Madeira City Schools Planning Commission

21st Century Skills

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Overview

Purpose

The Madeira "21st Century Skills" Committee was formed at the request of the Madeira City Schools Board of Education to study and identify skills that students will need to be successful in the workplace and in the community for the 21st Century. Another committee (comprised of parents, community members, business owners and educators) named "The 2020 Committee" spent last school year (2007-2008) studying and discussing this topic. The results of their work to date include a purpose/vision statement, goals, strategies and action steps. With that in mind, the 21st Century Skills Committee identified a few actions steps developed by "The 2020 Committee" to narrow our study and focus our research:

Methodology

- Review literature to identify needed essential skills for students necessary to successfully navigate in a world of constant change.
- Reviewed literature on several 21st Century Schools to identify and report on models that might best meet the needs of Madeira City Schools.
- Interviewed resources from New Technology High Schools, Metropolitan School District of Lawrence Township Indianapolis Indiana, Partnership for 21st Century Skills and Knowledge Works.
- Create an external communication plan that will bring educators, community members, parents, businesses and students together as partners and supporters of the changes needed to prepare students for success in an ever changing world.
- Evaluate Madeira City School's current state of preparedness and resources available to move forward to achieve the goals of preparing student with the 21st century necessary skills.

Partnership for 21 Century Skills

About Route 21

Route 21 was created by the Partnership for 21st Century Skills. The <u>Partnership for 21st Century Skills</u> has emerged as the leading advocacy organization focused on infusing 21st century skills into education. The organization brings together the business community, education leaders, and policymakers to define a powerful vision for 21st century education to ensure every child's success as citizens and workers in the 21st century. The Partnership encourages schools, districts and states to advocate for the infusion of 21st century skills into education and provides tools and resources to help facilitate and drive change.

Member organizations include: Adobe Systems Incorporated, American Association of School Librarians, Apple, AT&T Foundation, Blackboard, Cable in the Classroom, Cengage Learning, Cisco Systems, Corporation for Public Broadcasting, Davis Publications, Inc., Dell, Discovery Education, Education Networks of America, ETS, EF Education, Ford Motor Company Fund, Giant Campus, Intel Corporation, JA Worldwide, KnowledgeWorks, LEGO Group, McGraw-Hill Education, Measured Progress, Microsoft Corporation, National Education Association, Oracle Education Foundation, Pearson Education, PolyVision, SAP, Sesame Workshop, Texas Instruments, THINKronize, Verizon, Wireless Generation.

The goal of Route 21 is to provide an online interactive tool that demonstrates how 21st century skills can be supported through standards, professional development, assessments and curriculum and instruction, with a particular focus on:

- Serving as an informational tool for state leaders, policymakers and practitioners interested in implementing 21st century education initiatives
- Enabling 21st century skills implementation in schools, districts and states by sharing promising practices
- Supporting the 21st century skills community of advocates, practitioners and other stakeholders through the use of Web 2.0 features
- Soliciting user-generated content on 21st century skills
- Providing an efficient method for various education groups working on 21st century skills to disseminate and receive feedback on their work

Core Subjects and 21at Century Themes

Mastery of core subjects and 21st century themes is essential for students in the 21st century. Core subjects include:

- English, reading or language arts
- World languages
- Arts
- Mathematics
- Economics
- Science
- Geography
- History
- Government and Civics

In addition to these subjects, P21 believe schools must move beyond a focus on basic competency in core subjects to promoting understanding of academic content at much higher levels by weaving 21st century interdisciplinary themes into core subjects:

Global Awareness

- Using 21st century skills to understand and address global issues
- Learning from and working collaboratively with individuals representing diverse cultures, religions and lifestyles in a spirit of mutual respect and open dialogue in personal, work and community contexts
- Understanding other nations and cultures, including the use of non-English languages

Financial, Economic, Business and Entrepreneurial Literacy

- Knowing how to make appropriate personal economic choices
- Understanding the role of the economy in society
- Using entrepreneurial skills to enhance workplace productivity and career options

Civic Literacy

- Participating effectively in civic life through knowing how to stay informed and understanding governmental processes
- Exercising the rights and obligations of citizenship at local, state, national and global levels
- Understanding the local and global implications of civic decisions

Health Literacy

- Obtaining, interpreting and understanding basic health information and services and using such information and services in ways that are health enhancing
- Understanding preventive physical and mental health measures, including proper diet, nutrition, exercise, risk avoidance and stress reduction
- Using available information to make appropriate health-related decisions
- Establishing and monitoring personal and family health goals
- Understanding national and international public health and safety issues

Life and Career Skills

Today's life and work environments require far more than thinking skills and content knowledge. The ability to navigate the complex life and work environments in the globally competitive information age requires students to pay rigorous attention to developing adequate life and career skills.

Flexibility & Adaptability

- Adapting to varied roles and responsibilities
- Working effectively in a climate of ambiguity and changing priorities

Initiative & Self-Direction

- Monitoring one's own understanding and learning needs
- Going beyond basic mastery of skills and/or curriculum to explore and expand one's own learning and opportunities to gain expertise
- Demonstrating initiative to advance skill levels towards a professional level
- Defining, prioritizing and completing tasks without direct oversight
- Utilizing time efficiently and managing workload

Social & Cross-Cultural Skills

- Working appropriately and productively with others
- Leveraging the collective intelligence of groups when appropriate
- Bridging cultural differences and using differing perspectives to increase innovation and the quality of work

Productivity & Accountability

- Setting and meeting high standards and goals for delivering quality work on time
- Demonstrating diligence and a positive work ethic (e.g., being punctual and reliable)

Leadership & Responsibility

- Using interpersonal and problem-solving skills to influence and guide others toward a goal
- Leveraging strengths of others to accomplish a common goal
- Demonstrating integrity and ethical behavior
- Acting responsibly with the interests of the larger community in mind

Learning and Innovation Skills

Learning and innovation skills increasingly are being recognized as the skills that separate students who are prepared for increasingly complex life and work environments in the 21st century, and those who are not. A focus on creativity, critical thinking, communication and collaboration is essential to prepare students for the future.

Creativity & Innovation

- Demonstrating originality and inventiveness in work
- Developing, implementing and communicating new ideas to others
- Being open and responsive to new and diverse perspectives
- Acting on creative ideas to make a tangible and useful contribution to the domain in which the innovation occurs

Critical Thinking & Problem Solving

- Exercising sound reasoning in understanding
- Making complex choices and decisions
- Understanding the interconnections among systems
- Identifying and asking significant questions that clarify various points of view and lead to better solutions
- Framing, analyzing and synthesizing information in order to solve problems and answer questions

Information, Media and Technology Skills

People in the 21st century live in a technology and media-suffused environment, marked by access to an abundance of information, rapid changes in technology tools, and the ability to collaborate and make individual contributions on an unprecedented scale. To be effective in the 21st century, citizens and workers must be able to exhibit a range of functional and critical thinking skills related to information, media and technology.

Information Literacy

- Accessing information efficiently and effectively, evaluating information critically and competently and using information accurately and creatively for the issue or problem at hand
- Possessing a fundamental understanding of the ethical/legal issues surrounding the access and use of information

Media Literacy

- Understanding how media messages are constructed, for what purposes and using which tools, characteristics and conventions.
- Examining how individuals interpret messages differently, how values and points of view are included or excluded and how media can influence beliefs and behaviors.
  Possessing a fundamental understanding of the ethical/legal issues surrounding the access and use of information

ICT (Information, Communications & Technology) Literacy

- Using digital technology, communication tools and/or networks appropriately to access, manage, integrate, evaluate, and create information in order to function in a knowledge economy
- Using technology as a tool to research, organize, evaluate and communicate information, and the possession of a fundamental understanding of the ethical/legal issues surrounding the access and use of information

Communication & Collaboration

- Articulating thoughts and ideas clearly and effectively through speaking and writing
- Demonstrating ability to work effectively with diverse teams
- Exercising flexibility and willingness to be helpful in making necessary compromises to accomplish a common goal
- Assuming shared responsibility for collaborative work

Assessment

P21 advocates for an aligned set of support systems to enable student mastery of 21st century skills. 21st century standards, assessments, curriculum, instruction, professional development and learning environments must be aligned to produce a support system that produces 21st century outcomes for today's students.

Assessment of 21st century skills should:

- Support a balance of assessments, including high-quality standardized testing along with effective classroom formative and summative assessments
- Emphasize useful feedback on student performance that is embedded into everyday learning
- Require a balance of technology-enhanced, formative and summative assessments that measure student mastery of 21st century skills
- Enable development of portfolios of student work that demonstrate mastery of 21st century skills to educators and prospective employers
- Enable a balanced portfolio of measures to assess the educational system's effectiveness at reaching high levels of student competency in 21st century skills

Curriculum and Instruction

The relationship between curriculum and instruction is obviously a very close one. Curriculum is essentially a design, or roadmap for learning, and as such focuses on knowledge and skills that are judged important to learn. Instruction is the means by which that learning will be achieved. To meet the needs of the 21st century learner and achieve the student outcomes described in its Framework, the Partnership calls on schools

- To adopt a **21st century curriculum** that blends thinking and innovation skills; information, media, and ICT literacy; and life and career skills in context of core academic subjects and across interdisciplinary themes, and
- To employ methods of **21st century instruction** that integrate, innovative and research-proven teaching strategies, modern learning technologies, and real world resources and contexts.

Professional Development

P21 advocates for an aligned set of support systems to enable student mastery of 21st century skills. 21st century standards, assessments, curriculum, instruction, professional development and learning environments must be aligned to produce a support system that produces 21st century outcomes for today's students.

21st Century Professional Development

- Highlights ways teachers can seize opportunities for integrating 21st century skills, tools and teaching strategies into their classroom practice — and help them identify what activities they can replace/de-emphasize.
- Balances direct instruction with project-oriented teaching methods
- Illustrates how a deeper understanding of subject matter can actually enhance problem-solving, critical thinking, and other 21st century skills.
- Enables 21st century professional learning communities for teachers that models the kinds of classroom learning that best promotes 21st century skills for students

- Cultivates teachers' ability to identify students' particular learning styles, intelligences, strengths and weaknesses
- Helps teachers develop their abilities to use various strategies (such as formative assessments) to reach diverse students and to create environments that support differentiated teaching and learning
- Supports the continuous evaluation of students' 21st century skills development
- Encourages knowledge sharing among communities of practitioners, using face-to-face, virtual and blended communications
- Uses a scaleable and sustainable model of professional development

Learning Environments

A 21st century learning environment depends on a number of aligned and interdependent elements to support 21st century teaching and learning. Among these elements are the following:

- facilities and design
- technology infrastructure
- scheduling
- school culture
- leadership
- professional learning communities

21st Century High Schools: The New Technology Model

New Technology High School (NTHS) is committed to leading educational reform. The city of Napa is best known as the southern tip of California's most famous wine-making region, but may soon be famous as the birthplace of an educational revolution. However, when several local businesspeople first tossed around the idea of a school in which students would learn the skills necessary to succeed in the New Economy, revolution was not a word they used. "Frustration" came more readily to their minds - local business leaders' frustration with the lack of skilled local employees; students' frustration as they came out of school unprepared for jobs in a technologically advanced marketplace; and the community's frustration with the quality of public education in general. Out of frustration came inspiration, and New Technology High School was born.

