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## Introduction

The Whitefish Bay School District has long been known as *an exceptional place to learn*. This is due in part to a strong curriculum coupled with excellent leadership. As a result of our current plan two district level committees have been formed to give input into the scope and direction of technology initiatives within the district. They are a five person Administrative Advisory Group and a District Technology Committee with representation from each school as well the district office. The administrative group focuses on budgetary needs, broad infrastructure upgrades and the scheduling of the aforementioned events. The district technology committee attends to the selection of twenty-first century tools that are available to students, staff and community members.

This plan, like all others crafted in our district, is aligned to our district focus plan. The plan describes the student learning environment containing strategies for continuous learning with multiple avenues for success that is a preparation for future educational opportunities. The Information and Technology Plan goals support these elements in the district focus plan.

While this plan was under development the district was in the process of exploring referendum possibilities. The original time frame proposed in the referendum was altered due to the fall 2008 economic climate. After surveying the community it has been decided that the referendum will be taken to the voters in the next year. Should the referendum pass, many improvements will be made to the infrastructure within the buildings which will help to support some of the hardware pieces included in our Information and Technology Plan.

In his article from the summer 2009 Threshold magazine, Will Richardson suggests that the digital natives that now make up our K-12 student population are utilizing many Web 2.0 social networking tools available to them. It is his contention that schools need to embrace the power that these technologies hold and utilize them as new avenues to learning. Whitefish Bay's Information and Technology plan seeks to capitalize on these tools, develop collaborative communities within the staff and in turn train staff to develop curricula around the enhance ability for students to create and collaborate using these technologies.

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## Background Information

The Whitefish Bay School District is located in a suburban setting just north of the city of Milwaukee. The K-12 district has population of 2,982 students which includes 350 non-resident students who participate in the Chapter 220 program. The district is comprised of two elementary schools with students in grades 4K through grade five enrolled, a middle school enrolling grades six, seven and eight and the high school with grade nine through twelve. In addition to the four school buildings there is a community center which operates a cooperative pre-school program.

The Village of Whitefish Bay is a residential community with approximately 14,000 residents. The village, 2.4 square miles in size is located along Lake Michigan about 6 miles north of downtown Milwaukee. The adult population residing in this area is comprised of primarily professional or people employed in other white collar positions. The Whitefish Bay community values its youth has high expectations for the school district.

The following data validates the district's claim that Whitefish Bay Schools in *an exceptional place to learn*:

### College Preparation

Whitefish Bay students have achieved average ACT composite scores exceeding 25.0 in each of the past nine years, the only public school in Southeastern Wisconsin to reach this benchmark. Nearly 9 in 10 Whitefish Bay students take the ACT annually. [Source: *Public Schooling in Southeastern Wisconsin*, 2002, 2003, 2004, 2005, 2006 (Public Policy Forum) and School District Records]

### Advanced Achievement

Whitefish Bay students take and pass advanced placement exams at a significantly higher rate than students in any other Southeastern Wisconsin high school.

- 98% of students enrolled in AP classes complete the corresponding AP exams.
- The ratio of Advanced Placement tests passed by Whitefish Bay students to total school enrollment (50%) widely surpasses other Southeastern Wisconsin schools.
- The number of Advanced Placement tests taken and passed by Whitefish Bay students has nearly quadrupled in the past eleven years.
- The average AP exam score over the past seven years has been 4.0 (5.0 scale), exceeding the national average by 1.0.
- In 2008 student participation in AP exams increased by 20% and the number of exams taken increased by 23%.

[Source: *Public Schooling in Southeastern Wisconsin* (Public Policy Forum) and School District Records]

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### **Standardized Assessments**

Today's third and fifth grade students are performing among the highest levels on record for Whitefish Bay students on the Iowa Test of Basic Skills (ITBS). [Source: School District Records]

### **Post High School Education**

An average of 94% of Whitefish Bay graduates go on to post secondary education immediately after high school over the past five years. [Source: School District Records]

### **School Completion**

The drop-out rate in Whitefish Bay has been less than one-half of one percent in each of the past five years. [Source: School District Records]

### **Attendance**

Whitefish Bay student daily attendance has been the highest in Southeastern Wisconsin for the most recent three years reported. [Source: *Public Schooling in Southeastern Wisconsin*, 2004, 2005, 2006 (Public Policy Forum)]

### **Diversity**

Twenty percent of Whitefish Bay school attendees are students of color, including 8% of students who attend under the State Chapter 220 Integration Program. [Source: School District Records]

### **Participation**

More than 80% of Whitefish Bay High School students participate in at least one co-curricular activity each year and the number is growing. [Source: School District Records]

### **Cost**

Our per pupil expenditures rank near the bottom (fourth) among the five highest performing school districts in Southeastern Wisconsin [Source: Public Policy Forum]

### **Support**

Whitefish Bay residents, alumni and supporters pledged or donated approximately \$700,000 on behalf of opportunities, services and facilities for students in just the past year (2007). [Source: School District Records]

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## **Plan Committee Members**

