned to Ohio Academic Standards using Examview Learning Series by January 2010.
4. Create SS units to integrate technology in culminating authentic student projects in grades 4-6th, continuously 2009-2011. Some of these projects will be "Curriculum Connections" tied to satellite experiences outside of the district.

#### Middle School SS Strategies:

1. Refine benchmark assessments aligned to Ohio Academic Standards using Examview Learning Series for

grades 7-8 by January 2010.

2. \*Ensure that 7-8th grade teachers deliver engaging, interactive lessons using interactive white boards using the Teacher's Toolkit and AirLiner graphics tablet by June 2010.
3. \*Provide training on how to create teacher and student accounts to access the online edition of Holt's SS texts from school or home for grades 7-8 by September 2009.

High School SS Strategies:

1. \*Provide introductory training on interactive white boards and AirLiners for all SS teachers 9-12th by December 2009.
2. Create SS benchmark assessments using Examview Learning Series for all SS students 9-12th by June 2011.
3. \*Provide an online environment (Moodle) and training for SS teachers grades 9-12th so that students can access SS notes and videos from school or home by June 2010.

Special Needs PK-12 Goals:

1. The online Moodle web site will contain archived recordings and class notes which can be access by students, tutors and parents 24x7.
2. Goals identified with an asterisk\* are especially designed to help differentiate instruction for students with identified special needs.

NEEDS ASSESSMENT:

Teachers of SS are beginning to integrate the use of technology to enhance teaching and learning in the classroom. Over the past three years, white boards have made their way into elementary social studies classrooms. At the K-6 level, a new SS textbook was just purchased, along with a host of digital resources: audio CDs, videos, multimedia presentation, books on CD, and test generators for which teachers need PD. Middle school teachers received new texts a few years ago, and they too need help learning how to use the digital resources that accompany the texts. K-12 SS texts are available online. Teachers will need support setting up teacher and managing student accounts to online texts. This fall, middle and high school SS classrooms were equipped with Smart Boards, projectors. There is a need for follow-up training to improve basic and advanced skills on the Teacher Toolkit, record lessons and export notes. Another need is to develop (K-6, 9-12) or refine (7-8) Examview benchmark tests in SS. Most SS teachers are not integrating technology into curricular units. As district maps move to an online database, accessible to teachers from work or home, we will schedule time to help them build units that are aligned to ODE Social Studies Academic and Technology Standards.

Hardware/Software, Network Services: Every PK-12 computer will be imaged June-December 2009 and 300 will be replaced. New switches will be installed at the middle and high school. Software is adequate.

Internet Access: Access to online SS t

### **How will we know we're getting there?**

PROFESSIONAL DEVELOPMENT:

Professional development will be delivered through release days for grade levels or departments, after-school and weekend workshops and summer courses. The Curriculum Director and Technology Facilitator will be responsible for PD and will work in cooperation with textbook trainers, teacher-trainers and consultants toward that end. The PD schedule will be developed in June and will be posted online annually by August 2009-2012. K-6 teachers will also participate in embedded classroom PD through the services of the elementary Tech Specialist, IT Facilitator and Curriculum Director. In addition, staff will benefit from additional tech workshops, online PD offerings, eTech Conference and JIT online videos. Participants register online for all PD activities and sign-in sheets provide documentation of attendance.

1. The IT Facilitator will train K-12 SS teachers on the advanced techniques for using interactive white boards: recording lessons, using the Teacher Toolkit, building common lessons which are posted in a shared server. (Summer 2009)
2. The IT Facilitator will work with Tech Director to determine the best way to distribute K-12 CDs, DVD, web pages and exam makers via the network (e.g.: network apps, intranet, shared drive) by June 2009.
2. Textbook consultants will introduce K-6 teachers to the new print and digital resources purchased for SS in September 2009.
3. IT Facilitator will re-introduce 7-8th grade teachers to the digital resources which accompany SS texts.

4. IT Facilitator will train K-8 teachers to setup instructor and student account for online version of texts in September 2009.
5. Teacher-trainers will introduce 7-12th grade teachers to use the AirLiner graphic tablets in May-June 2009.
6. The Curriculum Director will provide K-12 training on the online curricular database to help teachers develop lessons and units which integrate technology into SS Academic Standards August-June 2009.
7. A consultant has been hired to train secondary teachers to create online courses in Moodle software so that students can engage in collaborative activities: surveys, wikis, etc. in May 2009. Additional training will be offered by a district trainer 2009-2012.
8. Curriculum Director and IT Facilitator will train teachers to refine the existing benchmark assessments (7-8th grade SS) using Examview software for grades. Create exams for grades 3-6th and 9-12th and continue to administer them three times per year.
9. Curriculum Director and IT Facilitator will work with all 4th grade teachers (May 2009), and 5th-6th grade teachers (August-June 2010) to begin creating SS units which integrate technology into culminating projects for students.
10. Curriculum Director and IT Facilitator will work with all 7-8th grade teachers (August-June 2010) to begin creating SS units which integrate technology into culminating authentic assessment projects for students.

#### EVALUATION PROCESS:

The majority of technology training is embedded into the work-day, which ensures that all teachers are participating. An online registration database (<http://pd.ncoesc.org/sandreg/listview.php>) is used to manage workshop enrollment in both mandatory and optional training sessions. This system is used to print and archive CEUs for staff members and is managed by the IT Facilitator. Title IID funds are often used to stipend teachers for their time in the summer months when new initiatives are undertaken. Progress in reaching our PD goals will be monitored via the registration system 2009-2012. An electronic survey will be administered following each workshop beginning in September 2009.

To measure the creation of SS lessons and benchmark assessments, we will count the number stored in the district SS folder, inside the shared drive each spring. In addition, we will count the number of online SS classes/courses created annually in the Moodle server.

#### How will we sustain focus and momentum?

##### SUSTAINING FOCUS AND MOMENTUM:

For the past six years, Sandusky City Schools has implemented a professional development model that brings together all district teachers, per grade level or department, quarterly in grades K-8, and at least twice per year for a full day, more times as needed, in grades 9-12. Teachers receive professional development in construction and revision of standards-based curriculum maps, assessment, use of technology for instruction, and best practices. Technology alignment is attained through this same process, with the addition (as described above) of working with building level principals and other instructional leaders toward the monitoring of technology use among teachers and students. This model has proven to be very effective and is well received by staff members. Evaluation of technology standards use across the curriculum is most effectively pursued in discussion with teachers and administrators about lesson and unit plans where technology facilitates learning. Curriculum maps across content areas will be revised in the area of technology use as teachers become more adept at using technology and teaching students to use it in their classes.

Because technology initiatives are aligned and integrated to our district curriculum initiatives, our focus and momentum will remain strong. Teachers' technology skill levels have increased dramatically over the past three years and they regularly use technology to deliver instruction. The next three years district PD will focus on building curriculum projects that will help build student tech skills. Quarterly review of strategies and annual review of the district tech plan will help ensure that the focus and momentum are sustained.