Since opening its doors in 1996, New Technology High School has graduated 756 students, sending them to an impressive list of top colleges and internships with nearby Silicon Valley companies. The students themselves helped design its elegant modern facade and also assist in maintaining its interior landscape, and the NTHS website. The classrooms are visions of modern industriousness; with each student seated at his or her own personal computer. Students use the latest software to do everything from accessing daily bulletins to completing math assignments. Some students have been computer junkies all their lives. Some have never touched a mouse before arriving at NTHS.

The most exciting aspect of education at NTHS is directly connected to this access to technology. It's called "project-based learning", and it very nearly comprises a revolution in itself. Instead of plugging their knowledge into fill-in bubbles on scantron sheets at finals time, students present tech-based projects about the subject at hand. You won't find simple book reports at New Tech High - you're more likely to see a detailed website with original graphics and links to related sites, or a beautifully designed Power-Point presentation combining digital photography and original text.

Parents shouldn't fear that all this technology overshadows core academics. Students fulfill all district requirements and some extra ones specific to NTHS. They can also get college credit at local Napa Valley College. They need not sit behind a computer screen all day - extracurricular organizations include clubs, dances, and off-campus trips. Students can enroll in music and sports at nearby Napa or Vintage High Schools. In addition, students learn self-sufficiency and time management and participate in what the school's founders call "A Community of Trust." Small class sizes and personal relationships with instructors create an environment in which students are responsible for their own learning. There are no bells telling them when classes begin and end and no hall passes required to go to the bathroom. It's more like college, or even a workplace, than a high school. In addition, the atmosphere of trust and respect makes students feel comfortable leaving their backpacks behind in a classroom. A seemingly insignificant privilege, it comes at a time when too many students across the country fear that the locker next to theirs may hold a weapon.

The backbone of NTHS's unique learning environment is Project-Based Learning. Instead of handing out daily assignments, teachers assign periodic projects with different components. Components may include a written essay and a digital project such as a website, PowerPoint presentation, or photo essay. Finally, students are asked to present their work orally to their classmates. Students work on these projects either individually, with a partner, or in a group.

The due dates for these projects are sometimes deceptively far away, forcing students to develop time management skills. At first, procrastination is the name of the game, but students quickly learn that if they want to succeed, they need to spread the project out over a period of time.

One Leadership student writes eloquently of her experience in the new learning environment. "My old school was a "college prep" school, and if what my college friends tell me is true, then I was prepared there. I was used to cramming information just to pass the next test, only to have it dissipate the next day as the information was no longer useful. So when I came to New Tech, my standards for learning changed quite dramatically. There was a bit of lecturing in my classes, but after the lectures we would be free to go do what needed to be done. In any other school, this would mean free time for fooling around. But at Tech High it meant getting what needed to be done, done. It meant working on projects and finishing assignments. I was amazed with how I wasn't the only one working on my group project, that my entire group did it. When you have independent learning, then the pressure is put on the individual to have the drive to learn. At most places it is just a passionate teacher trying to force the student to be interested."

New Technology Foundation – Network

New Technology Foundation is a school development organization that assists communities across the country in creating 21st century high schools modeled on Napa's New Technology High School. The Foundation works with innovative, forward thinking schools districts that are committed to preparing students for success in a technology immersed society and globally competitive economy.

The NTHS network is currently comprised of 40 schools across the United States, locations are in California, Colorado, Illinois, Indiana, Louisiana, New York, North Carolina, Oregon. There are currently 6 New Technology High Schools in Indiana. 3 have opened in 2007 and 3 have opened in 2008. They are located in Indianapolis, Decatur, Rochester, Elnora, Bloomington and Columbus.

The NTHS Learning System

The NTH Learning System is comprised of tools developed by NTHS teachers to manage this changed classroom environment. The tools give structure and cohesion to the work-for both teachers and student-and provide common platforms from which to communicate, to share best practice, and student work.

21st Century High School

The New Technology High School model reflects commitment to these criteria:

Program
- 400 or less students, Full day program
- All kids college ready
- Non-selective admissions policy

Curriculum
- 21st Century Skills
- Team teaching & curricular integration
- Project based and standards based (PBL)
- Authentic assessment strategies
- Culture and trust responsibilities

Technology
- Student and teacher workflow managed through NTH Learning System
- 1:1 student to computer ratio
- Network capacity for e-mail and internet

Partnerships
- Business community partnerships
- Community partnerships
- College partnerships

Professional Development
- Shadowing & training on PBL and technology
- Network professional development
- Technology Administration Training

Staffing
- Full-time principal
- Staffing autonomy
- Full-time staff dedicated to school
- Lead teacher as on-site mentor
- School based Network Administrator

Facilities
- Separate – uniquely identified facility
- Classrooms to support team teaching in technology rich environment

21st Century Schools
Metropolitan School District of Lawrence Township
Indianapolis Indiana

The mission statement of the Metropolitan School District (MSD) is to empower all students with the knowledge and skills, compassion and integrity needed to contribute and succeed as self-directed, lifelong learners in a competitive global community. Through the work of the Digital Age Literacy Initiative, MSD has defined that body of knowledge and the 21st century skills necessary for students to succeed as self-directed learners in the digital age.

The three paradigm- shifting goals of the Digital Age Literacy Initiative are:
- **Content: Broaden the scope of the literacy to include digital age skills.**
- **Process: Implement a systemic professional development framework.**
- **Context: Reinvent the district as a professional learning community.**

In an international world of abundant, interactive, multimedia information, paper and pencil literacy is no longer adequate for students who are projected to have as many as nine different careers during their work lives. In addition to strong reading and writing skills, they will need to be literate in many other areas to thrive in a global, knowledge-driven world.

*Before students can learn those new digital age skills, their teachers must master the skills themselves. Research confirms that high quality systemic and **ongoing professional development for teachers is the most effective way to improve student learning**, (Wenlinsky, 2000; Ferguson 1991; and Laine 1996).*

Coaching is the best professional development method for assuring that teachers apply new strategies (Edwards and Green 1997, Joyce and Showers 1980). *Consequently, MSD continues to train **16 master teachers to serve as Digital Age Literacy Coaches.** Simultaneously, the district is training teacher leaders, including former literacy coaches who have now returned to the classroom, alongside coaches as another strategy for **broad-based implementation and sustainability.***

*To support the ongoing learning for teachers and students, the district is reinventing itself as a professional learning community. Both administrators and teachers participate in a reflective and collaborative learning community focused on shared mission, values, vision, collective inquiry, collaborative teams, action orientation and continuous improvement. The district recognizes that functioning as **a professional learning community is key to institutionalizing** the initial work of the Digital Age Literacy Initiative.*

Also noted in the study of this district was the recognition of the systematic shifts required of leadership and school culture in order to institute reform of the depth and magnitude necessary to bring the district into the 21st Century Educational Mindset - and the time it takes for such shifts.

Maderia City Schools – 21st Century Inventory

In order to evaluate Madeira City School's current state of preparedness for 21st century education, the following two activities were undertaken with Madeira schools staff and administration.

21st Century Skills/Support Systems Assessment (Appendix VIII)

This assessment form was used in discussions with principals and 4-5 teachers at each of the schools (Madeira Elementary, Madeira Middle, and Madeira High School). The form includes a listing of the 21st Century Skills and Support Systems identified by the Partnership for 21st Century Skills. We asked each teacher or administrator to assign a rating from 1 to 3 to each skill and support system, assessing Madeira's level of integration of 21st century skills.

> **1 - Early Stage.** You have started to consider what changes need to be made to incorporate 21st Century Skills into your school. You understand the role of students, teachers, administration and partners, and are working to increase the involvement of each stakeholder.
>
> **2 - Transitional Stage.** You have already implemented a number of important changes to integrate 21st Century Skills into your school. The roles of management and leadership have started to change and you have actively created new partnerships to continue such change.
>
> **3 - 21st Century.** You have successfully integrated 21st Century Skills into your school and are working towards continual implementation. The roles of all stakeholders are constantly changing to meet local and ongoing needs of your school. You have a vision for your school and students, teachers, administrators, parents and the community work towards this common vision.

The assessment form also included a space for examples to help inventory some of the current activities taking place in Madeira schools that illustrate the integration of 21st century skills.

Madeira Schools 21st Century Skills Assessment Survey (Appendix IX)

This survey was sent electronically to all Madeira staff and consisted of open ended questions asking for responses regarding the current strengths, weaknesses, opportunities, and perceived threats to Madeira schools relative to 21st Century Skills. A final question asked for "your vision of Madeira schools in the 21st century".

Findings

Discussions with Teachers/Administrators and Assessment Form

- There are activities taking place at each of the schools that clearly demonstrate integration of 21st Century Skills. See Appendix VIII for a partial inventory.
- The self-assessment of the level of integration of 21st Century Skills shows that the elementary school is further along than Madeira Middle school. The high school assessments show that they are in the early stages of implementation of 21st Century Skills. See Appendix VIII for a chart of the ratings received from the schools. Note that so few ratings responses were received that the results cannot be viewed with any scientific significance.
- Teaching staff feel that they are supported and given the freedom to explore new teaching techniques and/or professional development.
- Staff feel they need more professional development and collaboration time (MMS and MHS predominantly).
- The elementary grade levels are naturally more conducive to 21st Century Skill concepts with one teacher covering most subjects. There is much collaboration at each grade level. The middle school continues with team teaching and incorporates a flexible schedule. The high school schedule and curriculum is very inflexible and presents the most challenge for integration of 21st Century Skills.

Strengths, Weaknesses, Opportunities, Threats (SWOT) Survey

Thirty six questionnaires were returned with an equal sampling from each of the three schools. Several themes occurred.

Strengths

- Discussion related to 21st century skills is gaining momentum
- Many staff have embraced 21st century skills acquisition
- Most teachers remain open minded
- We have a dedicated, forward thinking staff
- Students have mastered basic skills and can move to higher skills through critical thinking
- Students are already tech savvy- they power down when they get to school
- Administrators support change and progressive educational strategy
- We have a top notch tech department with an excellent work order system in place and excellent trouble shooting
- Many strong curriculum areas
- Parents support progressive educational strategies
- Because of our small size we have a personalized setting for learning- students don't get lost in the system

Weaknesses

- Much of our student learning is teacher directed
- We lack a media specialist to advise staff on new resources
- Non-technical staff members need to be convinced that the time needed to learn new technologies is worthwhile.
- Incorporating and believing in the value of topics such as cultural awareness, media literacy, economics, communication, collaboration, problem solving and resourcefulness
- Teachers who have access to technology and don't take advantage
- It is a struggle to teach students to be self motivated
- 25% stated there is not enough planning/professional development time
- Students are overly dependent on teachers to show them "how to learn"
- Students are not motivated to do outstanding work or to reach their potential
- Accepted levels for As and Bs are too low
- Students lack communication skills
- Lack of computer access for every student
- We are not teaching specific computer skills
- We do not use parents and community resources effectively
- Curriculum is limited by our small size

Opportunities

- We can be leaders in the forefront of educational reform

- Students are eager to embrace technology and collaboration
- Students want expanded job skills
- A high percentage of capable learners gives us the potential to make many adjustments and adaptations
- Professional development that goes beyond assessment and gives teachers time to collaborate
- Students have so many personal resources- we can find a way to allow personal laptops, control internet access, etc
- We can utilize technologies students already use for means other than entertainment and social networking
- Many curriculum opportunities
- Reach out to other schools in the area, the country, the world
- We have so many resources we don't use!
- Parent education
- Business collaboration

Threats

- Teachers who see this initiative as just one more thing to do
- Lost opportunities due to untrained staff
- Lack of time- for training, planning, collaboration and dedication to change
- Lack of funding
- Overemphasis on standardized testing
- More rigor and critical thinking are threatening to students and parents
- Preoccupation with academic standing and GPA
- Student perception of creative classes
- Length of school year
- Tradition! The philosophy that "if it is not broken, don't fix it."