<b>Name</b>	<b>Position</b>
Kitt Brett-Harte	Special Education Teacher
Robert Bruch	High School Teacher
Tony Frontier	Director of Instruction
LaNell Gill	Library Media Specialist
Yuki Gleason	High School Teacher
Michael Joynt	Middle School Teacher
John Haines	School Board Member
Karl Landwehr	District AV Specialist
Pam Lee	Instructional Technology Coordinator
Amy Levek	High School Associate Principal
Bryan Manzeck	Network Manager
Tracy Matthews	Elementary Teacher
Laura Myrah	Director of Instruction
Gail Pollock	Parent
Elyssa Purvis	Library Media Specialist
Lisa Roberts	Library Media Specialist
Keith Sohr	Elementary Teacher
Kent Stahlman	Director of Technology
Patti Stannard	Middle School Teacher
Julie Stefan	Elementary Teacher
Pam Swanson	Elementary Teacher
Cassie Tadisch	Library Media Specialist
Judy Weiss	High School Teacher
Shawn Yde	Business Manager

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## Needs Assessment

### Planning Process:

The process for development of this plan was framed through a concerted effort to align the Technology Plan to the district Focus Plan and Shared Commitments. (see appendix 4)

The process for the development of this 3 Year Plan has included:

A technology needs survey administered to all teaching staff in November 2007

Focus Group discussion with Instructional Technology Committee, IT Staff, and building and central office administrative personnel in December 2007 led by Tushaus Technology

Information Technologies Network Assessment for Whitefish Bay School District from Tushaus Computer Services

Survey of 20 Wisconsin school districts on network capacity, user rights and administrative technology procedures conducted in spring of 2008

<b>Appleton</b>	<b>Beloit</b>	<b>Brown Deer</b>	<b>Cedarburg</b>	<b>Eau Claire</b>
<b>Elkhorn</b>	<b>Elmbrook</b>	<b>Fox Point</b>	<b>Franklin</b>	<b>Grafton</b>
<b>Greenfield</b>	<b>Kettle Moraine</b>	<b>Menasha</b>	<b>Mukwonago</b>	<b>Muskego</b>
<b>New Berlin</b>	<b>Nicolet</b>	<b>Oak Creek</b>	<b>Shorewood</b>	<b>So. Milwaukee</b>

Input from Instructional Technology Committee with IT Staff in spring of 2008

Administrative and Instructional Technology Committee input in fall of 2008

Plan authored by Pam Lee, Instructional Technology Coordinator; Bryan Manzeck, Network Systems Manager; Tony Frontier, Director of Instruction, Whitefish Bay Schools

First draft of three-year plan reviewed by Instructional Technology Committee and Administrative Council in fall of 2008

Second draft of three-year plan reviewed by Curriculum Evaluation Council in fall of 2008

External review of plan conducted by Network Administrator Consultant from Skyward Technologies, feedback submitted to Bryan Manzeck. Plan was also reviewed by Instructional Technology Coordinators from two area school districts; feedback submitted to Pam Lee. The primary adjustment made based on this feedback was an additional increase in the amount of bandwidth requested across the plan.

**\*\*\*Data used to review prior plan and develop current goals/objectives can be found in appendices**

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## **Mission for Instructional Technology**

The district's mission for instructional technology is to prepare all students for a global society by empowering them with the 21<sup>st</sup> century skills necessary for lifelong success.

### **Prioritization for Allocation of Technology Resources**

In support of this mission, the Administrative Technology Group has established the following priorities for allocation of resources for instructional technology.

- 1 Ensure network stability to deliver instructional technology.
- 2 Computing power, speed, and access for staff and students to support curricular and administrative needs.
- 3 Continuous expansion and scalability to meet increased demands for speed and memory associated with new/improved technologies.
- 4 Purchase of equipment that exceeds operational budget.

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## Information Technology Goals

Efforts related to the implementation of instructional technologies are guided by four goals.

### **Goal 1: Student Achievement**

All students will consistently engage in learning experiences using instructional technologies in order to improve their academic achievement and their technological skill and fluency.

### **Goal 2: Staff Effectiveness**

Staff will effectively and efficiently use technology to enhance student learning.

### **Goal 3: Information Resources and Learning Tools**

1. Students and staff will use technology to:
  - a. Access and analyze information
  - b. Utilize resources to create products and enhance learning
  - c. Communicate and collaborate clearly with others.
2. Community members will have access to information and resources related to our schools through web-based technology and resources.

### **Goal 4: Information Literacy**

Students and staff will use 21<sup>st</sup> century skills to gather, evaluate, and use information from a variety of sources and media to ethically create products.

# Implementation Action Plan

## Goal 1: Student Achievement

All students will consistently engage in learning experiences using instructional technologies in order to improve their academic achievement and their technological skill and fluency.

Objectives:

- 1.1 Increase the quality and frequency of opportunities students have to access information and resources using contemporary technology.
- 1.2 Improve student's ability to use core technology applications across the curriculum to enhance their learning and enhance the quality of final products.

<b>Objective 1.1</b>	Increase the quality and frequency of opportunities students have to access information and resources using contemporary technology.
<b>Target</b>	<ul style="list-style-type: none"> <li>• 100% of students will access quality information and resources once weekly.</li> </ul>
<b>Strategies</b>	<ul style="list-style-type: none"> <li>• Use age/grade appropriate applications that allow students to develop skills and knowledge related to academic standards.</li> <li>• Utilize technology across the curriculum to help students demonstrate knowledge and communicate ideas.</li> <li>• Ensure students and staff have the resources and expertise so they are able to access, present and communicate instructional content effectively.</li> </ul>
<b>Measurement Tool(s)</b>	<ul style="list-style-type: none"> <li>▪ Teacher feedback on technology use</li> <li>▪ Student surveys</li> <li>▪ References in curricular documents</li> </ul>
<b>Person(s) Responsible</b>	<ul style="list-style-type: none"> <li>• Director of Technology</li> <li>• Instructional Technology Coordinator</li> <li>• Library Media Specialists</li> </ul>
<b>Projected Timeline</b>	<ul style="list-style-type: none"> <li>▪ Fall 2009-2012: Collaborate with instructional staff ensure that students are being given opportunities for access to information and technology.</li> </ul>