## 2.8 How Are You Teaching Students About Technology Itself?

The goal of Phase 2.8 is for district technology planning staff to describe your district's efforts to teach students what they need to know and be able to do in order to meet Ohio's technology content standards.

**IMPORTANT NOTE:** Phase 2.8 is about technology as its own academic content standard and focuses on specific technology courses.

Phase 2.8 is the place to indicate what technology instruction you are offering at the elementary, middle and

secondary levels. Examples of these "pure technology" courses would include, but are not limited to: career technology, library media, keyboarding, multi-media or digital video production, web page authoring, network administration, etc.

As you are considering how you will teach the technology academic content standards, consider reviewing your Comprehensive Continuous Improvement Plan (CCIP) goals and strategies.

### Activity

Using the Apple Classroom of Tomorrow (ACOT) Scale and the grid below, indicate your school's current level of effective technology integration specifically concerning technology courses, as well as your target levels for improvement. If your responses fall between whole numbers, such as between 3.0 and 4.0, feel free to use .5 increments such as 3.5.

### Instructional Integration

1.0 **Entry** - Learn the basics of using the new technology.

2.0 **Adoption** - Use new technology to support traditional instruction.

3.0 **Adaptation** - Integrate new technology into traditional classroom practice. Here, they often focus on increased student productivity and engagement by using word processors, spreadsheets, and graphics tools.

4.0 **Appropriation** - Focus on cooperative, project-based, and interdisciplinary work - incorporating the technology as needed and as one of many tools.

5.0 **Invention** - Discover new uses for technology tools, for example, developing spreadsheet macros for teaching algebra or designing projects that combine multiple technologies.

	Where are we now?	Where do we want to go?
Pre-K	1.0	3.5
K-2	1.5	3.5
3-5	1.5	4.0
6-8	3.0	5.0
9-10	3.0	5.0
11-12	4.0	5.0

### How will we get there?

GOAL 1: SCS will ensure that Ohio Technology Standards are met or exceeded, by updating Technology curriculum maps, pacing charts, assessments and access to the latest technology.

GOAL 2: The district will strive to create independent learners by providing technology self-help videos and document libraries available to students and staff.

GOAL 3: SCS will utilize technology to provide a strong parent-student-school connection

#### Elementary Technology Strategies:

1. Reorganize existing personnel to provide Tech Integration Specialists at grades 4-6th. TIS will work in cooperation with classroom teachers to teach basic skills which are then integrated into classroom projects in all core areas: Math, Science, Social Studies and Language Arts.
2. Create a curriculum map for grades K-6 Computer Technology to ensure that all Ohio Technology Standards are being addressed.
3. Increase student technology skills at the intermediate level with EasyTech licenses used to support instruction of the TIS.
4. Teach internet safety.
5. Continue to pursue funding through competitive grants.

#### Middle School Technology Strategies:

1. Review and upgrade the existing 7-8th grade computer curriculum map each year, to ensure that all Ohio Technology Standards are being addressed, as we transition to teaching tech classes at the 4-6th grade level.
2. Continue to administer a technology assessment in grades 7 & 8 to ensure that all students are computer literate by the end of 8th grade.
3. Teach internet safety.

#### High School Technology Strategies:

1. Pursue grants and other opportunities at secondary level which will improve achievement and increase technology literacy.

2. Teach internet safety.
3. Investigate ways to better support the Career Tech classes' high demand for technology.

District Technology Strategies:

1. Update the district website to include better communication features such as parent alert system, blogs, email newsletters.
2. Continue to train parents on the use of the district grade book system.

Special Needs PK-12 Technology: All Special Needs students are included in computer/technology classes and accommodations are made according to the student's IEP.

NEEDS ASSESSMENT:

Presently, the district technology and computer classes are well equipped. Each elementary school has one computer lab equipped with 27 desktop PCs, a projector, laser printer and scanner and 2 carts of AlphaSmart word processors. With the addition of TISs at the elementary level, new software will need to be purchased such as Photoshop Elements, FrontPage, and Publisher. The middle schools labs (4) and high school labs (7) are equally equipped and appropriate software is already loaded on all stations.

The technology department will assess needs through monitoring facilitated by meetings with building tech personnel, the district tech team, teachers and administrators at all levels. The action steps in the Tech Plan will serve as benchmarks for these discussions. Needs will arise through examination of district and building achievement data, as this information will prompt investigation of resources to assist students and teachers. Surveys conducted both informally and formally will contribute valuable information about perceived strengths and needs for technology hardware, software, network services and training. As new school improvement action plans are developed and implemented over the next three years, technology needs will be assessed to determine how to best facilitate those plans.

Hardware/Software, Network Services: Investigate the purchase of additional software titles for K-6 buildings (see above), re-image all PK-12 computers, and install switches at middle and high schools.

Internet Access: Computer classes will need access to shared drives, student network accounts, online Moodle courses, research databases, online videos, email and a host of other online resources.

**How will we know we're getting there?**

PROFESSIONAL DEVELOPMENT:

With the reorganization of existing tech personnel to provide Tech Integration Specialists at grades 4-6th, consolidation of classes at the middle school, there is a strong need for professional development in computer/technology classes over the next three years.

1. The Tech Facilitator will provide training on Internet Safety to all computer instructors and they, along with the Building Tech Specialists will train remaining staff and all K-12 students.
2. The Technology Facilitator will train the TIS for each building and provide goals and supervision, as well beginning September 2009.
2. TIS will work in cooperation with classroom teachers to teach basic skills which are then integrated into classroom projects in all core areas: Math, Science, Social Studies and Language Arts, beginning January 2010.
3. The Director of Curriculum will work with the Technology Facilitator and a team of teachers/TISs to create a Technology curriculum map for grades K-6 to ensure that all Ohio Technology Standards are being addressed by the Tech Integration Specialist. September 2009
4. The Technology Facilitator will train TIS to use the EasyTech program in grades 4-6 and the Director of Curriculum will ensure that time is scheduled in the district Professional Development calendar for the TF to conduct this training and for TIS to assist grade levels with training. September 2009.
5. The TF and CD will work with the middle school teacher to revise existing 7-8th grade computer curriculum maps, thus ensuring that all Ohio Technology Standards are being addressed; January 2010.

Special Needs PK-12 Goals: Because all Special Needs students are already included in computer/technology classes, they are ensured access and assistance they may need in order to use the

technology.

### **How will we sustain focus and momentum?**

#### **EVALUATION PROCESS**

Sandusky will continue to use district created computer assessments to measure growth of student technology skills at the 7-8th grade levels. In addition, the elementary TISs will be charged with creating similar exams for grades 4-6. In addition, SCS will utilize the district website to post samples of student projects, thus giving students an authentic audience to present to.