Vision Statements

- Dynamic classrooms where student learning is initiated with dynamic teaching and learning that continues on a global basis with good technological support
- Classrooms that are connected outside the community. Technology in use for real world applications. Students communicating with each other, relating what they are learning and how it impacts their lives. Having a culture of self reliance, care and understanding for different points of view
- Students who are confident, resourceful, globally aware, curious and ready to problem solve
- This is just another initiative that will be pushed aside three years from now
- I am confident that Madeira will continue to be a school district with vision and foresight as we proceed deeper into the 21st century. We will continue to attract families who value education. We will continue to have administrators and educators who support outcomes that benefit students. As a teacher, my goal is to continue to be an advocate for young scholars and their successes, adapting my teaching methods and strategies for student interests as well as connections to the real world.
- A school system that keeps up with the times in terms of preparing students for a changing world, but one that retains the small town advantages that make it special.
- Our kids must learn more, learn it better, be able to present the learning better and make application of their learning in a real world context. This will not happen in a 180 day, 8-3 school day, brick and mortar environment. School must be "bigger" (worldwide), longer (all year), and more inclusive (outside our campus). School is and will be much more a part of our lives over a long period of time. The rigor in our schools in the years ahead must be much greater than we have now, but patiently greater. Our schools (US schools) are time driven rather than master driven or skills driven.

Community Education – The Urgent Need for 21st Century Skills

The growing demand for 21st Century skills has changed discussion about what should be taught in school. The evidence is pretty compelling that if we do not give students these skills, they will be less than competitive in the global economy. Since Madeira does a good job of preparing students for college, how do we educate our community about the urgent need for 21st Century skills? How do we educate parents about the need to change our education system? With this change process underway in many communities, there are numerous resources available to help accomplish this goal. Re-inventing the wheel is not necessary. The benefits of using outside resources / experts will help provide substantiation for the real need for 21st Century skills in Maderia City Schools.

A calendar of events needs to be created and implemented for the 2009 - 2010 school year that will detail meetings, educational sessions, and webinars on the urgent need for our district to move toward a 21st Century Education System.

The Partnership for 21st Century Skills in conjunction with the KnowledgeWorks Foundation (which is located in Cincinnati) has the following presentations available for use by schools and communities.

1. **Preparing Every Child for the 21st Century** - General overview of why 21st Century Skills are so important, what 21st Century Skills are, and how they differ from traditionally taught skills.

2. **Beyond the Three Rs – Voter Attitudes toward 21st Century Skills –** explanation of how the country as a group views the need for 21st Century skills and why our current educational system is not meeting the needs of our children. Also, it would explain how these 21st Century skills are critical to US competitiveness.

3. **21st Century Skills, Education & Competitiveness** – why we need to act now, what we need to do now and a shared vision of what the 21st Century Education System would look like.

Educational print materials and online video productions (which have already been developed) such as "Principals of a 21st Century School" and "Traditional Schools vs. 21st Century Schools" are available for distribution to parents, businesses, and community members via print and electronic media. It is recommended that these education materials be made available and presented on a continual basis to educate and reinforce, and to have the community embrace the need and willingness for change.

Conclusions and Recommendations

Conclusions

- From the literature and "new tech" schools, the primary focus of change needs to occur at the high school level.
- The most important element for success is change on the teacher's part. Teachers have to come out of their comfort zone and learn new subjects – teachers virtually become students.
- There needs to be commitment from the community, parents, administrators, and teachers for meaningful change.
- Teachers must be continuously trained in 21st century skill techniques and should work collaboratively in this direction.
- Madeira City Schools is on the verge of embarking on an educational system that will create real change and help prepare our students to compete in a global economy and prepare them to better citizens in the 21st Century.

Recommendations

1. The Madeira City School Board needs to embrace what a 21st Century School looks like. The Board and key stakeholders should plan to visit The New Tech High Schools and The Metropolitan School District of Lawrence Township (both in Indiana) by the end of May 2009. KnowledgeWorks Foundation can be our liaison to assist with planning and interface for these visits.

2. The Madeira School District should begin communicating the need for a 21st Century Skills model. This should begin in the 2009-2010 school year. The communication plan should utilize the presentations made available from KnowledgeWorks Foundation and the Partnership for 21st Century Skills and enlist outside experts to present the information.

3. Maderia City Schools should begin to identify alternative funding sources outside the traditional levy based system to supply funding for 21st Century School development.

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New Technology Foundation. March 29, 2008. http://www.newtechfoundation.org

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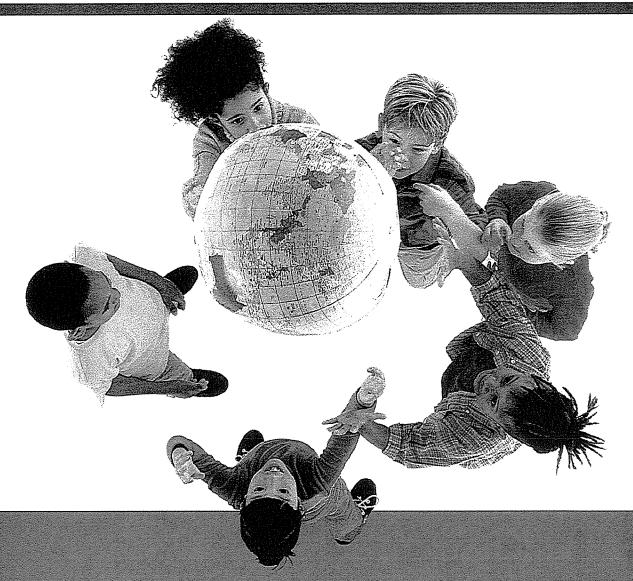
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"21st Century Skills, Education & Competitiveness"
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"Beyond the Three Rs – Voter Attitudes toward 21st Century Skills"
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"Info on the New Technology High School 21st Century Learning Model"
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   Metropolitan District of Lawrence Township. 2009. http://www.ltschools.org

Appendix I

21st Century Skills, Education & Competitiveness
A Resource and Policy Guide
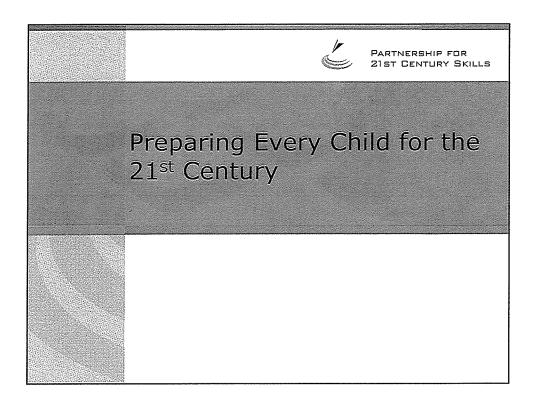
21st Century Skills, Education & Competitiveness

A RESOURCE AND POLICY GUIDE

PARTNERSHIP FOR
21st CENTURY SKILLS

Appendix II

Preparing Every Child
for the 21st Century

Preparing Every Child for the 21st Century

Overview

- Who is the Partnership?
- Why are 21st Century Skills so important?
- What is the Framework for 21st Century Skills?
- State initiatives

Appendix III

Beyond the Three Rs
Voter Attitudes Toward
21st Century Skills

Beyond the Three Rs

Voter Attitudes toward 21st Century Skills

PARTNERSHIP FOR
21ST CENTURY SKILLS

Appendix IV

New Technology High School – Napa

New Technology Foundation

21st Century Learning

Info on the New Technology High School

Principals of the 21st Century School

New Technology High School Postsecondary Student Success Study

Talking Points for Presentation on the New Tech Model and Foundation

PeBL – Collaborative Learning Environment

NEW TECHNOLOGY FOUNDATION

Enhancing the educational opportunities for youth in Napa County, California, and the U.S.

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Vision

Enhancing the educational opportunities for youth in Napa County, California, and the U.S.

Mission

New Tech's mission is to re-invent teaching and learning for the 21st Century by offering a proven model and a fully integrated suite of tools designed to facilitate the creation and management of a relevant and engaging 21st Century education.

Click here to view Napa New Technology High School website.

SC21 NAPA
21ST CENTURY CLASSROOMS

Click here to learn more...

Our Story

New Technology Foundation (NTF)™ was established in 1999 as a 501(c)(3) non-profit organization working to achieve national education reform with schools that desire to model the Napa New Technology High School™.

Read more...

New Book recently released from NTF Network School, L.A. School of Global Studies

ANGELENOS

Ángeleños: A Bilingual Collection of Poetry and Prose written by students of downtown Los Angeles

The students of Los Angeles School of Global Studies worked on this project throughout the year in their bilingual Spanish-English class, and they did a great job! All profits go directly to a scholarship fund for L.A. School of Global Studies students.

published by Milligan Books, Los Angeles, CA
(June, 2008)

NTF Initiatives

News

November 2008
Measuring Skills for the 21st Century
Education Sector Reports

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August 2008
At School, Technology Starts to Turn a Corner
The New York Times, 8/17/08

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"Small Schools Project" segment

"Learning Through Projects" segment from the ASCD series,"Teaching the Adolescent Brain"

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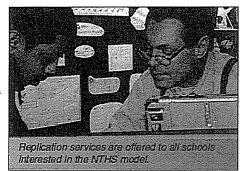
School Development Services

New Technology Foundation (NTF) offers school development services to schools interested in the New Technology High School (NTHS) model. Work began in 2000 under grants awarded by the Bill & Melinda Gates Foundation to create a Network of New Technology High Schools. Each of the schools is modeled on the Napa Valley Unified School District's nationally acclaimed demonstration school - New Technology High School.

Replication services are offered to all schools interested in the NTHS model.

All school development sites receive the following services from NTF :

- Access to use PeBL Collaborative Learning Environment
- A School Development Package that includes materials specific to planning for:
    - Facilities
    - School program
    - Curriculum
    - Staffing
    - Technology
    - Professional development
    - Student recruitment
    - Training
    - Community Relationships/Partnerships
    - Finance
    - District relations
- PBL Library
    - PBL units by course and grade
- School Management Library with resources for:
    - Staff recruitment, evaluation, and training
    - Student recruitment, orientation, and training
    - Creating partnerships
    - Master calendar and schedule
    - Counseling and college planning
    - Creating a culture of trust and responsibility
    - Technology and technology support
    - Creating and maintaining school Web site
    - Community relations
    - Policies and procedures
    - Curriculum resources
        - School-wide learning outcomes
        - Evaluation tools
        - Assessment tools
        - Digital agenda and journal templates
        - Digital professional portfolio
        - Senior projects
        - Technology Training
        - Internships
- Membership in the NTHS Network.
    Member sites have access to all PBL units and all tools developed by NTHS Network schools, as well as training and technology support. They will have the opportunity to collaborate, to share information, tactics, success stories and general support to the continued success of this innovative form of education.

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Replication services are offered to all schools interested in the NTHS model.