<b>Objective 1.2</b>	Improve students' ability to use core technology applications across the curriculum to enhance their learning and enhance the quality of final products.
<b>Target(s)</b>	<ul style="list-style-type: none"> <li>• 100% of elementary students will produce integrated projects using core applications on a quarterly basis.</li> <li>• 100% of middle school students will produce integrated projects using core applications on a quarterly basis</li> <li>• 100% of high school students will independently utilize core applications in all subject areas</li> </ul>
<b>Strategies</b>	<ul style="list-style-type: none"> <li>• Continue to embed information technology resources into the curriculum writing process.</li> <li>• Provide skills/ opportunities for students to distinguish whether information is accurate and appropriate through the incorporation of information analysis/critical thinking models.</li> </ul>
<b>Measurement Tool(s)</b>	<ul style="list-style-type: none"> <li>▪ Teacher feedback on technology use</li> <li>▪ Student surveys</li> </ul>
<b>Person(s) Responsible</b>	<ul style="list-style-type: none"> <li>• Director of Technology</li> <li>• Instructional Technology Coordinator</li> <li>• Library Media Specialists</li> <li>• HS Department chairs</li> </ul>
<b>Projected Timeline</b>	<ul style="list-style-type: none"> <li>▪ Fall 2009-2012: Information and technology is more fully embedded into the curriculum via the curriculum writing process.</li> </ul>

## Goal 2: Staff Effectiveness

Staff will effectively and efficiently use technology to enhance student learning.

Objectives:

- 2.1 Increase capacity of teachers to engage in effective instructional practices using instructional technologies through professional development courses and workshops.
- 2.2 Increase access to technology tools for teacher productivity and to enhance student learning.
- 2.3 Through the use of web-based resources, develop additional opportunities for staff to share resources and develop curricula. (e.g. wikis, file sharing)
- 2.4 Further develop staff capacity to post information and resources for students and parents on-line using a variety of web-based resources.

<b>Objective 2.1</b>	Increase capacity of teachers to engage in effective instructional practices using instructional technologies through professional development courses and workshops.
<b>Target(s)</b>	<ul style="list-style-type: none"> <li>• 100% of teachers will participate yearly in 3.5 hours of district wide professional development focused on instructional technologies.</li> </ul>
<b>Strategies</b>	<ul style="list-style-type: none"> <li>• Provide teaching staff with on-going training in the use of technology related tools.</li> </ul>
<b>Measurement Tool(s)</b>	<ul style="list-style-type: none"> <li>▪ Tracking of Professional Development participation and district approved course work containing the above options.</li> <li>▪ Tracking teacher participation &amp; use of topics covered in professional development focused on instructional technologies.</li> </ul>
<b>Person(s) Responsible</b>	<ul style="list-style-type: none"> <li>▪ Director of Technology</li> <li>▪ Director of Instruction</li> <li>▪ Coordinator of Professional Development</li> <li>▪ Instructional Technology Coordinator</li> </ul>
<b>Projected Timeline</b>	<ul style="list-style-type: none"> <li>▪ 2009-2012 tracking of professional development activities</li> </ul>

<b>Objective 2.2</b>	Increase access to technology tools for teacher productivity and to enhance student learning.
<b>Target(s)</b>	<ul style="list-style-type: none"> <li>• The district will install, populate and train 100% of teachers in the use of web-based applications.</li> </ul>
<b>Strategies</b>	<ul style="list-style-type: none"> <li>• Increase quantity and quality of resources for teachers to enrich the curriculum, identify student learning needs, and to enhance student learning through the curriculum writing process.</li> </ul>
<b>Measurement Tool(s)</b>	<ul style="list-style-type: none"> <li>• Integration of technology in the curriculum writing process</li> </ul>

<b>Person(s) Responsible</b>	<ul style="list-style-type: none"> <li>• Director of Technology</li> <li>• Director of Instruction</li> <li>• Instructional Technology Coordinator</li> <li>• Library Media Specialists</li> <li>• Coordinator of Professional Development</li> </ul>
<b>Projected Timeline</b>	<ul style="list-style-type: none"> <li>• Spring 2010 – server installation</li> <li>• 2010-2011 – staff training of the HS/MS staff</li> <li>• Spring 2011 – identification of mentors from the HS/MS staff</li> <li>• 2011-2012 – staff populates server with student learning resources</li> </ul>

<b>Objective 2.3</b>	Through the use of web-based resources, develop additional opportunities for staff to share resources and develop curricula. (e.g. wikis, file sharing)
<b>Target(s)</b>	100% of staff will use Web 2.0 tools to share instructional resources and develop curricula.
<b>Strategies</b>	<ul style="list-style-type: none"> <li>• Provide staff with ongoing training on the use of Web 2.0 tools</li> <li>• Provide online resources of training materials used in professional development focused on instructional technologies</li> </ul>
<b>Measurement Tool(s)</b>	<ul style="list-style-type: none"> <li>• Staff surveys</li> <li>• Tracking of use on the Moodle server</li> </ul>
<b>Person(s) Responsible</b>	<ul style="list-style-type: none"> <li>• Director of Technology</li> <li>• Director of Instruction</li> <li>• District Instructional Technology Coordinator</li> <li>• Library Media Specialists</li> </ul>
<b>Projected Timeline</b>	<ul style="list-style-type: none"> <li>• Summer 2011 – mentors develop training materials on the use of Web 2.0 tools</li> <li>• 2011-2012 training and use of Moodle server for elementary staff</li> <li>• 2011-2012 staff training provided with additional training opportunities on Web 2.0 tools</li> </ul>