In regard to professional development, SCS will use attendance records at all PD, including on-line registration records, CEU lists, signed attendance verifications, and the PD schedule itself to verify the depth and breadth of PD geared toward technology. We will analyze the categories of PD implemented and compare that analysis with our stated goals. We will survey staff and students regarding the effectiveness of teacher training for technology use.

#### **SUSTAINING FOCUS AND MOMENTUM:**

A midyear survey can tell us if fall semester training produced skill that has been implemented mid-winter in our classrooms, each year. If we find that survey results reveal spotty implementation, that pattern can be addressed in a number of ways: change the way we in-service teachers, change the way administrators support what we are trying to do, reorganize our PD techniques or schedules, or re-survey later. Results of our assessments of the effectiveness of the technology program at Sandusky can be quite transparent and be shared with all through web-site columns, newsletters such as the district Compass and through discussion with administrators, Board of Education, Cabinet, and teachers.

## Technology Policy, Leadership and Administration

### 3.1 Analyzing District Education Technology Policies

**Awareness** - Policy is not in place; little or no understanding of importance of policy

**Adoption** - Traditional policies are in place; lack of consistent use

**Exploration** - New/updated policies are being researched

**Transformation** - Policies support high performing learning environments

	Where are we now?	Where do we want to go?
A. Electronic network linking district with other stakeholders for information exchange, collaboration and distance education	Exploration	Transformation
B. District wide program providing data or administrative systems to schools (e.g., fiscal databases, student assessment results)	Transformation	Transformation
C. Technology-related facilities design, equipment and software	Exploration	Transformation
D. Technology acquisition and standards	Transformation	Transformation
E. Research and evaluation of educational technology initiatives	Exploration	Transformation
F. Development and dissemination of educational technology devices, applications and approaches	Exploration	Transformation
G. District funding for educational technology	Transformation	Transformation
H. Equity and access to technology	Exploration	Transformation

#### How do we get there?

The Technology Planning Team is comprised of administrators, teachers, tech specialists, the Technology Coordinator, the Instructional Technology Facilitator, the Director of Curriculum, the Assistant Superintendent and the Superintendent of Schools, as well as other interested persons including Board of Education representatives. The group meets formally at least twice per year to review the Technology Plan, review policy and brainstorm suggestions for better implementation.

Key players such as the Tech Coordinator, Instructional Tech Facilitator, District Curriculum Director, Director of Special Services, and Federal Programs Coordinator, engage in on-going discussions to discuss policy development and strategies for implementation. The Sandusky Teachers' Association (SEA) leadership is apprised of planned developments through discussions at Labor Management Committee meetings and the general public is educated through Board of Education minutes that sometimes feature the topic of technology. In addition, bimonthly meetings are held with building level tech specialists and the Tech Department to discuss issues impacting use of technology as well as new technology initiatives, policies and procedures. Policies on acceptable use, network responsibilities, lab use, student internet safety, and others, are in place.

Teachers are informed of changes, training, and new initiatives during regularly scheduled grade level and department meetings, a minimum twice during the year. Time is set aside to update, train, and inform teachers of tech procedures, equipment and opportunities for integration into classroom instruction. We also utilize email and intranet postings to educate our staff members.

#### How do we know we are getting there?

Sandusky City Schools uses previously-developed action steps as guides for evaluation and monitoring of implementation effectiveness. Those action steps, appearing in a grid, are reviewed item by item and graded quarterly. Reviewers note to what extent each action step has been thus far "initiated," "developed," "completed," or "not initiated." Items requiring further attention are discussed more fully and action plans modified or projected. Ideas stemming from this discussion along with emerging district needs based on current achievement data are used to create the next year's technology plan. This analysis also helps the review team assess degree of success of each planned strategy. Areas of success are viewed as milestones and areas for growth are viewed as a part of the goals for the next phase of the plan.

We continue to perform an analysis of the BETA Survey is performed biannually. The results of this analysis

provide further data for the Tech Planning Team. The Technology Department uses categories measured by BETA such as "Needs Analysis," "Perceived Level of Support," "Perceived Level of Access to Technology," "Technology Integration," and "Perceived Level of Skill Development" to determine efficacy in the area of technology use in our district.

### How do we sustain the focus and momentum?

Sandusky City Schools, through its Board of Education, Central Administration, building level administration and teachers, supports systemic development and monitoring of the technology plan and its implementation. The Tech Plan drives instruction and communication, as well as staff development, in all departments. There is a strong parallel between the adoption of State of Ohio Content Standards and support for ODE's Technology Standards. Our district underlines the importance of combining and integrating these together in practice throughout all departments and throughout the district. Therefore, our organization will support policy development through organized levels of review and recommendation, including reviews of achievement data and mapped curriculum aligned with state standards.

Through our Ohio Improvement Process District Focus Team and the Ohio Department of Education's Decision Framework, a review of all district data, we annually examine achievement data and needs. Principals and other administrators use data generated through ODE (EMIS) and regularly review building action plans using this data. In addition, there are initiatives that arise from School Improvement plans in various buildings and from grants in various departments. One example of such an initiative was the eTech PD ePortfolio Grant Proposal. In this proposal, a high school science teacher was trained to use electronic portfolios with her sophomore Biology students. This project served as a model to the rest of the department in how to engage students in authentic assessment using 21st century skills, focused on improving writing, science and technology skills.

## 3.2 Analyzing District Leadership

**Awareness** - These administrators do not use technology. An expectation to use technology with students and staff is not expressed nor do the administrators support the staff in the use of technology.

**Adoption** - Administrators have access to technology but don't use it on a comprehensive basis. Educators in the building are expected to use the technology but not in a powerful way to improve student achievement. Leaders support staff in developing technology skills.

**Exploration** - Leaders encourage and support educators in the use of technology, but the use may not be pervasive throughout the system. Administrators use technology and see some benefit.

**Transformation** - Leadership provides strong vision encompassing all aspects of educational technology. Technology is vital to administrators and is utilized in innovative ways on a daily basis. Administrators fully understand how to use the tools effectively in the classroom and to manage education.