2008 Startups:
- New Tech High @ Zion-Benton East, Zion, IL
- Columbus Signature Academy, Columbus, IN
- Bloomington New Tech High School, Bloomington, IN
- Southeast Raleigh Magnet High School, Raleigh, NC
- New Tech High School at Coppell High School, Coppell, TX
- North Daviess 21st Century Jr/Sr High School, Elnora, IN
- New Tech New Orleans@Joseph S. Clark High School, New Orleans, LA

2007 Startups:
- EagleRidge High School, Klamath Falls, OR
- Tech Valley High School, Albany, NY
- Algiers Technology Academy, New Orleans, LA
- Anson New Technology High School, Wadesboro, NC
- Hillside New Tech High School, Durham, NC
- Warren County New Tech High School, Warrenton, NC
- Manor New Technology High School, Manor, TX
- Math, Engineering, Technology, and Science Academy (METSA), Carrollton, TX
- New Tech Academy at Arsenal, Indianapolis, IN
- New Tech School of IDEAS, Decatur, IN
- Zebra New Tech @ Rochester Community H.S. , Rochester, IN

2006 Startups:
- Arleta High School of Science, Math and Related Technologies (S.M.A.R.T), Arleta, CA
- Los Angeles School for Global Studies, Los Angeles, CA
- Jordan New Technology High School , Los Angeles, CA
- Student Empowerment Academy at Jefferson High School, Los Angeles, CA
- CamTech High School, Camden, NC
- New Technology High School at Garinger, Charlotte, NC
- Cherokee New Technology High School , Cherokee, NC
- Information Technology High School , Pembroke, NC
- Scotland School of Math, Science and Technology, Laurinburg, NC
- East Wake School of Integrated Technology, Wendell, NC
- North Eugene School of IDEAS, Eugene, OR
- Akins New Technology High School , Austin, TX

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2005 Startups:	⋈ Welby New Technology High School , Denver, CO
	⋈ Patrick F. Taylor Science & Technology Academy (Jefferson Parish Public Schools), Harahan, LA
	⋈ Little Village Infinity Math, Science and Technology High School (Chicago Public Schools), Chicago, IL
2004 Startups:	⋈ Leonardo DaVinci High School (Davis JUSD), Davis, CA
	⋈ Castlemont Business & Information Technology School (Oakland USD), Oakland, CA
	⋈ BizTech High School (Portland Public Schools), Portland, OR
	⋈ Highland Tech High (Anchorage School District), Anchorage, AK
	⋈ New Orleans New Technology High School (New Orleans Public Schools), New Orleans, LA
2003 Startups:	⋈ Sacramento New Technology High School (Sacramento City USD), Sacramento, CA
	⋈ Marin School of Arts and Technology (Envision Schools), Novato, CA
2002 Startups:	⋈ Anderson New Technology High School (Anderson UHSD), Anderson, CA
	⋈ Mare Island Technology Academy, Vallejo, CA
	⋈ Technology High School (Cotati-Rohnert Park USD), Rohnert Park, CA
Model School (1996):	⋈ Napa New Technology High School (Napa Valley USD), Napa CA
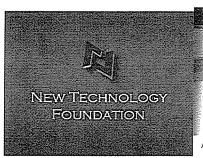
Additional communities are in various stages of discussion with NTF to secure NTF's services and products to replicate the NTHS model. Interested districts/parties are urged to fully understand the NTHS Commitment Criteria and begin a formal planning process. Successful plans result in further discussions between the district and NTF. Once NTF has selected a site to begin the school development process NTF staff begin actively working with the school staff to bring a NTHS model school to life in their community.

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NTHS Network of Schools

The NTHS Network is currently comprised of 40 schools across the United States. For further information on current sites, click on each school listed below.

RESOURCES FOR CURRENT NTHS NETWORK - Click here

The small school size of the New Tech Model allows teachers to provide one-to-one help to students.

Northern California

- New Technology High School, Napa
- Anderson New Technology High School, Anderson
- Sacramento New Technology High School, Sacramento
- Leonardo DaVinci High School, Davis
- Castlemont Business & Information Technology School, Oakland

Southern California

- Jordan New Technology High School, Los Angeles
- Student Empowerment Academy at Jefferson High School, Los Angeles
- Los Angeles School of Global Studies, Los Angeles

Colorado

- Welby New Technology High School, Denver

Illinois

- Infinity Math, Science and Technology High School, Chicago
- New Tech High @ Zion-Benton East, Zion

Indiana

- New Tech High Academy at Arsenal, Indianapolis
- New Tech School of IDEAS, Decatur

New York

- Tech Valley High School, Albany

North Carolina

- CAMTECH High School, Camden
- New Technology High School at Garinger, Charlotte
- Information Technology High School, Pembroke
- Cherokee New Technology High School, Cherokee
- Scotland High School of Math, Science and Technology, Laurinburg
- East Wake School of Integrated Technology, Wendell
- Anson New Technology High School, Wadesboro
- Hillside New Tech High School, Durham
- Warren New Tech High School, Warrenton
- Southeast Raleigh Magnet High School, Raleigh

Oregon

- BizTech High School, Portland
- North Eugene School of IDEAS, Eugene
- EagleRidge High, Klamath Falls

Texas

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Northern California

- New Technology
  High School, Napa
- Anderson New Technology
  High School , Anderson
- Sacramento New Technology High School,
  Sacramento
- Leonardo DaVinci
  High School, Davis
- Castlemont Business & Information
  Technology School, Oakland

Southern California

- Jordan New Technology
  High School, Los Angeles
- Student Empowerment Academy at
  Jefferson High School, Los Angeles
- Los Angeles School of Global Studies, Los
  Angeles

Colorado

- Welby New Technology High School, Denver

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- Infinity Math, Science and Technology High
  School, Chicago
- New Tech High @ Zion-Benton East, Zion

Indiana

- New Tech High Academy at Arsenal,
  Indianapolis
- New Tech School of IDEAS, Decatur
- Zebra New Tech @ Rochester Community
  High School, Rochester
- North Daviess 21st Century Jr./Sr. High
  School, Elnora
- Bloomington New Tech High, Bloomington
- Colulmbus Signature Academy, Columbus

Louisiana

- 21st Century Learning Academy @ Joseph
  S. Clark Senior High School, New Orleans
- Algiers Technology Academy, Algiers
- Patrick F. Taylor Science & Technology
  Academy, Jefferson
- St. Charles Satellite Center, Luling

New York

- Tech Valley High School, Albany

North Carolina

- CAMTECH High School,
  Camden
- New Technology High School at
  Garinger, Charlotte
- Information Technology High School,
  Pembroke
- Cherokee New Technology High School,
  Cherokee
- Scotland High School of Math, Science
  and Technology, Laurinburg
- East Wake School of Integrated
  Technology, Wendell
- Anson New Technology High School,
  Wadesboro
- Hillside New Tech High School, Durham
- Warren New Tech High School, Warrenton
- Southeast Raleigh Magnet High School,
  Raleigh

Oregon

- BizTech High School,
  Portland
- North Eugene School of IDEAS,
  Eugene
- EagleRidge High, Klamath Falls

Texas

- Akins New Technology High School Austin
- ⊛ Manor New Technology High School, Manor
- ⊛ Math, Engineering, Technology and Science
  Academy (METSA) at R. L. Turner High School,
  Carrollton
- New Tech High School at Coppell High School,
  Coppell

⊛ 21st Century Certified School:
The NTF 21st Century School
Certification process acknowledges
and celebrates the success of
schools within the New Tech
Network that have become excellent
examples of the New Tech school
model.

New Technology Foundation (NTF) aims to provide Napa New Technology High School's unique resources – standards-based online curriculum, assessment tools, electronic grade book and other data reporting tools, all organized in a unified technology platform – to schools and school districts across the country.

NTF created the New Technology High School (NTHS) Network to deliver these resources to members of the NTF New Technology High School Network.
The NTHS Network fulfills three roles:

- Deliver the New Tech High (NTH) Learning System™ to new schools opening under the School Development Project. The NTH Learning System™ is New Technology High School's classroom-developed instructional methodology, which makes optimal use of a technology infrastructure similar to those found in a wide range of businesses large and small. It is designed to prepare students to excel in an information-based, technologically advanced society.

- Maintain a dynamic communications/collaboration environment linking teachers at participating schools, who are the developers of the project-based learning (PBL) curricula. Collaboration is a conspicuous part of the NTHS teaching environment. Finished PBL units are stored in the Learning System's Project Library, accessible to network members.

- Provide means to distribute the Learning System's resources to school districts that join the NTHS Network. These agreements may include complete NTFT school support to open new schools or access to specific components of the Learning System .

21ST CENTURY LEARNING
THE PRINCIPLES AND PRACTICES OF THE NEW TECH MODEL

1. **FOCUS ON 21ST CENTURY SKILLS AS WELL AS STATE CONTENT STANDARDS**
   Today's singular focus on state mandated content tests does not reflect the needs of either the student or society as a whole. A more balanced assessment system that includes 21st Century skills like collaboration, critical thinking, creativity, adaptability and communication is required if we are to prepare students to be successful in further academic and career paths.

2. **IMPLEMENTING STUDENT CENTERED, PROJECT AND PROBLEM-BASED LEARNING METHODOLOGY TO INCREASE RELEVANCE AND RIGOR**
   Humans only truly learn when they have a need to know. Traditional instruction methods are largely void of any context for learning and seldom ask the students to apply information to real world situations. By using standards-based projects, teachers can better contextualize the course content, students must apply what they have learned, and 21st Century Skills can better be infused into the instruction.

3. **COURSES AND LEARNING EXPERIENCES DESIGNED TO CONNECT LEARNING TO OTHER SUBJECT AREAS AND TO THE POST-HIGH SCHOOL WORLD**
   Team teaching and cross-curricular projects allow for more contextualized learning and act as lever for change of instructional practice. Students are required to take college classes and internships to see beyond high schools. Each student creates his/her own digital portfolio that tracks growth, demonstrates skills, and expresses individuality.

4. **INFUSION OF TECHNOLOGY AS A TOOL FOR COMMUNICATING, COLLABORATING AND LEARNING**
   Most educational uses of technology are simple updates to traditional school tasks. Students use word processors to write papers instead of typewriters, complete online work sheets and tests, or get remediation through simulations. In 21st Century Schools, computers are used to support the work that must be done -- much the same way as businesses use computers. The technology is used to communicate, collect and manipulate data, collaborate, and stay organized. Software is used as a lever for change in instruction and assessment.

5. **PARTNERSHIPS WITH COMMUNITY, HIGHER EDUCATION AND BUSINESS**
   The New Tech model sees itself as a hub of student activity, not as a one-stop shop for all student learning. No school can meet all the needs of each student and therefore must rely on the community at large to ensure each student's need is being addressed. An emphasis on real world learning requires schools to have partnerships. Internships require business partners to provide opportunities for students, community service projects require a close relationship with local organizations and resources, and college course requirements necessitate a strong collaboration with local higher education institutions. This blurring of the boundaries between high school and what comes next helps prepare students for their next step.

6. **CONTRIBUTING TO THE HIGH SCHOOL REFORM MOVEMENT**
   The business community helped initiate the creation of Napa New Tech High in response to their assessment that graduates from traditional education systems are poorly prepared for the modern world. Their hope was that New Tech would become a proven success and that others would emulate it's practices. New Tech has been hosting tours for educators since 1997 and now hosts over 600 visitors each year. It has also become a national model of education reform and has help more than 35 school districts bring the model to their communities.