<b>Objective 2.4</b>	Further develop staff capacity to post information and resources for students and parents on-line using a variety of web-based resources.
<b>Target(s)</b>	100% of teachers will post information twice monthly
<b>Strategies</b>	<ul style="list-style-type: none"> <li>• Increase the capacity of staff to use technology to improve, integrate, and share resources.</li> </ul>
<b>Measurement Tool(s)</b>	<ul style="list-style-type: none"> <li>• Quarterly teacher log or resources of postings.</li> </ul>
<b>Person(s) Responsible</b>	<ul style="list-style-type: none"> <li>• Director of Technology</li> <li>• Instructional Technology Coordinator</li> </ul>
<b>Projected Timeline</b>	<ul style="list-style-type: none"> <li>• 2009-2012 quarterly statistics of district website hits</li> </ul>

**Goal 3: Information Resources and Learning Tools**

3. Students and staff will use technology to:
  - a. Access and analyze information
  - b. Utilize resources to create products and enhance learning
  - c. Communicate and collaborate clearly with others.
4. Community members will have access to information and resources related to our schools through web-based technology and resources.

Objectives:

- 3.1 Increase opportunities for teachers, students and parents to effectively access information and instructional resources using technology.
- 3.2 Demonstrate an increased number of effective and regular uses of technology for teacher and student productivity in order to enhance student learning.
- 3.3 Provide opportunities for instructional staff to access and enter information, including student data.

<b>Objective 3.1</b>	Increase opportunities for teachers, students and parents to effectively access information and instructional resources using technology.
<b>Target(s)</b>	<ul style="list-style-type: none"> <li>• Increase use of district website by community</li> <li>• Increase use of web-based reporting resources by community</li> <li>• 100% of students and staff will access information and instructional resources using technology as a part of their daily interaction with the curriculum</li> </ul>
<b>Strategies</b>	<ul style="list-style-type: none"> <li>• Target specific needs for technology training related to deployment of new technologies (Staff)</li> <li>• Increase bandwidth for greater data flow to allow access to resources such as streaming media (Staff and students)</li> <li>• Review and rewrite district technology policies (Staff)</li> <li>• Parent/Community information sessions as to resources available – possible flyer or public sessions</li> </ul>
<b>Measurement Tool(s)</b>	<ul style="list-style-type: none"> <li>• Survey data collected at open houses</li> <li>• Bandwidth use charts</li> <li>• Google Analytics – Progression data on website</li> </ul>
<b>Person(s) Responsible</b>	<ul style="list-style-type: none"> <li>• Director of Technology</li> <li>• Instructional Technology Coordinator</li> <li>• Coordinator of Professional Development</li> </ul>
<b>Projected Timeline</b>	<ul style="list-style-type: none"> <li>• 2010-2011 needs targeted</li> <li>• 2010-2011 additional bandwidth allocated</li> </ul>

<b>Objective 3.2</b>	Demonstrate an increased number of effective and regular uses of technology for teacher and student productivity in order to enhance student learning.
<b>Target(s)</b>	100% of teachers will use technology consistently to enhance student learning
<b>Strategies</b>	<ul style="list-style-type: none"> <li>• Continue to deploy a uniform platform for instructional technology and ensure all computers meet at least minimum standards to use contemporary resources (e.g. software, web-applications).</li> <li>• Continue to gather and monitor survey data from staff related to capacity of technology to meet instructional needs.</li> <li>• Continue to increase and refine access to media resources through the use of web-based library catalog.</li> <li>• Continue to increase quantity and quality of information about Whitefish Bay Schools to parents and community members.</li> <li>• Maintain and ensure consistent meetings of Administrative Technology Advisory Group and District Technology Committee to monitor and guide technology plan and its on-going implementation</li> <li>• Increase the amount of technology based professional development</li> <li>• Institute a required professional development technology-based system for all licensed staff to replace the current course choice options</li> </ul>
<b>Measurement Tool(s)</b>	<ul style="list-style-type: none"> <li>• Hardware/software inventory</li> <li>• Survey data from staff</li> <li>• Media resource data base</li> <li>• Professional development attendance and feedback</li> <li>• Technology walk-throughs</li> <li>• AV checklist calendars</li> <li>• Review of licensed staff technology professional development</li> </ul>
<b>Person(s) Responsible</b>	<ul style="list-style-type: none"> <li>• Director of Technology</li> <li>• Director of Instruction</li> <li>• Instructional Technology Coordinator</li> <li>• District Technology Committee</li> <li>• Library Media Specialists</li> <li>• Trained technology professional development reviewers</li> </ul>
<b>Projected Timeline</b>	<ul style="list-style-type: none"> <li>• 2009-2012 continue to upgrade and deploy a standard platform</li> <li>• Spring 2010 gather survey staff survey data</li> <li>• Fall 2011 District Technology Committee and Administrative Technology Advisory Group analyze survey data</li> <li>• 2009 – 2012 redesign the district website to better publish technology-related improvements</li> <li>• 2010-2012 technology professional development process</li> </ul>