	Where are we now?	Where do we want to go?
A. Instructional leadership, assessment and curriculum	Exploration	Transformation
B. Competencies/Standards (e.g. ISTE NETS-A)	Exploration	Adoption
C. Advocacy for technology	Exploration	Transformation
D. Measures and accountability for effective use	Exploration	Transformation
E. Role model in the use of technology	Exploration	Transformation
F. Professional development	Exploration	Transformation
G. Support for educational technology	Exploration	Transformation
H. Professional practice	Adoption	Exploration

### How do we get there?

The use of technology in our district by administrators at building and district levels has been driven from the top down, from our superintendent to central office to building sites. SCS administrators were originally trained in basic technology skills through OhioLIT. Each year, the district Instructional Technology Facilitator reviews skills, informs administrators about digital resources such as the ODE Success Site. She also assists administrators in using various applications such as spreadsheets, email, interactive white boards, the Progress Book grade management system, use of resources on the district intranet and internet web sites, etc. The Assistant Superintendent trained all building administrators on DASL so that principals are capable of printing reports, finding data, and navigating the student information system. To facilitate better use of technology at all administrative levels, the following strategies planned:

- Technology retreat that would prepare administrators in August in one full day of intensive training.
- Conference calls via phone and video for training of administrators;
- Follow-up support via webinars.
- Principals' Academies (one emphasis at each of five meetings throughout the year);
- One-on-one, desk-side training provided by Tech staff.
- Instructional videos/audios filmed as a review for administrators and made available on the intranet.
- Building principals will account for their use of existing technology annually in leadership discussions and assessments of performance conducted by the superintendent.

These strategies would support and strengthen our goal to have our administrators utilize, model and explore existing and emerging technologies.

#### **How do we know we are getting there?**

Principals will be instrumental in supporting the use of technology by arranging schedules within their buildings so that technology training can occur. They will monitor use of technology integration within day-to-day classroom instruction, including use of classroom equipment and computer lab facilities, and student achievement in web-based math and reading software programs. They will model the use of technology by disseminating information via voice mail, email, memos, shared files at the building and district level. Principals will monitor the use of the electronic grade management system within the building. They will encourage staff development in technology, through the use of building level Professional Development funds. Principals will facilitate the schedules of building tech specialists so they can consult with teachers relative to tech needs. In addition, they will educate parents and parent groups re: how to access parent-reports of student data online, etc.

Things other district administrators will do to help support the use of technology include:

- Internal communications will be conducted online.
- Provide Health and Safety Training for all district employees via the web.
- Inform parents regarding use of other electronic resources, such as "Meal Pay," access to Progress Book reports, access to calendars, menus and announcements as well as Board of Education meeting reports, etc. on the district web site.
- Provide a library management system in each building.

#### **How do we sustain the focus and momentum?**

Sandusky City Schools will support the use of technology to achieve leadership goals and determine building goals by using the decision framework spreadsheet with Building Focus Teams. This two-day process focuses on reviewing data online, prioritizing needs and developing goals, strategies and action plans, that will be incorporated in the CCIP. Other strategies include:

- Online registration, attendance sign-in sheets and agendas for all in-district professional development sessions at which leadership attendance are required and will indicate the amount and kinds of training administrators, coaches and teacher-leaders have received. (2009-2012)
- The superintendent will observe administrators in their buildings conducting sessions with staff in which the administrator has embedded either his use of technology or is conducting a demonstration of how to use that technology.
- The superintendent requires principals to give evidence of data collection and analysis at monthly meetings he holds with principals. Use of technology to devise displays of data can be documented through these sessions.
- An ISTE checklist will be provided to administrators to help them track their personal progress and document needs for future training.
- Administrators may be required to submit an electronic portfolio which will contain their choices of examples of work produced through technology. The purpose of the portfolio would be to evidence levels of proficiency and to prepare the district for its intended future use of technology--in the transformation stage. Principals, and other administrators, would then be models for teachers and other staff who use technology throughout the district.
- End-of-year assessments of skills may be used to benchmark actual proficiency of principals and district administrators in technology use and to plan future levels of training.
- Principals' Academy attendance and surveys administered to building principals at the academies will document areas in which principals receive training and will give evidence of areas where training is desired or needed.

### 3.3 Technology Leader/Coordinator Time Commitments

	Where are we now?	Where do we want to go?
Strategic/Project/Action Planning	5%	5%
Acquisitions/Procurement	10%	10%
Deployment/Implementation of Technology	15%	15%
Maintenance & Repair	20%	20%
End-user Technical Support & Training	15%	15%
Curriculum Alignment & Instructional Integration	10%	10%
Fiscal Management/Grant Applications	10%	10%
Superintendent Cabinet/Executive/Board Meetings	2%	2%
Tech Staff Development & Management	5%	5%
Policy Development, Monitoring & Enforcement	3%	3%
Evaluating New/Emerging Technologies	5%	5%
Other	0%	0%
<b>Total</b>	<b>100%</b>	<b>100%</b>

#### How will we get there?

The Technology Department is composed of four people who share responsibilities for network coordination, professional development, hardware/software installation and maintenance. The employment of this team supports the technology development and implementation in the district. Time allocations are arrived at through the planning of the Network Coordinator and the Instructional Tech Facilitator, sometimes with input from both the Director of Curriculum and the Assistant Superintendent in charge of operations. The Network Coordinator creates a project plan each spring to coordinate major initiatives that happen over the summer, such as: re-imaging computers, network upgrades, installation of labs, upgrading food service and transportation software. With several commitments to Federal and State Grants, the technology team is informed as far in advance as feasible about the software, hardware, and technical assistance needs required, so that time can be allotted into the project plan. In June of each year, a comprehensive Professional Development schedule is developed by the team in coordination with the Director of Curriculum and coordinators of various departments, including the Tech Department. It is important to note that chains of communication among team members is established and maintained, so that work division can be effectively balanced and also that a team approach is vital to the work of this department. It is also important to note that coordination with other district departments (e.g. maintenance) must be maintained at all times in order to plan a smooth transition into installation of new equipment and distribution of tasks in a timely fashion. As the district shrinks in enrollment resulting in reconfiguration of building assignments, the closing of buildings or the merging of departments into alternate physical locations, redistribution of hardware and licensing of software is impacted, thus planning for these events is prudent if not crucial.

#### How will we know we are getting there?

The Network Coordinator examines HELP DESK metrics and server up-time reports to see whether or not we are meeting our goals. He also looks at band-width statistics to see if changes are needed in our network.

Our administrators and staff are quick to inform us when there are needs still to be met. This is done through use of the HELP desk direct dial telephone number, the on-line HELP ticketing system, emails from Building Tech Specialists, conversations with principals and the gathering of district information at Professional Development grade level and department meetings. Conversations between the Tech Department, Director of Curriculum and Instruction, the Superintendent and High School Department Chairs provide on-going information about technology needs. In addition, BETA survey results are scrutinized to determine where improvements can be made.

#### How will we sustain focus and momentum?

To sustain and maintain direction within the technology departments, including support of the role of Technology Coordinator, we will continue to communicate the needs of this department to cabinet level personnel and, through those individuals, to the Board of Education and Treasurer. This department depends upon financial

support and an understanding of the integral nature of technology in educating our students. The Director of Curriculum, working hand-in-hand with the Technology Facilitator, supports the needs of the Tech Department because its efficiency directly impacts her work with teachers and students, resulting in increased student achievement within the district.