7. **FIX THE CULTURE BY GETTING SMALL**
   Large comprehensive high schools are forced to make policies that can control a large number of mostly anonymous students. Smaller organizational units have an opportunity to build a more professional culture of trust, respect and responsibility. Discipline becomes based on relationships instead of on authority. This change in itself increases students' ownership of the culture and allows them to practice governing their own behavior.

Info on the New Technology High School 21st Century Learning Model

Napa New Technology High School (NTHS) opened in 1996 serving students in Grades 11-12 from two feeder high schools. Today the school serves 400 students in grades 9-12. Napa New Tech may be a remodeled elementary school facility, but it looks like a workplace, not a school.

New Tech students learn 21st Century Knowledge and Skills, are assessed on these skills, and master them for graduation. They do this through classes that are project-based and integrated. At New Tech, it's "Real Projects. Real World. Real Learning." New Tech schools have 1 to 1 computer to students environments, giving students the tools to do their work plus access to the NTH Learning System, an enabling technology platform for 21st century Learning that comprises the school's curriculum, standards, assessment tools, and reporting tools. New Tech High schools nationally share curriculum and assessments through the NTH Learning System.

The New Technology Foundation is a school development organization that supports the start-up and implementation of 21st Century Schools based on the New Technology High School model. The national Network of New Technology High Schools now comprises 42 schools. Thirteen schools opened 2002-2005 based on the NTHS model, 7 in Northern California, and one each in Portland (OR), Anchorage, New Orleans, Mapleton (CO), Chicago, and Jefferson Parish (LA). 12 New Technology High Schools opened in the Fall of 2006, including 6 in North Carolina, 1 in Texas, 4 in Los Angeles, and 1 in Oregon. Another 11 opened in August, 2007, including 3 in Indiana, 3 in North Carolina, 2 in Texas, 1 in New York, 1 in New Orleans, and 1 in Oregon. 9 of 11 of the 2007-8 start-ups are STEM-focused schools. See NTF School Development for list of schools. For more information about the New Tech High School model:

1. Napa New Tech High Web Site and New Technology Foundation web site.
The New Technology Foundation (NTF) provides ongoing support to New Technology High School and supports the development of new small schools based on the NTHS model.

2. 21st Century Learning and Assessment
See "Assessing 21st Century Skills : The New Tech High School Model", a powerpoint presentation at the CoSN 12th Annual School Networking Conference, San Francisco, California, March 29, 2007.

3. ASCD Video -- Learning through Projects
See what 21st Century Learning looks like at Sacramento New Tech High School and Napa New Tech High School in an award winning video from ASCD, "Learning through Projects". Also see Fox7 News: Gov. Rick Perry Inaugurates Manor New Tech High-School and Tech Valley High School celebrates opening.

4. Videos and News Clips on the New Tech model.

5. NTHS Learning Outcomes
Students graduate New Technology High School (NTHS) mastering 21st Century Knowledge and Skills through 8 learning outcomes: content standards, collaboration, critical thinking, oral communication, written communication, career preparation, citizenship and ethics, and technology literacy. NTHS incorporates project-based learning to embed these learning outcomes in all projects and assessments.

6. NTH Learning System
The NTH Learning System comprises the school's curriculum, standards, assessment tools, and reporting tools, all online on a common technology platform. To see a Virtual Tour of the NTHS Learning System, go to http://www.newtechfoundation.org/initiatives_nth.html. You will need a broadband connection to download it, which will take 2-3 minutes. If you use Internet Explorer, it will download and play in your browser. If you use Navigator, save it to your hard drive and play using PowerPoint. Also see the case study of the NTHS Learning System from the 2006 Computerworld Honors Awards at http://www.cwhonors.org/case_studies/NewTechnologyFoundation.pdf.

7. The New Technology High School Model
A recent PowerPoint presentation about the New Technology High School model is posted at http://www.bobpearlman.org/modelschools.htm. You can click on the link and then either view it through your browser or else save the presentation to your own computer. It is 4 MB, so it will take a few minutes even on a high speed connection.

8. Student Digital Portfolio Pages, Current and Past
These portfolios of current students are continuously under construction. The best time to view them is in June near the end of the school year. The site also contains "Good, Fair and Poor Examples from the Past", from prior graduating classes.

9. National Network of New Tech High Schools

10. Results that Matter
New Technology High School has graduated eight classes since opening. Some of these students have now graduated college and entered the workforce. NTHS has had powerful results in both post-secondary success and in student achievement while in high school. See the Post Secondary Success Study and NTHS Results that Matter at http://www.newtechfoundation.org/press_research.html.

11. Articles about Napa New Technology High School
Go to http://www.newtechfoundation.org/press_articles.html. Key articles include:

- "At School, Technology Starts to Turn a Corner", Essay by Steve Lohr, NY Times, August 17, 2008
- "'Soft Skills' in Big Demand -- Interest in teaching students habits of mind for success in life is on the rise", By Catherine Gewertz, Education Week, June 12, 2007
- New Skills for a New Century (PDF), by Bob Pearlman, Edutopia, June 2006
- "21st Century Learning in Schools – A Case Study of New Technology High School in Napa, CA", by Bob Pearlman, published in New Directions for Youth Development, Summer 2006, Special Issue: The Case for Twenty-First Century Learning.
- Case Study of Napa New Technology High School (PDF), prepared by the International Center for Leadership in Education for the Model Schools Conference, Nashville, TN, June 26-28, 2005.
- High Tech Haven, Education Week, May 29-June 5, 2002.
  New Technology High School in California's Napa Valley provides at least one computer for every student. But that's not the only reason teenagers choose to attend this school.
- Project-Based Learning: a Primer, TECHNOLOGY & LEARNING — January 15, 2003
  When students are challenged to get to work solving real-life problems, the whole world becomes a classroom. This article features Napa New Technology High School. By Gwen Solomon.
- Reinventing the High School Experience, Educational Leadership, April 2002. By Bob Pearlman.

12. Tours and Study Tours
Go to http://www.newtechfoundation.org/visit_tours.html and click on "Tours" or "Institutes". One-day Institutes or Study Tours are scheduled in the 2008-9 school year:

- Napa NTHS: October 29, November 13, December 3, January 27, March 5, March 18, and April 1.
- Sacramento NTHS: November 6, November 18, February 10, February 26, March 12, April 16, and May 5.

Go to http://www.newtechfoundation.org/visit_tours_study.html to register.

New Technology High School
PRINCIPLES OF A 21st CENTURY SCHOOL

Educational reform has, for the most part, failed because it has been plagued with "piecemeal" efforts. Any sustainable and significant reinvention of high school education requires a new concept of what high schools are supposed to do and how they are supposed to do it. Below are some of the differences in design between traditional schools and New Technology High School.

	TRADITONAL PARADIGMS	21st CENTURY PARADIGMS
OVERARCHING DESIGN CONSTRUCT	**LARGE FACTORY MODEL** Implement the principles of assembly line manufacturing in education by standardizing curriculum, creating tracks, and minimize variability within a class in order to produce a large number of factory workers and a small number of students ready for post-secondary education.	**SMALL LEARNING COMMUNITY** Create a professional culture of trust, respect and responsibility by supporting relationships and community. Increasing flexibility and adaptability by keeping organization size small, giving it significant autonomy, integrating curriculum across subject areas, and making learning rigorous <u>and</u> relevant in order to produce a large number of students prepared for post-secondary education and high skill 21st century employment.
SCHOOL CULTURE	**ORDER THROUGH DISCIPLINE** School culture is the result of managing large numbers of students that have little ownership of the school's educational environment. Crowd control is managed by bells, hall passes and suspensions that control behavior.	**TRUST, RESPECT AND RESPONSIBILITY** School culture encourages student buy-in to the educational environment by empowering students and treating them as individuals in an adult, professional manner. No bells, no hall passes, students learn self-management.
CURRICULAR GOALS	**MEMORIZATION OF FACTS** Expose students to a wide variety of topics and concepts in compartmentalized, unrelated, short term experiences so that students can demonstrate mastery on content specific standardized tests with little regard to 21st century skills.	**EXPLORATORY LEARNING AND APPLICATION** In depth exploration of a smaller number of broad concepts and themes that can be related to other contexts and situations to ensure that students can apply what they have learned outside the classroom and after graduation. Infusion of 21st skills into the curriculum that all teachers are responsible for contributing to.
METHODS OF INSTRUCTION	**TEACHER LED LESSONS** Teachers create discrete daily lesson plans that tend to use the lower half of Bloom's Taxonomy critical thinking chart. Students tend to work alone using the text book or teacher provided materials as their primary resource.	**STUDENTS WORKING AS A TEAM** Teachers create longer term projects designed to engage students to become more active in their learning and that provide a context and application for the knowledge and skills acquired. Students work in teams to develop solutions to complex problems using a variety of resources and strategies. Teacher acts as a guide and coach to an externalized challenge.
USE OF TECHNOLOGY	**REMEDIATION AND INSTRUCTION** Students use technology infrequently to do some web research, type reports, and solve simple math equations. Some content delivery systems are used for remediation or instruction.	**COLLABORATION AND COMMUNICATION** One to one computer ratio gives every student access to workplace tools including school sponsored e-mail accounts, digital calendar and file storage space. Teachers use computers to post and share resources for student projects, assess student performance on 21st century skills, and collaborate with other teachers.

CORE DESIGN PRINCIPLES OF NEW TECHNOLOGY HIGH SCHOOLS

1. Maintain Student Population Under 400 to Maximize the Cultural Benefits of Being Small
2. Focus on 21st Century Skills as well as State Content Standards to Better Prepare Students for Their Futures
3. Implementing Student Centered, Project and Problem-Based Learning Methodology to Increase Relevance and Rigor
4. Courses and Requirements Designed to Connect Learning to Other Subject Areas and to the Post-Secondary World
5. Infusion of Technology as a Tool for Communicating, Collaborating and Learning
6. Personalized Student Experienced Formed with Community, Higher Education and Business Partners

New Technology
F O U N D A T I O N

Supporting Innovation in Education

PeBL™

Collaborative
Learning
Environment

New Technology Foundation
1040 Main Street, Suite 302 · Napa CA 94559
(707) 253-6951 · (707) 253-6993 FAX
www.newtechfoundation.org

New Technology Foundation is a 501(c)(3)

PeBL™

PeBL™ helps support teachers and schools that wish to create a more student-centered learning environment.

Developed originally by Napa NTHS teachers and perfected over the last 9 years by Napa New Technology Foundation to meet specific classroom, curricular and authentic assessment needs, **PeBL**™ is now used, refined and expanded upon by the NTHS Network of schools. **PeBL**™ is a unique suite of tools designed to specifically support a student centered, project and problem-based collaborative learning environment. This online and web-enabled learning system can now be replicated in high schools nationally.