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<b>Objective 3.3</b>	Provide opportunities for instructional staff to access and enter information, including student data.
<b>Target(s)</b>	100% of staff will access the district student records data base to enter, utilize and analyze student data consistently.
<b>Strategies</b>	<ul style="list-style-type: none"> <li>• Continue use of web-based grade books that seamlessly integrate with our Student Information Software</li> <li>• Expand ability for staff to access additional student data resources including testing profiles and other assessment information in order to inform instructional practice and comply with federal initiatives such as RTI.</li> </ul>
<b>Measurement Tool(s)</b>	<ul style="list-style-type: none"> <li>• Statistics on grade book usage</li> <li>• Identify areas in which student data is made available to staff</li> </ul>
<b>Person(s) Responsible</b>	<ul style="list-style-type: none"> <li>• Director of Technology</li> <li>• District Data Manager</li> </ul>
<b>Projected Timeline</b>	2009-2012

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#### Goal 4: Information Literacy

Students and staff will use 21<sup>st</sup> century skills to gather, evaluate, and use information from a variety of sources and media to ethically create products.

Objectives:

- 4.1 Increase opportunities for students, staff, and parents to effectively access and utilize information in a variety of formats using research skills and technology.
- 4.2 Demonstrate an increased number of effective and regular uses of technology and research skills in order to enhance student learning.
- 4.3 Ensure that incoming students at each grade level possess age-appropriate 21<sup>st</sup> century information literacy and technology skills.

<b>Objective 4.1</b>	Increase opportunities for students, staff, and parents to effectively access and utilize information in a variety of formats using research skills and technology.
<b>Target</b>	<ul style="list-style-type: none"><li>• All students will use research skills and technology on a consistent basis.</li><li>• All instructional staff will utilize research skills and available technology to aid student learning.</li></ul>
<b>Strategies</b>	<ul style="list-style-type: none"><li>• Collaboration between library media specialists and instructional staff will occur to plan and implement lessons related to technology and information literacy in the general curriculum.</li><li>• Increase awareness of resources – both online and in print – that are available to students, staff, and parents.</li><li>• Provide staff instruction on resources and technology through workshops or staff meetings.</li></ul>
<b>Measurement Tool(s)</b>	<ul style="list-style-type: none"><li>▪ Circulation and online database usage statistics</li><li>▪ Surveys</li><li>▪ Workshop or meeting feedback</li><li>▪ References in curricular documents</li></ul>
<b>Person(s) Responsible</b>	<ul style="list-style-type: none"><li>• Director of Technology</li><li>• Library Media Specialists</li><li>• Instructional Technology Coordinator</li></ul>
<b>Projected Timeline</b>	<ul style="list-style-type: none"><li>• Fall 2009: Identify staff training needs</li><li>• Spring 2010: Provide staff training based on immediate needs</li><li>• Fall 2009-Spring 2012: Collaborate with instructional staff to ensure students are learning and utilizing research and technology skills</li></ul>

<b>Objective 4.2</b>	Demonstrate an increased number of effective and regular uses of technology and research skills in order to enhance student learning.
<b>Target</b>	<ul style="list-style-type: none"> <li>• By 8<sup>th</sup> grade, 100% of students will be required to access and cite information from a variety of sources including subscription databases.</li> <li>• Teachers will demonstrate use of technology to enhance student learning at least once per quarter.</li> </ul>
<b>Strategies</b>	<ul style="list-style-type: none"> <li>• Collaboration between library media specialists and staff will occur to plan and implement lessons related to technology and information literacy in the general curriculum.</li> <li>• Provide instruction to staff and students in using online and print resources.</li> </ul>
<b>Measurement Tool(s)</b>	<ul style="list-style-type: none"> <li>▪ 8<sup>th</sup> grade student projects</li> <li>▪ Teacher feedback about technology use</li> <li>▪ Student surveys</li> <li>▪ References in curricular documents</li> </ul>
<b>Person(s) Responsible</b>	<ul style="list-style-type: none"> <li>• Director of Technology</li> <li>• Library Media Specialists</li> <li>• Director of Instruction</li> </ul>
<b>Projected Timeline</b>	<ul style="list-style-type: none"> <li>• Spring 2010 – Spring 2012: Assess citations in 8<sup>th</sup> grade student projects</li> <li>▪ Fall 2009 – Spring 2012: Assess teacher use of technology</li> </ul>

<b>Objective 4.3</b>	Ensure that incoming students at each grade level possess age-appropriate 21 <sup>st</sup> century information literacy and technology skills.
<b>Target</b>	<ul style="list-style-type: none"> <li>• By the end of Y3 90% of students will possess the skills outlined in the information literacy rubric.</li> </ul>
<b>Strategies</b>	<ul style="list-style-type: none"> <li>• Teach students and staff information and technology skills on an informal basis as needed through one-on-one or small group interactions.</li> <li>• Develop a K-12 information literacy rubric that will be integrated and implemented within the general curriculum.</li> </ul>
<b>Measurement Tool(s)</b>	<ul style="list-style-type: none"> <li>▪ Information literacy rubric</li> </ul>
<b>Person(s) Responsible</b>	<ul style="list-style-type: none"> <li>• Director of Technology</li> <li>• Library Media Specialist</li> <li>• Director of Instruction</li> <li>• Instructional Technology Coordinator</li> </ul>
<b>Projected Timeline</b>	<ul style="list-style-type: none"> <li>• Fall 2009: Review Wisconsin's Model Academic Standards for Information and Technology</li> <li>• Spring 2010: Complete K-12 information literacy rubric</li> <li>• Fall 2010 – Spring 2012: Design instruction to meet standards outlined in the information literacy rubric</li> </ul>

## Three Year Budget Summary

### Summary of Year One

Year one\* of the plan continues on a path toward routine replacement of outdated computers. The largest investment in this portion of the plan is in upgrading the network infrastructure to ensure demands for increased data flow can be met for the foreseeable future.