Among new initiatives, these now or in the future will utilize existing and emerging technologies:

- Early Childhood Education serving an expanded number of students. These programs use interactive whiteboards, Earobics software, and other specialized programs.
- The development of authentic assessments and projects K-12. Based on research, students and teachers are learning to use new technology to investigate and display findings.
- Use of a new database for archival and manipulation of curriculum maps
- An increase in video production at all levels, requiring updated software and network services.
- The use of interactive video conferencing for the delivery of Mandarin Chinese, and other IVDL programs tied to science standards K-8.
- Use of interactive whiteboards and response systems, Moodle, etc.
- Increased data collection for purposes of school improvement initiatives

## Technology Infrastructure, Management and Support

### 4.1 Networking, Internet & Telecommunications

This section is designed to speak to the network/telecommunications infrastructure necessary to support the technologies in use by the district for administrative and instructional computing. These uses range from EMIS reporting, shared administrative applications, video on demand (VOD), voice over IP (VoIP) telephony, thin client server access, Internet research and others.

With a wide range of new, converging or expanding services relying heavily on a converged network, capacity planning is imperative to the success of subsequent strategies that use the network. For example, a network using thin client connectivity to servers, with heavy Internet access, file and print services, as well as voice over IP, will need careful network capacity planning to introduce video streaming technologies.

#### ACTIVITY 1:

Complete the portfolio of network services and telecommunications services provided. Indicate any changes that you plan to introduce. Use the following scale in answering "Where are we now?"

- **None** - This technology does not currently reside on the network.
- **Some** - There are pieces of this technology residing on the network. It does not exist in all buildings or only in certain places.
- **Many** - This technology is pervasive throughout the district and/or building.

Use the following scale in answering "Where do we want to go"

- **Decrease** - We plan to decrease this technology on the network.
- **No Change** - We plan to maintain the level of technology on the network.
- **Researching** - We are investigating if we want to implement this technology on the network or if we want to increase or decrease this technology on the network.
- **Increase** - We plan to increase this technology on the network.

	Where are we now?	Where do we want to go?
Thin/Network Clients	None	No Change
File and Print Sharing	Many	Increase
Internet Traffic	Many	Increase
Video Conferencing (IP)	Some	Increase
Video Conferencing (ATM)	None	No Change
Video On-Demand (local building/district server)	None	Increase
Video Streaming (Internet)	Many	Increase
Voice Communications - Voice over IP	Many	Increase
Voice Communications - Centrex/PBX	Some	Decrease
Remote Access (Dial-up/VPN) to School Resources	Some	Increase
Wireless	Some	Increase
Email	Many	Increase
Enterprise/Shared Applications (e.g., online grade book)	Many	Increase

#### ACTIVITY 2:

Discuss the impact of the network and telecommunications services activity above on the bandwidth requirements of the LAN, WAN and Internet connection. Record the impact on bandwidth below.

	What is the current impact?
LAN Bandwidth	Increase
WAN Bandwidth	No Changes
Internet Bandwidth	Increase
Telephone Circuits	Increase

### How will we get there?

Technology within the district is used at every level, from the VoIP phone on our desk or cellular phone on our hip, to internet ready computers capable of accessing our files from anywhere.

GOAL 1: To increase capacity of our Local Area Network.

#### STRATEGIES and NEEDS ASSESSMENT:

Our current infrastructure is comprised of a fiber network connecting our buildings all collapsing into our network core. Our WAN ( Wide Area Network) has more than ample capacity for the next 3 years and beyond, however, we have found that we have grown our LAN (Local Area Network) usage to the point that we need to increase backbone capacity in our switches. This has required us to look into an upgrade of our switched LAN components and the availability of funding from eRate. The need for more ports in the classroom has grown as we increase the availability of services to the desktop and we are currently seeking new switches in our high school and our two (2) middle schools as a result. In addition we will be seeking to upgrade the capacity of our Elementary buildings in the near future as well.

GOAL: Internet access.

#### STRATEGIES and NEEDS ASSESSMENT:

Internet connectivity has been adequate over the past 3 years and while we see that trending higher, the bandwidth available is more that our up-stream supplier can provide. Therefore an increase in that bandwidth is not expected nor needed.

GOAL: Telecommunications

#### STRATEGIES and NEEDS ASSESSMENT:

Our telecommunications needs have been evolving over the past 3 years. We are currently working on a project to incorporate desktop faxing for our users. This will involve the removing of Centrex and/or Pots lines from the district and the possible expansion of Prime (T-1) lines. With this increase we also see the need to add additional network drops in our building to allow multi-function devices to provide fax services away from the desktop. In addition, these devices will provide the scanning capability for users to create electronic copies of documents for faxing as well as digital storage.

Our cellular abilities ore under review and currently provide us with two-way communications. While we don't currently see this changing, we do see, in the very near future, the need to add cellular data access within the district. We are very interested in its application within the security realm.

GOAL: Video.

#### STRATEGIES and NEEDS ASSESSMENT:

We have identified a need for expansion within the video arena as well. We see this expansion in several areas, not the least of which is streaming video to the desktop. Desktop video is one of the driving factors in the switch upgrades discussed above, but not the only area we are looking into. We would also like to be able to do more integration of video conferencing. This would be used in inter-building class exchanges, as well as providing an economic way to reduce travel expenses for meetings and student field trips. In addition we are developing broadcast video applications within the district and plan to allow broadcast of that information across the IP network.

**How will we know we are getting there?**

The district currently measures statistics with several tools and routinely informs the appropriate staff of results. In regard to network backbone services, network monitoring tools track up/down time as well as log files that indicate error conditions. With cellular services, the district relies on end-users to indicate issues so that helpdesk staff can inform the carrier. Video services (video conferences) are monitored by the our upstream partner and our Network Director is contacted in the event of an issue. In addition all IT trouble issues are tracked within helpdesk software. These metrics are shared with the Superintendent, Assistant Superintendent and other appropriate staff members to ensure that we continue to provide the best service possible for our users, both students and staff. Monthly statistic reports are kept an available for senior staff members.

**How will we sustain focus and momentum?**

Network bandwidth is tracked using tools that interface with the network devices within the district. These tools track real time statistics as well as trend data allowing us to see emerging patterns.

The network has been designed for the future, ensuring that bandwidth can be scaled up easily with very little monetary outlay if any at all. Several technologies are in place that will allow us to double and even quadruple our bandwidth should the need arise via channel bonding. Once again we utilize our network monitoring tools to ensure that our helpdesk staff are aware of issues before the end users even know there is an issue and bring it to resolution.

Future needs are addressed within the same framework that we utilize for everything within our environment. We evaluate it against a standards list to ensure compatibility with existing software/hardware and evaluate the bandwidth requirements on a per application basis to determine if that application or device can function correctly within our network. If the software or device is deemed to need more bandwidth than we currently have available then we look at segmenting that device off on its own VLAN.