FEATURES

- Built for Project and Problem Based Learning Environments
- Rubric Based Assessment Tools
- Skills Based Grade Portal to Support Authentic Assessment
- Home Access for Students and Parents
- On-line Homework and Journal Submissions
- On-line Discussion Groups to Facilitate Collaboration
- Curriculum Organization
- Curriculum Sharing
- Internship Management
- Parent Volunteer Management
- Email Support
- Personal Calendaring
- Course Calendaring
- School Calendaring

CURRICULUM DEVELOPMENT & SHARING

PBL Project Briefcase

Organizing student materials and resources for complex standards-based project-based curriculum units is a significant challenge. The Project Briefcase is a digital library that holds the teacher-created documents, web links, evaluation rubrics, and scaffolding activities that the students use for each unit. All documents are immediately and automatically published to the web for access anywhere there is an internet connection. The Briefcase also serves as an important tool for capturing and sharing curriculum.

PBL Project Library

The Project Library is a collection of projects developed in the classroom by teachers that can be downloaded and edited. It is important that teachers are supported with projects that have been successful in the classroom while they learn and perfect the methodology of project based learning.

RESULTS

Transformation tools replace the textbook as the primary driver of curriculum with an environment that supports meaningful, engaging projects that are centered on the student.

COMMUNICATION & COLLABORATION

Course Calendar

Project based learning environments are more dynamic than traditional instructor-center classrooms. The Course Calendar allows teachers to post classroom activities links to the entire project each day of the week so that students are aware of the entire project's tasks to be completed.

Digital Journals

Monitoring student learning in a PBL environment can be difficult for teachers not accustomed to project management. The Digital Journal provides an easy way for teachers to assure that students are on course and understanding the content. This tool can also be used as an inbox for homework and other assignments.

Discussion Forums

Teachers can create and manage discussion forums around any number of topics. Reading clubs, political parties, and student government can benefit from having an on-line site to share ideas and information.

Staff Agenda and Discussion

The time available for staff to collaborate and make discussion is very limited. This tool is used to develop a positive staff culture where meeting agendas and topics are posted digitally to get the conversation started.

AUTHENTIC ASSESSMENT

GradePortal™

The **GradePortal** reinforces authentic assessment practices by allowing teachers to easily record separate skill evaluations for each assignment. Content, collaboration, work ethic and other 21st century performance data on the skill categories are displayed separately, allowing for quick identification of a student's strengths and weaknesses.

Real-time Authentic Evaluation

The Evaluation Tool digitally creates a rubric and collects student performance data over time. This is especially useful for school-wide assessments such as presentations, writing assessments or critical thinking.

Peer Evaluation and Feedback Tool

Like the Evaluation Tool above, the Peer Evaluation and Feedback Tool collects multiple evaluations for an event and creates averaged reports for teachers and students. This is perfect for allowing student feedback on collaboration skills during group tasks.

Digital Portfolio

As the capstone for student learning, the web-based Digital Portfolio is student managed, highlighting each student's success at mastering the school's learning outcomes, and allowing for a much deeper presentation of student

Appendix V

Knowledge Works and New Technology Foundations
Join Forces to Transform Approach to High School
Education in the US

March 9, 2009

Business Wire
A Berkshire Hathaway Company

KnowledgeWorks
Foundation

March 09, 2009 05:22 PM Eastern Daylight Time

KnowledgeWorks and New Technology Foundations Join Forces to Transform Approach to High School Education in the U.S.

KnowledgeWorks Foundation Commits $10 Million and Expertise over Four Years to Support Expansion of Promising New Tech High Schools

Former AOL CEO Barry Schuler to Head National New Tech Board

INDIANAPOLIS--(BUSINESS WIRE)--KnowledgeWorks Foundation, a national public education philanthropy, announced today a strategic partnership with New Technology Foundation (New Tech), an organization that has pioneered an approach to collaborative, technology-based learning and teaching designed to give students the knowledge and skills they need to compete in the Information Age. Barry Schuler, former CEO of AOL, was appointed as Chairman of the Board of New Tech Foundation.

"Our primary objective at KnowledgeWorks is to drive innovation in public education, and we believe that New Tech is the best-in-class, most highly-scalable approach to learning in the 21st century that we have seen," said Chad Wick, CEO of KnowledgeWorks.

"We're thrilled to have KnowledgeWorks and Barry on board to help us rapidly grow the New Tech network," said Susan Schilling, CEO of New Technology Foundation. "Developing our nation's next set of leaders who come into adulthood with the ability to find and analyze information, solve problems, communicate solutions, and implement them has never been of greater importance."

This announcement was made together with Governor Mitch Daniels in Indiana (see video), where six New Tech schools currently operate and more than 22 schools are working toward implementation for 2009 and beyond. Indiana's successful work with New Tech high schools in partnership with the Center of Excellence in Leadership of Learning at the University of Indianapolis, business and economic leaders, and community stakeholders has become a strong model for linking high school education to economic development and was a key driver in KnowledgeWorks' decision to invest in New Tech.

As part of this partnership, KnowledgeWorks will provide up to $10 million to New Tech over a four year period, along with operational guidance and strategic expertise, to help develop the infrastructure necessary to support the rapidly growing network of New Tech schools. The management teams have already begun working together over the past nine months, with a focus on operations and further developing New Tech's technology platform.

Barry Schuler, former CEO of America Online, known for leading the AOL team that simplified the online service provider's user interface, making it possible for millions of consumers to gain easy access to the Internet, will bring a vast amount of technology management experience to his position as Chairman of the Board.

New Tech Schools Transform Traditional Approach to High School Education

New Tech High Schools focus on project-based learning, integrated use of technology in the classroom, and fostering a strong culture of trust, respect, and responsibility. Working within state standards, New Tech's projects are initiated and completed collaboratively by groups of students and then student work is stored in digital portfolios. Students' grades are then based on a multi-faceted combination of content, oral and written communication, teamwork, critical thinking, and work ethic. Upon graduation, students understand their role on a team, how to identify and solve problems and are fully able to take responsibility for their own learning and adapt to a new environment.

"New Tech demonstrates that students will embrace learning when it is relevant, applied, and challenging and when they are

part of a learning community," explained Monica Martinez, Vice President of Education Strategy for KnowledgeWorks Foundation and interim COO for New Tech Foundation. "New Tech also demonstrates how teachers can be creative, personal, and innovative in the delivery of instruction while aligning projects and the curriculum to today's standards."

New Tech has quietly emerged as the most successfully-replicated approach to transforming high school education in the U.S. There currently are 39 public high schools in the New Tech network with over 8,500 students in 9 states, and another 13-15 schools expected to open by August 2009.

KnowledgeWorks Strengthens National Support of Innovation in High Schools

A key criterion in the decision to invest in New Tech is the degree to which they implement key parts of KnowledgeWorks' highly praised, "Map of Future Forces Affecting Education." Within the Map and the New Tech approach, teachers are re-envisioned as agents of learning — enabling and supporting learning processes and opportunities beyond direct instruction, learning is customized and personalized, and a media rich environment is an integral part of the learning process.

The decision to support high school education nationally builds on KnowledgeWorks success with Ohio high school initiatives, where its redesigned high schools have increased graduation rates in some of the most economically challenged districts in the state by over 30% since 2003. Although historically focused primarily on Ohio-based educational initiatives, KnowledgeWorks partnership with New Tech is a key step towards supporting and investing in more national educational initiatives.

Schuler, Former AOL CEO, Drawn to New Tech's "Real-World" Preparation

As a business leader in the United States, Schuler was drawn to the New Tech schools because they present students with "real world" problems and then organizes them into small working teams in large, open, technology-enabled classrooms.

"Gone are the days of assembly line education," explained Schuler. "The New Tech approach is exactly what increasingly competitive and global business leaders expect and demand in today's public schools."

KnowledgeWorks Foundation, www.kwfdn.org, incubates and accelerates promising educational innovations throughout the nation. With a focus on transforming the national education landscape from a world of schooling to a world of learning, the foundation employs education experts and enlists innovative partners to equip our students to contribute in a global society hungry for talent and knowledge.

New Technology Foundation, www.newtechfoundation.org, is a school development organization that supports the start-up and implementation of 21st century high schools. The National Network of New Technology High School Network currently comprises 39 schools across the county, including schools in North Carolina, Indiana, Texas, California, Louisiana, Oregon.

Photos/Multimedia Gallery Available: http://www.businesswire.com/cgi-bin/mmg.cgi?eid=5912586&lang=en

Contacts

KnowledgeWorks Foundation
Meredith Yacso, 513-929-1117
yacsom@kwfdn.org

Permalink: http://www.businesswire.com/news/home/20090309006211/en

Smart Multimedia Gallery

KnowledgeWorks
Foundation

◇ **Logo**

Appendix VI

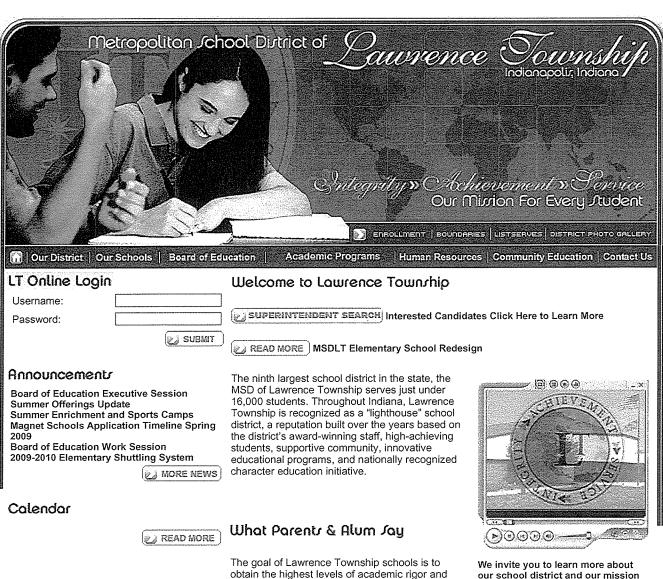Metropolitan School District of
Lawrence Township - Indianapolis, Indiana

About the District
Our Mission
Performance Results
Specialized Programs and Services
Special Initiatives
Elementary Redesign
Middle School Redesign
Curriculum and Standards
Educational Partners
District Profile

Introduction & Initiative Summary on 21st Century –
How Are We Doing?

MSDLT Instructional Audit – Spring 2008

Metropolitan School District of *Lawrence Township*
Indianapolis, Indiana

Integrity » Achievement » Service
Our Mission For Every Student

ENROLLMENT | BOUNDARIES | LISTSERVES | DISTRICT PHOTO GALLERY

Our District | Our Schools | Board of Education | Academic Programs | Human Resources | Community Education | Contact Us

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Announcements

Board of Education Executive Session
Summer Offerings Update
Summer Enrichment and Sports Camps
Magnet Schools Application Timeline Spring 2009
Board of Education Work Session
2009-2010 Elementary Shuttling System

MORE NEWS

Calendar

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**Visit the
LT School Foundation**

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Welcome to Lawrence Township

SUPERINTENDENT SEARCH | Interested Candidates Click Here to Learn More

READ MORE | MSDLT Elementary School Redesign

The ninth largest school district in the state, the MSD of Lawrence Township serves just under 16,000 students. Throughout Indiana, Lawrence Township is recognized as a "lighthouse" school district, a reputation built over the years based on the district's award-winning staff, high-achieving students, supportive community, innovative educational programs, and nationally recognized character education initiative.

What Parents & Alum Say

The goal of Lawrence Township schools is to obtain the highest levels of academic rigor and achievement for all. We are driven by excellence and proud that our schools offer multiple choices for students. We passionately believe that by providing rigorous, high-quality academic achievement in a diverse and enriching environment the Lawrence Township schools offer the best options for future employment and the global challenges ahead.