Alignment of computers to a common level of operation will allow for deployment of new software and access to additional internet and streaming media resources across all four of the district's schools. More student end devices will added in all the school's to access new wireless infrastructure. Smartboards allow for further deployment of this form of instructional technology. Current access to Smartboards exists largely through Whitefish Bay Public Education Foundation Grants, parent groups, and "as available" expenditures from building budgets.

Year One 2009-10				
Item	Survival Cost	Recurring Cost	Expansion Cost	Rationale
Prof Development				Funding for additional tech PD
Curriculum Writing Hours				No additional cost – this is already a part of the Curriculum and Instruction budget.
2002-2004 PCs (118)	\$88,500			This will replace the remaining out of warranty workstations.
Internet Bandwidth		\$7,200		In Spring of 2009 bandwidth was increased from 3 Megabits to 9 Megabits.
Additional Storage Space			\$10,000	With the addition of PLTW and an increase in digital art classes at the high school additional server space is needed to store these student files.
Add Additional Smartboards			\$30,000	This will allow for approximately 25 installations. As teachers develop a community of users and share ideas, lessons and resources, the demand for this type of technology will continue to increase.
End devices for students (450)			\$135,000	As more network access for student use is installed using voter referendum funds, 90 devices at HS, 180 devices MS, 90 at each elementary school. Wireless and @\$300.
Skyward hosted remotely by ISCorp		\$12,000		Skyward servers, switch, and storage capacity has been outsourced.
24 Switches	\$120,000			These have been in service since 2001. They limit the internal data flow on our network and are no longer supported by the vendor.
Wireless			\$120,000	Wireless controllers & endpoints & PoE switches at all 4 schools
Inter-Campus Bandwidth			\$6,000	To take advantage of the additional bandwidth purchased in Y1, more radio spectrum is needed for CU and RI
Server virtualization		\$3,000		This allows multiple server instances to run on one CPU. (This saves on power and hardware.)

WAN core switch			\$8,000	The switch will be 7 years old and will need to be replaced so that it will have the capacity and speed to support the wireless controller.
Replace three additional HS servers (Destiny, San Servers, DO/HS & MS)			\$21,000	These servers are 8 and 6 years old and lack speed and capacity. At this point they will no longer be supported by the vendor.
Collaboration server			\$10,000	A Moodle server will become available for the HS/MS to share instructional materials with students. The server will also provide a safe arena for student blogging and collaboration.
<b>Total</b>	<b>208,500</b>	<b>22,200</b>	<b>340,000</b>	

Voters passed a referendum in 11/09 to fund \$300,000 in technology infrastructure improvements that appears in this Year One budget.

**Year One Total = 570,700 (\$300,000 funded by referendum)**

*\*This is a living document. Voters passed a referendum in 11/09 to fund \$300,000 in technology infrastructure. While this represents current thinking about the best method to ensure 1) network stability to deliver instructional technology, 2) computing power, speed, and access for staff and students to support curricular and administrative needs and 3) continuous expansion and scalability to meet increased demands for speed and memory associated with new/improved technologies in order to facilitate the 4) purchase of equipment that exceeds operational budget, adjustments will be made on an annual basis as needs are met and technologies evolve.*

## Summary of Year Two

Year two\* of this plan maintains a consistent upgrade plan for all PC's.

This portion of the plan begins to deploy wireless technologies across the Middle School and the High School, and access to pods of networked computers in 4<sup>th</sup> and 5<sup>th</sup> grade elementary classrooms.

Year Two 2010-2011				
Item	Survival Cost	Recurring Cost	Expansion Cost	Rationale
Prof Development				Funding for additional tech PD
Curriculum Writing Hours				No additional cost – this is already a part of the Curriculum and Instruction budget.
50% of PCs at RI & CU (120)	\$96,000			The warranty on these computers will expire in May, 2011.
Internet Bandwidth		\$3,000		Application to BadgerNet for 40 Megabits of Internet bandwidth
Wireless			\$40,000	Addition of more wireless access points.
Add additional Smartboards			\$30,000	This will allow for approximately 25 installations. As teachers develop a community of users and share ideas, lessons and resources, the demand for this type of technology will continue to increase.
Server virtualization		\$3,000		This allows multiple server instances to run on one CPU. (This saves on power and hardware.)
PC expansion of G4 & G5 CU/RI			\$100,000	Additional workstations will be added to each 4th & 5th grade areas. These mobile labs will bring 21century tools into the classrooms.
Skyward hosted remotely by ISCorp		\$12,000		Skyward servers, switch, and storage capacity has been outsourced.
<b>Total</b>	<b>\$96,000.00</b>	<b>\$18,000.00</b>	<b>\$170,000.00</b>	

### Year Two Total = \$284,000

*\*This is a living document. While this represents current thinking about the best method to ensure 1) network stability to deliver instructional technology, 2) computing power, speed, and access for staff and students to support curricular and administrative needs and 3) continuous expansion and scalability to meet increased demands for speed and memory associated with new/improved technologies in order to facilitate the 4) purchase of equipment that exceeds operational budget, adjustments will be made on an annual basis as needs are met and technologies evolve.*

## Summary of Year Three

Year three\* of this plan maintains the consistent upgrade of all PC's, replaces media center mobile labs, and replaces a series of essential servers.