**4.2 Access to Technology**

**None** - This technology does not exist in the building(s) and/or district.

**Some** - This technology is in the building(s) and district, but there are only a few in each location.

**Pervasive** - This technology is an integral part of the building(s) and/or district.

	Where are we now?	Where do we want to go?
Computer to Teacher Ratio (1:n)	1:1	1:1
Computer to Student Ratio (1:n)	1:4	1:3
Peripherals (e.g. scanner, digital camera)	Some	Pervasive
Emerging Technologies	Middle adopter	Middle adopter
Assistive and adaptive hardware (e.g. Intellikeys, Alpha Smart) and specialized software	Pervasive	Pervasive

**How will we get there?**

GOAL: Up to Date Technology (New Purchase).

**STRATEGIES and NEEDS ASSESSMENT:**

The district has made a commitment to standardize on a PC platform. This decision has allowed our students and staff the ability to have the same "end-user" experience from anywhere within the district. Our standards dictate appropriate hardware configuration to run the software required on a daily basis (Ex: 2.6Ghz Processor, 2 gig Ram, DVD-ROM). All computers have the ability to connect to the network and access the Internet. The standards also define what peripherals are supported and how access to that peripheral is granted. This allows staff to identify needs with standardized hardware and peripherals and has reduced problems with grant writing and normal day to day procurement of hardware.

Goal: Up to Date Technology (Current hardware).

**STRATEGIES and NEEDS ASSESSMENT:**

As the district minimum system standards change older technology is expected to keep pace. The IT department budgets for existing system upgrades. These upgrades are aligned to RAM and optical technologies, for the most

part. Our maintenance programs are based around vendor certification programs that allow us to be a “self servicing” entity, thereby saving maintenance costs. It is a requirement that helpdesk personnel are vendor certified to ensure warranty compliance. In addition, we source out of warranty parts, and because we standardize, we minimize the number of “parts on the self” needed.

Goal: Access to technology.

#### STRATEGIES and NEEDS ASSESSMENT:

The district deploys computers and needed peripherals (scanners, printers, interactive whiteboards, cameras, etc.) in locations that allow access by both students and staff. In our K-6 buildings we deploy a lab environment with additional systems in classrooms. In addition we have multiple carts that can travel the building. In the 7-12 buildings, computers are deployed with an emphasis on lab environments. Mobile carts are provided where appropriate and in some cases pilot projects are started in this manor. Interactive whiteboards technologies are provided in every core subject classroom and in many extracurricular classrooms as well. Access to “standardized” template lessons is provided across the network for teacher access and soon will be provided for student access as well.

Goal: Replacement cycle.

#### STRATEGIES and NEEDS ASSESSMENT:

Out of date technology is a concern that has been addressed with the adoption of a 5-6 year refresh cycle where appropriate. The district maintains acquisition dates and strives to replace at a minimum, computers older than 6 years. With peripheral components, that need may be on a shorter or longer cycle dependent upon the technology life span. Our server farm is evaluated for replacement based on application utilization, and in some cases servers are migrated to other duties as the need arises to save costs.

#### **How will we know we are getting there?**

The upgrading of hardware and software is handled with the hardware/software inventory database. Reports are run on an annual basis to determine the oldest hardware in the district. Based on the results of that report, the budget is created and the systems identified for replacement. Replaced systems are then either scrapped for parts to maintain other systems in the district, or sold at auction to recover assets. The upgrade process happens in the same way as above with the identification of assets that do not meet the current requirements and a plan is put in place to improve the operational abilities of that hardware.

Evaluation of new hardware and software in the district takes place first in a “sandbox” environment to limit any negative exposure. Once the testing process has happened appropriate staff are identified to conduct limited trials with that hardware/software. In some cases this may be limited to a single classroom and in others a pilot may be installed in an entire building. Regardless of how the pilot program was implemented it is always evaluated to determine the effectiveness in the classroom. If a pilot project is having issues, IT and other district personnel are involved to resolve the issues. If it is determined that a pilot program is a failure the plug can be pulled quickly without affecting a large scale population.

The district goal is not just to be on the “cutting edge” of technology but rather implement tried and true technologies in new ways. That said, we examine emerging technologies when the need arises. An example would be that the district was an early adopter of VoIP and has had a fully functional system for several years. On the flip side we are slowly migrating to wireless as wireless is still a developing technology and as such upgrades are costly and time consuming.

#### **How will we sustain focus and momentum?**

Just as this technology plan is filled with redundancies, so is our network. The district is very fortunate to have the support of the administration, the Board of Education, as well as our staff members.

Opportunities are always presenting themselves to the IT department through regular reading of trade magazines, conference attendance, and staff generated ideas.

## **4.3 Stakeholder Access to Educational Information & Applications**

1. **None:** Our organization does not have this type of electronic system. We maintain paper records.

2. **Minimal:** Our organization utilizes some electronic documents to manage these systems and processes such as spreadsheets or word processor.
3. **Adequate:** Our organization uses database software to manage these systems and documents.
4. **Advanced:** Our organization shares this type of information using industry-adopted data standards and practices (e.g. SIF, XML-Web Services or EDI).

### Tool

	Where are we now?	Where do we want to go?
Student Information Services	3 - Adequate	4 - Advanced
Instructional Applications	3 - Adequate	4 - Advanced
Data Analysis & Reporting	3 - Adequate	4 - Advanced
Grade Book	3 - Adequate	4 - Advanced
Library Automation	4 - Advanced	4 - Advanced
Facilities Management	2 - Minimal	3 - Adequate
Voice Telephony	4 - Advanced	4 - Advanced
Human Resources & Financial Management	2 - Minimal	3 - Adequate
Network Account Management	3 - Adequate	4 - Advanced
Transportation	3 - Adequate	4 - Advanced
Food Services	3 - Adequate	4 - Advanced

### How will we get there?

The district is well versed at rollouts of new technology. As stated previously within this document we roll out small pilot projects to access the value of the project before a full scale rollout is started. Most of the applications listed above are web based and, therefore, do not require modifications to the desktop for access. In the event that we should need to roll out software to the desktop, the IT staff develops the application to fit within the framework of our "push" technologies, and we simply install the application to the desktop with no need for user intervention.

Our standards are such that we look for applications that conform to the SIF standards, or that are LDAP enabled, to allow us to leverage our existing network trees simplifying or even eliminating user account creation. Access is granted via group creation. Assigning a user to a group can provide the correct access and or restrictions within the application.

All application rollouts are preceded with staff training. Our intent is 100% participation in the training with handouts and self-help documentation posted to the district Intranet for reference by staff members.

All applications utilized within the district benefits students in some way even if indirectly. As an example the grade book application allows students to see, in real time, the grades they are achieving at any given moment in time. In addition, parents can see that same information in real time to allow for intervention should the need arise. In the case of the district Point of Sale application we provide students with an anonymous way to purchase their meal. By allowing them to purchase meals with a pin code free and or reduced meal status is only seen by the attendant at the register. In addition we allow parents to place money within the "bank" for student access at the register teaching responsibility of money by students.