We invite you to learn more about our school district and our mission to empower all students with the knowledge, skills, compassion and integrity needed to contribute and succeed in a competitive global community.

READ MORE | Learn more about what people have to say about Lawrence Township schools and public education in the state of Indiana.
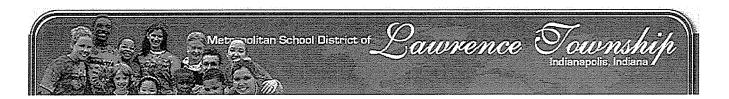
Community Matters

Located in the northeast corner of the greater Indianapolis area, Lawrence is a residential suburban community of 95,000+ and home to Fort Benjamin Harrison State Park and Geist Reservoir. With families from widely diverse cultural, racial, and socio-economic backgrounds, the Lawrence community values and embraces diversity as one of its greatest strengths.

Press Releases

Mar 05, 2009: Lawrence North High School recognized as one of seven Indiana high schools with one or more students in the graduating class of 2008 who earned a top composite score of 36 on the ACT college admissions and placement exam.

Mar 03, 2009: The Marion County Coordinators of Integrated Education (MCCIE) will host the third annual minority recruitment fair. This recruitment fair will be held Thursday, April 9, 2009, 3:00 to 7:00 p.m. at the Marriott Hotel, 7202 E. 21st Street, (21st and

Metropolitan School District of *Lawrence Township*
Indianapolis, Indiana

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About the District | Calendar and News | Curriculum and Standards | Special Initiatives | Educational Partners

Superintendent's Welcome | Mission Statement | Strategic Plan | Performance Results | Specialized Programs | District Profile | Community Profile

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Lawrence Township

7601 East 56th Street,
Indianapolis, Indiana 46226
Telephone: 317-423-8200
Email: **webmaster@msdlt.k12.in.us**
Fax: 317-543-3534

Our Mission (Who We Are)
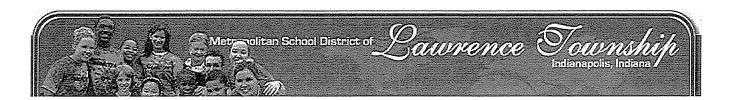
The mission of the Metropolitan School District of Lawrence Township is to empower all students with the knowledge, skills, compassion, and integrity needed to contribute and succeed as self-directed, life-long learners in a competitive global community.

Our Core Values (What We Believe)

We believe that:

- People are responsible for their choices.
- An environment of high expectations results in higher achievement.
- Great communities are built on mutual respect and dignity for all people.
- Integrity is essential to creating and sustaining positive relationships.
- Embracing diversity contributes to the strength of a community.
- The pursuit of learning as a life-long endeavor is essential to individual and organizational success.
- Cooperation, collaboration and communication are essential to success.

Metropolitan School District of *Lawrence Township*
Indianapolis, Indiana

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About the District | Calendar and News | Curriculum and Standards | Special Initiatives | Educational Partners

Character Education | Outdoor Challenge

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Special Initiatives

Elementary Redesign I Middle School Redesign

What's Coming

As we approach the end of the first decade of the twenty-first century the MSD of Lawrence Township is pursuing new options and opportunities for both students and parents. Faced with increasing parent expectations and student needs, our learners want more choices and options from a wider range of competing alternatives according to our 2007-08 Stakeholder Input polls.
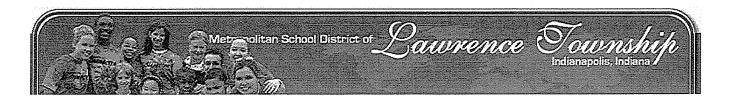
Competition is no stranger since our public school offerings have competed with private, parochial, charter and home school options for many years. Few systems, however, provide the quality and quantity of the multiple choices LT Schools provide for advanced placement, international baccalaureate, performing arts, extra curricular activities, gifted and talented options, special and exceptional education services, athletic experiences, multiple social events and so on. But there is even more for us to do. Several new options and opportunities should be available soon following two full years of study and planning by key leaders and staff using best practice models from around the country. Newly revised middle schools will open in 2009-10 around three task force recommendations. Our elementary schools are seeking ways to balance enrollments with choice options for learning and achievement that will provide an authentic learning focus at each site. The high schools are providing multiple learning options that sustain and support order and discipline yet create new choices for each student. Collaborative efforts of teachers, staff, students and parents will continue to assist in developing these strategic initiatives for our Lawrence Township families for multiple options and opportunities for all.

by Dr. Michael Copper, Superintendent, Summer 2008 *FOCUS on MSDLT*

For more information: **Dr. Jan Combs**, Assistant Superintendent for Achievement and Learning, 423-8200

About the District | Calendar and News | Curriculum and Standards | Special Initiatives | Educational Partners

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Special Initiatives

What's Coming | Middle School Redesign

Elementary Redesign

Redesigning Elementary School Opportunities in Lawrence Township

It is an exciting time in the MSD of Lawrence Township as the district embarks on two significant efforts at the elementary level: 1) To balance the enrollment of the district elementary schools so that they are all within 10% of what would be considered the average enrollment; and 2) The opportunity for choice for families at the elementary schools.

This effort began during the 2006-07 school year when a Balanced Enrollment Committee was formed with the goal of developing a plan to balance the enrollments of the elementary schools. The elementary schools range in size with enrollments from the low 400 student range to nearly 700 students in other schools. The committee consisted of parents, teachers and administrators from the district. It soon became clear that in addition to balancing enrollment, there was also a call for greater choice.

The EXCEL (Excellence through Community Education and Learning) was an extension of the work that was started by the Balanced Enrollment Committee. This process was an extensive gathering unique in scale of stakeholder input from thousands in the community. Stakeholders representing all areas of our community and all demographics were represented and their message was clear – they desired greater choice in deciding where their child attended school.

The administration and School Board will be working with the community throughout the 2008-09 school year to determine what that choice will look like as we balance the enrollments of the elementary schools.

Elementary Redesign Phases

Phase I – Balanced Enrollment Committee Work

- Oct. 06-April 07
- Major Themes: East/West district layout, expansion of choice options, balancing enrollments
- **View the Timeline of Balanced Enrollment and EXCEL Initiatives**

Phase II – EXCEL: Excellence Through Community Education & Learning
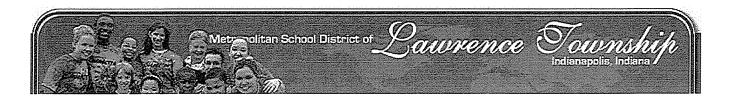
- May 07 – Dec. 07
- Phone survey, focus groups, online/paper surveys
- Major Themes: Choice, balanced schools, equal access, communication & other (academic rigor, behavioral expectations, cultural competency)
- **Read more about EXCEL**

Phase III –Design and Stakeholder Input

- Jan 08 – May 09
- Major Themes: Defining choice, balancing enrollment, elementary program emphasis
- Continued stakeholder input.

[READ MORE] Elementary Redesign Presentation Board of Education Meeting 2-23

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Special Initiatives

What's Coming | Elementary Redesign

Middle School Redesign

A Middle School Task Force was formed in the fall of 2007 with the charge to evaluate and assess our three middle schools. The Task Force consisting of teachers, parents, and administrators met throughout the 2006-07 school year. The focus of the group was on three distinct areas: 1) Improving academic achievement for our middle school students; 2) Improving the transitions for students from grades five to six and grades eight to nine; and 3) Evaluating the current schedule structure to determine whether it effectively meets the learning needs of middle school students.

The members of the Task Force reviewed national research on middle level education; evaluated the present condition of today's early adolescent; and visited and assessed a variety of successful middle school models. The Task Force members also established a timeline to address these three areas over the course of the 2008-09 school year. Specifically, members of the Task Force will examine and plan for implementation in the 2009-10 school year strategies for:

The Middle School Task Force, comprised of a variety of stakeholders, will identify current systemic areas of strength, and the necessary systemic areas of growth, related to student outcomes in MSDLT's middle school programming.

Rigor (Student Achievement)

The objective is to create an authentic middle school system that has high expectations for student success and achievement. The effective system would focus on rigor, student and staff accountability, and it will provide an engaging and challenging curriculum. The program will be data driven and include interventions and options that will ensure the academic, social, and emotional growth of all students.

Relevance (Design/Operations)

The objective is to creatively re-design the middle school schedule system into one that will be more meaningful, more supportive, and more engaging than the current model. It will be sustainable through the years with options based on the personalized needs of the students whom we serve.

Relationships (Student Services)

The objective is for the staff to be supportive and engaging while meeting the needs and interests of the students. The school community will provide a safe and fun learning environment while promoting high expectations for the students and staff. The student-centered services will responsive to student need and interest and will provide options and interventions that will create an atmosphere where the students and staff are accountable for learning and teaching.

Additional Documentation and Resources

- Middle School Task Force Document, *Their Future, Not Ours*
- Middle School Task Force Members
- Consensus Characteristics Of Middle School Students
- Pike Township Visitation PowerPoint
- Warren Township Visitation PowerPoint
- *Their Future, Not Ours* PowerPoint
- Middle School Task Force Options

Executive Summary
Lawrence Learning System

Sustainability and Continuous Improvement

Continuous improvement of an organization's practices and processes is at the heart of organizational performance improvement. The focus of MSDLT over the past two years is how to institutionalize the digital age literacy teaching and learning practices which address:

- Deprivatization of teaching practice
- Engagement of students in the learning process
- Data collection, analysis and use to guide instruction
- Establish the cultural values, beliefs and behaviors to support our commitment to all students learning essential curriculum at high levels
- Improving and emphasizing instructional leadership
- Establishing accountability for broad and effective deployment of the key initiatives
- Create an awareness of and response to individual student needs and interests

The Lawrence Learning System

High performing systems require three elements: research-based <u>Approaches</u>, broad and effective <u>Deployment</u> of those approaches, and analysis of student achievement and process improvement <u>Results</u>. Through the DALI grant, MSDLT was afforded the opportunity to design and deploy the content of digital age literacy. Trained literacy coaches in placed in each school and each coach worked with teachers in their assigned schools to learn and apply the best literacy instructional practices. During the implementation cycle, MSDLT created a vision that will transform our schools into schools of inquiry and authentic learning.

During 2007 and 2008, we reviewed our deployment processes and determined that improvement is required in order to achieve the level of performance we are committed to achieve. Broad and effective deployment of best practices is the most difficult aspect of continuous improvement.

With sustainability as our focus, the Digital Age Literacy initiative has been integrated into the Lawrence Learning System (LLS). LLS is designed to optimize understanding and communication among administrators and teachers about the relationship of the digital age literacy initiative with the other three district improvement initiatives: Cultural Competency, Response to Instruction and Project / Authentic Learning. The following is a visual aide that reflects that integration:

28

Township conducted this instructional audit with a random sample of teachers at all levels. The results are as follows.