This portion of the plan begins to deploy wireless technologies across the elementary schools, and creates new access to networked pods of computers in 1<sup>st</sup> – 3<sup>rd</sup> grade elementary classrooms.

Year Three 2011-2012				
Item	Survival Cost	Recurring Cost	Expansion Cost	Rationale
Prof Development				Funding for additional tech PD
Curriculum Writing Hours				No additional cost – this is already a part of the Curriculum and Instruction budget.
50% of PCs at RI & CU (120)	\$96,000			This will replace the remaining out of warranty workstations.
PC expansion of G1, G2, G3 CU/RI			\$120,000	Additional workstations will be added to each 1st, 2nd & 3rd grade classrooms. These mobile labs will bring 21 century tools into the classrooms.
Internet Bandwidth		\$3,000		Application to BadgerNet for 40 Megabits of Internet bandwidth
Wireless			\$40,000	Addition of more wireless access points.
Current Laptop Labs	\$50,000			The current laptops housed at RI (14), MS (16) & HS (20) were purchased in 2004-2006. They are out of warranty and in need of replacement with units that will better work on the wireless network.
Server virtualization		\$3,000		This allows multiple server instances to run on one CPU. (This saves on power and hardware.)
Add additional Smartboards			\$30,000	This will allow for approximately 25 installations. As teachers develop a community of users and share ideas, lessons and resources, the demand for this type of technology will continue to increase.
Skyward hosted remotely by ISCorp		\$12,000		Skyward servers, switch, and storage capacity has been outsourced.
<b>Total</b>	<b>\$146,000.00</b>	<b>\$18,000.00</b>	<b>\$190,000.00</b>	

**Year Three Total = \$354,000**

### Total Cost of Three Year Plan: \$1,154,700

*\*This is a living document. While this represents current thinking about the best method to ensure 1) network stability to deliver instructional technology, 2) computing power, speed, and access for staff and students to support curricular and administrative needs and 3) continuous expansion and scalability to meet increased demands for speed and memory associated with new/improved technologies in order to facilitate the 4) purchase of equipment that exceeds operational budget, adjustments will be made on an annual basis as needs are met and technologies evolve.*

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## **Dissemination to Stakeholders**

A variety of paths are available for the sharing of the vision, mission goals and objectives of the Whitefish Bay School Information and Technology Plan. The Director of Technology, Library Media Specialists, and Instructional Technology Coordinator with the support of the Coordinator of Professional Development and Director of Instruction will be involved in the success of this plan. They will be instrumental in working with the building staff to implement the strategies and measure the impact of these strategies. Professional development sessions, staff meeting and parent information sessions will be additional options for focusing on the goals of the plan.

The plan in its entirety will be an active link on the district website. The mission and goals will be further communicated through the community newsletter that is annually sent to all residents. During the referendum process the goals and an update as to the progress toward those goals will be distributed through the district web site. It is our intent to remind all stakeholders of the district's commitment to information and technology learning tools.

## **Monitoring, Evaluation, Revision**

This document will be constantly monitored and updated. The committee that designed the plan will meet four times each year to monitor its progress. It will be the responsibility of the Director of Technology, Library Media Specialists and the Instructional Technology Coordinator to report the plan's progress to the committee, staff, students, parents and community members (stakeholders).

To assess the progress toward our goals, stakeholders will be asked participate in an online survey. The survey data will be use to evaluate and revise this plan. The measures listed in the implementation action section of the plan will provide additional success data. It is the intent of the committee to provide both summative and formative data for future planning sessions.

## Three Year Overview with Goal/Object Alignment

# Projected Budget for 2009-2012 Information and Technology Plan

### Projected Expenditures

	CITP	School Year		
	Goal.Obj.	2009-10	2010-11	2011-12
<b>Software Procurement</b>				
New Skyward Applications (EduTrack, etc.)	3.3			
Remote Access to Network Resources	1.1, 1.2, 2.2, 4.1			
Virtual Learning Opportunities	1.1, 2.3, 2.4, 4.1, 4.3	4,000	6,000	8,000
Instructional Software	2.1, 4.2	5,000	7,000	9,000
Online assessments	3.3			
<b>Hardware, Facilities &amp; Networking</b>				
Equipment Components, Backup Tapes, Adabpters, Cables, Caching Appliance, Peripherals, UPS Backup Units, etc.	1.1	10,000	10,000	10,000
Mobile Computer Labs	1.1, 1.2, 4.2, 4.3	135,000	67,000	67,000
Servers	1.1, 4.2	24,000	5,000	5,000
Network Switches, Routers	1.1, 4.2	130,000	5,000	5,000
Wireless Network	1.1, 2.3, 2.4, 3.1, 3.2, 4.1	120,000	40,000	40,000
Replacement Computers	1.1	88,500	96,000	116,000
SMARTBoards	2.2, 2.3, 3.1, 3.2	30,000	30,000	30,000
Digital Phone equipment, cabling, & hardware		4,000	4,000	4,000
Digital Phone Replacement		2,000	2,000	2,000
<b>Operation, Maint, Upgrade, Communications</b>				
Skyward Blk Hrs., School Messenger		8,000	6,000	6,000
Maintenance and Support (RS, Skyward, SBC Digital Phone, Netsmart, Arc Serve, Anti-Virus, Firewall, Novell, Help Desk, etc.)	1.1	47,000	47,000	47,000
Internet Service	1.1, 1.2, 2.3, 2.4, 3.1	7,200	10,200	10,200
AccessTV/Video Upgrade	1.1, 3.1			
<b>Professional Development</b>				
Skyward User Conferences	3.3	2,000	2,000	2,000
Educational Technology integration (outside district)	2.1	2,000	2,000	2,000
Educational Technology integration (in district)	2.1, 2.2, 2.3, 2.4	4,000	5,000	5,000
<b>Human Resources in Support of Technology</b>				