### How will we know we are getting there?

The applications listed above are designed to allow access to student data. The indicators in this event are:

- Can we see the data?
- Is the data presented in a concise format?
- Does the application provide the required data?

If the above questions are answered with a "yes" then the application has been successfully implemented. If not, revise and or start over.

### How will we sustain the focus and momentum?

Communication among various stakeholders and administrative levels must continue to build and strengthen monitoring effectiveness. The systems listed above must continue to be supported by discussions about present and future needs. Administrative meetings, tech plan meetings, and surveys will determine how well

systems are working for the people who use them. Changes and the effects of these will be determined through this kind of communication, and the district will continue to respond to needs identified.

## 4.4 Educational Software

**Never** - When selecting educational software, this process never occurs.

**Rarely** - When selecting educational software, occasionally this process is followed.

**Sometimes** - When selecting educational software, we typically follow and/or incorporate this process.

**Always** - When selecting educational software, this process is always followed and/or incorporated.

### Selection Processes

	Where are we now?	Where do we want to go?
Requirements gathering, feature/fit analysis to goal	Always	Always
Professional development planning for end users and support personnel	Always	Always
Criteria for evaluation developed - including alignment to ACS and curriculum	Always	Always
Evaluation of demo copies	Always	Always
Implementation pilots	Always	Always
Replacement cycle (upgrade, retire, new)	Always	Always
System requirements / technical and operational support	Always	Always

### How will we get there?

After examining each of the selection process categories above, discuss how your organization plans to overcome barriers to reach desired outcomes and how you plan to reach your goals. Consider how the inclusion of each process may impact educational goals and reduce the total cost of ownership.

The IT department works very closely with the Director of Curriculum to identify software that supports the direction we are headed. Once the needs assessment has been completed, the two departments work together to identify what software will provide the best return in value based on both cost, and student achievement. Our focus has always been to provide the best opportunity for student achievement. With budgets being what they are, we strive to accomplish this task with as much open source software as possible. We will not, however, sacrifice quality just because open source software is available.

The current software in the district is a combination of pay for use, subscription, and open source. Most of our software projects have started as pilot projects. Our pilot projects all start with a combination of limited software rollout and staff training. Once the participants are identified, a pilot training is developed to go hand in hand with the software pilot project. Assuming that the pilot project is successful, the software and training are rolled out to all staff/students needing the application.

The district uses several ways to identify if the project is successful. We place value on student achievement, staff "ease of use", alignment to the standards, IT support, vendor support, and specifically determined criteria based on the application. Again, provided that our pilot project was successful, the software is rolled out to all staff and/or students.

Because the district places such high value in our software selection, we strive to maintain that same software with timely upgrades and patches. The district has invested heavily in software that allows us to maintain applications (as well as desktop operating systems) with little need for man power, but rather employing push technologies. This software allows new applications or patches to be rolled out to end user desktops with little or no intervention and in some cases takes place at night when no one is even in the buildings. Software residing on servers is upgraded during off hours and tested to make sure that the patch or upgrade didn't "break" anything. In many cases it is applied to "sandbox" systems and tested prior to being installed on live production systems.

### How will we know we are getting there?

We measure student achievement software, whether pilot or currently installed, by examining the progress reports built into the product. For example, one product that we use is Fastt Math. This program provides teachers with instant alerts when they log into the system which notify them of students who are falling behind

and/or have not logged into the software recently. This same product allows teachers, coaches, administration the ability to check progress by class as well as teacher participation.

When the district selects software we look for products that teach or reinforce Ohio Academic Content Standards, are engaging for students, have a simple teacher management system, and most importantly, can provide the reporting capabilities needed to measure student achievement.

#### How will we sustain focus and momentum?

We continue to build capacity within the district by systematically phasing in software utilization within buildings. One example of this process is how we have implemented assessment software. In phase one, the IT Facilitator and district math and reading coaches scanned in test results, printed and distributed reports, and met with teacher and administrative teams to review the results. In phase two, key building level stakeholders were trained to take on the responsibilities of scanning and printing reports, allowing coaches more time to review test results. The final phase involved training teaching staff to administer tests on the network, eliminating the need to scan tests and providing immediate access to results. This gradual migration of responsibilities to the end user level allows our limited facilitation staff more time to work with other stakeholders and software products. In addition, this process allows a slow “buy in” with teaching staff to show that in fact “they” really can do this within their class environment.

## 4.5 Security

1. **None:** Organization does not have any of these policies or securities in place.
2. **Minimal:** The basic functions are present, but not all layers are addressed.
3. **Adequate:** The basic functions are present and all layers are addressed and integrated.
4. **Advanced:** The basic functions are present, all layers are addressed and integrated, and proactive monitoring with security response and forensic log analysis procedures are in place.

	Where are we now?	Where do we want to go?
AUP (Acceptable Use Policy)	Yes	Yes
User Account management and network authentication policies	3 - Adequate	3 - Adequate
Security zones	3 - Adequate	3 - Adequate
Wireless network security policies	3 - Adequate	4 - Advanced
Central log mechanism and review policy	3 - Adequate	4 - Advanced
Incident response procedures	3 - Adequate	3 - Adequate
Network security	3 - Adequate	4 - Advanced
Host Security	3 - Adequate	3 - Adequate
Data security / integrity	3 - Adequate	3 - Adequate
Anti-virus software	4 - Advanced	4 - Advanced
Spyware	3 - Adequate	3 - Adequate
Firewall	4 - Advanced	4 - Advanced
Filtering	4 - Advanced	4 - Advanced

#### How will we get there?

(NOTE: This narrative information is suppressed to protect sensitive information about the education organization.)

#### How will we know we are getting there?

(NOTE: This narrative information is suppressed to protect sensitive information about the education organization.)

#### How will we sustain the focus and momentum?

(NOTE: This narrative information is suppressed to protect sensitive information about the education organization.)

## 4.6 Technology Support and Management

### Support Ratios (1:n)

	Where are we now? (1:n)	Where do we want to go? (1:n)
Support Staff to Students	1:257	1:257
Support Staff to Teachers	1:22	1:22
Support Staff to Computers	1:500	1:350
Support Staff to Buildings	1:1	1:1

	Where are we now?	Where do we want to go?
Average Response Time (Days)	6 hours	4 Hours
Service Level Agreement (SLA)	Yes	Yes
Full-time technology coordinator/director	Yes	Yes

### How will we get there?

The district is currently staffed with a Network Coordinator, a Technology Facilitator, and two (2) helpdesk technicians. In addition the district has 14 Tech liaisons with a minimum of one each per building. We are looking at ways to add one (1) more staff member to the networking team to ensure or continued growth and meet the continuing demand for new projects and maintenance of our existing environment.

The team stretch goal is to achieve a 3-4 hour response time to all helpdesk requests, however, presently we average about a 6 hour response. We have implemented an SLA on printer toner at 2 hours or less and we meet or exceed that consistently. The district is in the process of implementing a managed print solution allowing us to eliminate the SLA on toner as it will become a managed issue that informs the team when a cartridge needs replaced prior to the user even knowing that the cartridge even needs replacing. As for desktop service, currently we are looking at how we can implement a reasonable SLA.

Network maintenance (routers, switches, firewall, phone system, etc) are maintained via vendor contract and (parts) and service contract for the labor. Maintenance on these items is done on a needed basis during the school year and scheduled "off time" changes, upgrades, etc.

Much of our service is done in house as we are a self servicing entity with our major desktop, printer, and server vendor. This allows us to control our SLA much easier and saves in costs as well.

### How will we know we are getting there?

We monitor satisfaction of our user base by conducting random user questioning, the BETA survey, and through conversations at faculty grade level and department professional development meetings. In addition we discuss technology needs at principal and administrative meetings.

We firmly believe that we are doing a good job in meeting the needs of the student/teacher base, however, we are keenly aware that improvement is always needed.

### How will we sustain focus and momentum?

The district Technology Coordinator routinely reviews the helpdesk dashboard and ticket reports to ensure that we are meeting or exceeding the expectations of all of our users both student and staff. In addition, we provide training on an annual basis for our support staff to help keep them up to date on technology in use in the district. The fact that we are a self servicing entity also helps to keep our staff current in skills as the vendor requires yearly testing to maintain certification levels.

In addition to the train that we do we also take into account the bi-annual beta survey results. We have been able to see and track the progress we make in the eyes of our staff within that document supporting our helpdesk data.

## 4.7 Total Cost of Ownership

**None** - This factor is not accounted for in the cost analysis.

**Some** - This factor has cursory consideration but is not a primary decision driver.

**More** - There is deliberate consideration for this factor, but it may not always be a primary decision driver.

**Extensive** - This factor is always considered in cost analysis and is a primary decision driver.

### Process

	Where are we now?	Where do we want to go?
Vendor Relationships	Extensive	Extensive
Procurement Plan	More	Extensive
Specifications/Requirements/Fits Analysis	More	More
Integration of donated time, materials or services	None	None
Deployment/Installation plan	Extensive	Extensive
Initial Training and Professional Development	Extensive	Extensive
Evaluation of current external support costs versus new purchase	More	More
Loss of institutional knowledge for replaced systems	More	More
Phase Out/Replacement cycle	More	More
Disposal costs	More	More

### How will we get there?

Looking at the "TCO" factors of a purchase has always been a requirement of our department. We constantly look at what the true cost of doing business is because of the necessity of prudent budgeting and operation. We plan out our purchases and the needs of the project to make sure that we can support the addition to our district (network). We have developed vendor relationships that allow us to maintain good price margins on the goods and services that we purchase. In addition some of our vendors help us with product evaluation information.

### How will we know we are getting there?

The process that we use to evaluate a product include, but are not limited to:

Will the device or service do the intended task and do it well?

Will the product fit into our network today or do we need to upgrade something else?

What will the device or service cost the district as an out right purchase?

What are the support costs in the future as well as upgrade costs?

5) What are the upgrade paths for the product?

6) What amount of time will users be required to spend to learn the new product or service?

7) What will it cost us to train our user base on the new product or service?

8) What is the life cycle of the product?

### How will we sustain focus and momentum?

The concept and process of TCO is facilitated at SCS through teamwork at all levels. The Director of Curriculum, Director of Special Services and Technology Facilitator work with building principals and faculty to discern what resources, hardware and software programs, are appropriate to increase student achievement. If proposals are initiated, the requirements for these are discussed immediately with the Technology Coordinator to see if each meets TOC requirements and if the implementation of each can be sustained. Larger purchases must also be superintendent and Board of Education approved. Teachers are certainly part of the process. They are regularly consulted at quarterly grade-level or department meetings. If the selected resources are not working in the classroom, modifications are made.

## Budget and Planning

### 5.0 Budget

Sound budgeting is important for your technology plan; not only to project future spending and funding, but also to meet requirements for various private, state and federal funding opportunities. It is recommended that a representative from your treasurer's office be involved in completing this phase.

(NOTE: This budget information is suppressed to protect sensitive information about the education organization.)

	Where are we now?	Where do we want to go?			
	Current Fiscal Year	2009-10	2010-11	2011-12	Total
Network/Telecommunications Services	xx,xxx	xx,xxx	xx,xxx	xx,xxx	xx,xxx
Hardware	xx,xxx	xx,xxx	xx,xxx	xx,xxx	xx,xxx
Student Data Administrative Systems	xx,xxx	xx,xxx	xx,xxx	xx,xxx	xx,xxx
Software	xx,xxx	xx,xxx	xx,xxx	xx,xxx	xx,xxx
Security	xx,xxx	xx,xxx	xx,xxx	xx,xxx	xx,xxx
Technology Staffing/Support	xx,xxx	xx,xxx	xx,xxx	xx,xxx	xx,xxx
Professional Development	xx,xxx	xx,xxx	xx,xxx	xx,xxx	xx,xxx
Consumables	xx,xxx	xx,xxx	xx,xxx	xx,xxx	xx,xxx
Additional	xx,xxx	xx,xxx	xx,xxx	xx,xxx	xx,xxx
<b>Total</b>	<b>xx,xxx</b>	<b>xx,xxx</b>	<b>xx,xxx</b>	<b>xx,xxx</b>	

*Provide details about your budget process. How did your committee gather this data? Have you included spending amounts for planned future technology hardware, software, professional development, or other services?*

The budget process begins with a needs assessment at the department level. We look at what we want to accomplish and the costs associated with those projects. We have a keen eye towards funding projects with grant monies (public and private). We design major projects to coincide with eRate funding cycles where appropriate to maximize of limited general funds.

Once the department has developed an initial budget it is discussed with the Treasurer's office for a commitment of funding and from there becomes part of the overall district budget.

#### How will we get there?

We routinely fund our basic telephony needs with eRate dollars, as well as our basic network maintenance, and services. In addition, we leverage internal connections monies to fund major network upgrades (switches, routers, etc.). Ohio K-12 Network funding also offsets some of our telecommunication costs. We apply for internal connections monies from eRate to offset the costs of major network upgrades (planned for in the next two (2) years).

We look for grant opportunities whenever and wherever we can to fund the strategic initiatives of the district. Some of our professional development costs are covered with eTech grant money as well as private foundation money. Hardware cost costs have been paid for with foundation monies in the past and we routinely solicit those sources on a regular basis.

We look to Title funding, Special Education funding and any other source of funding that we can leverage before inlay turning to the general fund.