Maintain Existing Technology Positions	320,000	345,000	375,000
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<b>Other</b>			
	1.1, 2.1, 2.2, 2.4, 3.2, 4.1, 4.2, 4.3		
Integration of 21st century skills	1.1, 1.2, 2.2, 2.4, 3.2, 4.2		
Implementing best practices	1.1, 1.2, 2.2, 2.4, 3.2, 4.2		
Support instructional content	1.1, 2.3, 2.4, 4.1	10,000	
Explore staff and student online opportunities	1.1, 3.1, 4.1, 4.3		
School library resources			

### Projected Funding Sources

<b>Total</b>			
District Budget Technology		61,000	61,000
District School Budgets		34,000	30,000
November 2009 referendum		300,000	
eRate		1,000	1,000
Title I		----	----
Title II, Part A: Educ Train		----	----
Title II, Part B: Math/Science Ptr		----	----
Title II, Part D: Ed Tech		2,000	2,000
Title III		----	----
Title IV		----	----
Title V		----	----
Title VI		----	----
Common School Fund		----	----
Capital outlay		225,000	250,000
Telecom Access Subsidy		----	----

Note. Some CITP objectives may not require a financial expenditure.

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## Bibliography

Burniske, Richard W. *Literacy in the Digital Age*. New York: Corwin, 2007.

CoSN releases new report for educators exploring the use of collaborative technologies to enhance education (2006, September 7, 2006). *eSchool News*. <http://www.eschoolnews.com/conference-info/cosn/cosn-news/index.cfm?i=38605>

Dell, Amy G., Deborah Newton, and Jerry Petroff. *Assistive Technology in the Classroom Enhancing the School Experiences of Students with Disabilities*. Upper Saddle River: Prentice Hall, 2007.

Geier, Denise B. "One Curriculum for Media and Technology in the Elementary School?." *Library Media Connection* 24.1 (2005): 44.

Hanna, Donald. *LEADERSHIP FOR THE 21ST CENTURY (Open and Distance Learning)*. New York: Routledge, 2001.

Livingston, Pamela. *1-to-1 Learning Laptop Programs That Work*. Eugene, OR: International Society for Technology in Education, 2006.

Richardson, Will. *Blogs, wikis, podcasts, and other powerful web tools for classrooms*. Thousand Oaks, Calif: Corwin, 2008.

Rose, Colin. *Accelerated Learning for the 21st Century The Six-Step Plan to Unlock Your Master-Mind*. New York: Dell, 1998.

Scholastic Library Publishing (2008). *School libraries work!* (3rd ed.). [Danbury, CT]: Scholastic Library Pub.

Smaldino, Sharon E. *Instructional technology and media for learning*. Upper Saddle River, N.J: Pearson Education, 2007.

Wilson, Janell D., Charles C. Notar, and Barbara Yunker. "Elementary In-Service Teacher's Use of Computers in the Elementary Classroom." *Journal of Instructional Psychology* 30.4 (2003): 256.

Wisconsin educator standards - teachers: Ten standards for teacher development and licensure (2008).<http://dpi.wi.gov/tepd/stand10.html>

Young, Mark R., Bruce R. Klemz, and J. William Murphy. "Enhancing Learning Outcomes: The Effects of Instructional Technology, Learning Styles, Instructional Methods, and Student Behavior." *Journal of Marketing Education* 25.2 (2003): 130-142.

Taraban, Roman. "An impoverished machine: challenges to human learning and instructional technology." *Behavior Research Methods* 40.3 (2008): 639-646.

# Appendices

## **Appendix 1**

Results from fall 2007 survey of Whitefish Bay instructional staff.

## **Appendix 2**

*Recommendation Summary* from Tushaus Computer Services analysis of the school district's infrastructure, operations, security and component management. Components referenced in this report:

- Have already been addressed, or are in the process of being addressed where recommendations required no or limited costs.
- Are addressed over time through the five year replacement plan.
- Related to disaster recovery have been addressed through a review of local practices. A more comprehensive plan can be considered after recommendations for increased bandwidth have been implemented.

## **Appendix 3**

Summary of indicators of technology capacity of other high-performing schools in Southeast Wisconsin.

## **Appendix 4**

The District Focus Plan and Shared Commitments.

## **Appendix 5**

Technology Benchmarks and Standards

## **Appendix 6**

Hardware/Software Inventory

## **Appendix 7**

Library/Media/Information Scope and Sequence

MLA Citation Guide

Library Resource Collection Maps

## **Appendix 8**

Required Policies Approved by the School Board

CIPA

Internet Safety

AUP

Technology Concerns for Students with Special Needs

Copyright

Materials Selection and Reconsideration

Interlibrary Loan/Resource Sharing