MSDLT Instructional Audit – Spring 2008
DALI Data Collection for Teachers
98 Teacher Response
(6 Early Learning Center, 28 Elementary, 21 Middle School, 43 High School)

	Daily	Weekly	Monthly	Sometimes/ Never
1. Whole-group instruction	76	18	3	1
2. Cooperative learning	41	42	7	8
3. Individual Instruction by teacher	62	28	4	4
4. Working as partners	33	49	13	3
5. Guided practice	56	34	4	4
6. Teacher led oral reading	29	30	11	28
7. Whole class oral reading	17	32	17	32
8. Individual assigned silent reading	39	22	18	19
9. Small group oral reading	17	23	21	37
10. Partner reading	15	28	21	34
11. Read-aloud by teacher	42	20	18	18
12. Individual self selected reading	40	17	14	27
13. Teacher-guided discussion	57	31	7	3
14. Student-led discussion	19	33	22	24
15. Reading on level	43	26	10	19
16. Conferencing with students	22	42	21	13
17. Student self-correcting	32	39	16	11
18. Reading comprehension process	33	33	11	21
19. Comprehension workbooks	4	12	14	68
20. Prior knowledge	61	26	5	6
21. Graphic organizers	16	42	17	23
22. Enacting reading events	6	18	24	50
23. Skill-based help during reading	21	33	13	31
24. Readers using cues	35	27	5	31
25. Modeling met cognition	27	38	17	16
26. Presenting/assessing skills	26	43	22	8
27. Student engaged in drama/theater/role play	6	16	29	47
28. Content area reading strategies	19	42	19	18
29. Types of writing (shared to interactive writing)	32	33	22	11
30. Modeling writing process	21	34	24	19

|				
31. Writing process engagement	28	33	17	20
32. Conferencing with students about drafts	12	33	23	30
33. Modeling of editor's checklist	6	31	15	46
34. Writing for real (authentic)	19	24	30	25
35. Sharing writing with peers	13	26	30	29
36. Context learning	27	43	13	15
37. Using writing rubrics	7	21	42	28
38. Individualized spelling lists	6	17	7	68
39. Spelling in context of reading/writing	20	29	14	35
40. Use of media & technology for learning activities	35	39	20	4
41. Using writing software	6	16	19	57
42. Use of Internet...	17	40	29	12
43. Designing spreadsheets, databases, tables	4	13	20	61
44. Using webbing software	3	11	18	66
45. Real-world simulations	7	24	28	39
46. Use technology tools/resources for problem solving	13	24	33	28
47. Visual thinking tools used by students to express ideas	9	24	34	31
48. Students conducting evaluations	7	17	34	40
49. Creation of knowledge products	4	12	40	42
50. Setting/planning/reaching goals	19	25	26	28

Appendix VII
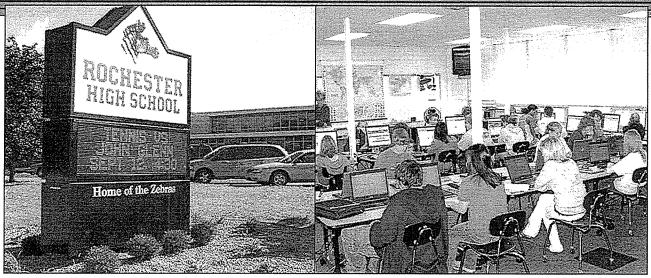
New Tech High – Education Reform Comes to Indiana Classrooms

New Technology High Schools in Indiana

CELL – Center of Excellence in Leadership of Learning

Gov. Mitch Daniels Pushing New Tech High Schools

Indiana Business and Civic Leaders Examine New Tech's Role in Statewide Education Successes

Rochester's zebras are changing their stripes as they lead the way on implementing New Tech technology into their curriculum.

New Tech High

Education Reform Comes to Indiana Classrooms
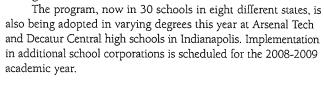
By Matt L. Ottinger

Rochester Community School Corporation Superintendent Debra Howe is looking toward the future, hoping the California-based New Tech High model will help transform her high school into an archetype for educational success in Indiana.

When the powers-that-be in the Rochester Community School Corporation (RCSC) decided to adopt the revolutionary, project-based New Tech High model, they were undoubtedly taking a risk. After all, implementing a new educational paradigm, retraining teachers and adopting new technology are initiatives that could cost several million dollars, according to RCSC Superintendent Debra Howe, Ph.D.

"Transforming our high school is an economic development issue," Howe says. "We're trying to retrofit a 1960s building for a 2007 world, so it's going to cost. ... Change in general is difficult, but everyone needs to be looking out for what's best for our kids."

The building Howe described is Rochester High School, which now hosts over 600 students. The New Tech model was implemented this year in just the freshman class, with its 166 students, and will be progressively used in each freshman class for the next four years, at which point the entire building will be a New Tech High School.

The program, now in 30 schools in eight different states, is also being adopted in varying degrees this year at Arsenal Tech and Decatur Central high schools in Indianapolis. Implementation in additional school corporations is scheduled for the 2008-2009 academic year.

What's so new about New Tech?

New Tech High originated in Napa, California in 1996. The idea was initiated by businesspeople in the community who had visions of a workforce trained in the ways of the New Economy — employees properly prepared for a world of advanced technology and the practicality of functioning in a business environment. New Tech utilizes project-based, group learning to generate discussion and problem-solving skills in the classroom, and the technology allows students to put their creations to the test.
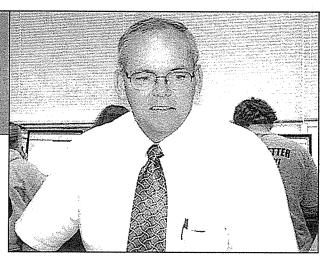
According to the New Tech Foundation's web site, "instead of plugging their knowledge into fill-in bubbles on Scantron sheets at finals time, students present tech-based projects about

the subject at hand. You won't find simple book reports at New Tech High – you're likely to see a detailed web site with original graphics and links to related sites, or a beautifully designed PowerPoint presentation combining digital photography and original text."

New Tech also consists of more college level courses, which Howe describes as giving students an important, early connection to higher education that they haven't had in the past.

Teachers become students

With New Tech, there is little room for fear of change or a reactionary attitude from teachers. Rochester High School teacher Dan McCarthy, a 28-year classroom veteran, is welcoming the new program with open arms – although he's not naïve to the challenges it presents.

"Teachers have to come out of their comfort zones," notes McCarthy, an English teacher who has had to expand his knowledge of geography in order to teach his new Global Perspectives class. "In a traditional class, there's a lot of quiet and it's mostly the teacher talking. But it's not really productive in terms of engagement."

To become acquainted with the new model, all affected educators in Indiana had to job shadow teachers in California, so it was a learning experience for more than just students. However, McCarthy concedes that students have also had to modify their thinking to a large degree.

"I think it's been a challenge, especially for our most talented students, to adopt a new way of thinking," he says. "But I think it also benefits them the most. I'd always felt guilty about holding back above average students. Teaching to tests like the ISTEP always put a cap on those kids, but now there are no limits."

McCarthy explains the practicality of New Tech as being a critical component.

"Students should never be asking why we're doing something in this program, because it's all real world scenarios," he offers. "There's a lot more rigor here, but it's more useful."

Group approach

According to McCarthy, some parents have been concerned that there is too much focus on group work. However, he noted that about 75% of the evaluations are on an individual basis, and students can even be fired from particular groups for not living up to their responsibilities. The challenge then becomes how to reintegrate those students into the system.

One project in McCarthy's class includes students drafting a real estate proposal and presentation to people who might consider relocating to the Rochester area, highlighting its demographic makeup, history and even relevant issues currently facing its county government. Meanwhile, just down the hall, biology teacher Amy Blackburn has her students developing a movie presentation on biodiversity and the water cycle. One movie from each class will be shown on the local cable channel.

Before each project, students draft personal contracts outlining their goals and contributions, and are evaluated according to how they live up to those agreements. Projects are also outlined on rubrics, which provide detail of every objective of every assignment.

Nate Basham, a 15-year-old freshman at Rochester High, welcomes the challenge of the New Tech model and sees a definite benefit.

"I like the business concepts," he says. "We have to find a lot of information, develop our computer skills and learn to present in front of people. We have to give presentations all the time."

Basham also describes how the longer-term projects could present a time management crisis if a student lacks in preparation.

"We have to keep up with rubrics in every class, which can be hard," he contends. "But I know this will help me a lot more than just reading right out of a book. The multiple projects make it harder to prepare, but it will help me learn time management skills. It's all very doable if you just try."

It's that ongoing effort that educators hope will keep students engaged over the long haul. McCarthy has already seen a benefit in this regard.

"One problem I had before was kids sleeping in class," McCarthy quips. "I've always taken that as an insult and a sign of complete withdrawal. Now, nobody has their head down."

In with the new

The New Tech model was first introduced in Indiana in November 2005 at a conference titled "Indiana's Future: Economic Development and the High School Connection." At the Indianapolis conference, governors from around the nation, as well as leaders from the United Kingdom and China, convened to discuss 26 new change models for American high schools.

Mke Simmons, president and CEO of T2 Systems, Inc. and TechPoint Foundation board chairman, speaks as part of a panel discussion on the implementation of New Tech and other technology-based learning initiatives.

After New Tech was chosen for selected Indiana schools, plans were put in place to implement the system. Aiding in this transition has been Nancy Sutton, senior fellow for state leadership development for the University of Indianapolis' Center for Excellence in Leadership of Learning (CELL) program. Sutton is former director of the Small High Schools network in Colorado and had worked on projects with the Bill & Melinda Gates Foundation, which has donated millions of dollars to New Tech High School.

"Rochester had a support system in the community to put this in place and there's a lot of national support, so it's a great fit," Sutton reports. "Implementing this is all about change management. That's something businesses understand, but schools don't always."

Sutton explains the transition has been a byproduct of public universities, schools and businesses working together. One such business organization that has had a hand in the New Tech revolution is TechPoint. Not only has the association offered its time and resources toward the New Tech conversion, the TechPoint Foundation invested $150,000 in July toward the new curriculum at Arsenal Tech.

At a "New Economy, New Rules" presentation in Indianapolis in September, TechPoint Foundation board chairman Mike Simmons discussed why the move is imperative to local schools.

"Our mission here is to bridge the digital divide," he told the assembled audience. "In this form of project-based learning, the class looks more like a lab than a traditional classroom."

Simmons also described the impression the students in Napa and Sacramento, California made on him when he traveled there for a New Tech site visit. "I was shocked at the professional maturity of the kids. I could see the pride they took in their classroom."

Simmons believes the true measure of success will not be as quantifiable as in the past, but will be gauged, at least in part, by enthusiasm.

"Instead of worrying about ISTEP scores going up a few points, a key indicator will be getting kids to want to go to school," he surmises. "In California, attendance and graduation rates have significantly increased."
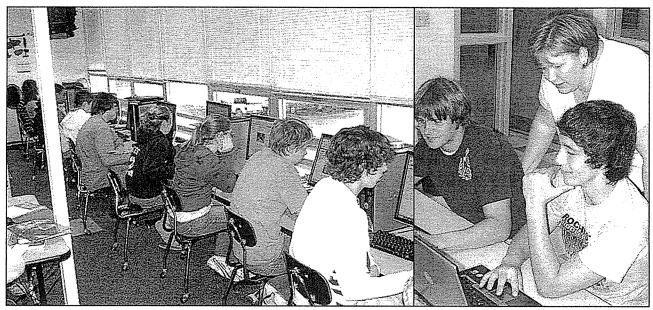
Business at hand

At the heart of the matter lies New Tech's perceived ability to enhance the business community by producing a more skilled and dynamic workforce. According to the Rochester school board, that was paramount in the decision to choose New Tech.

"We listened to what the Rochester area business community needed as characteristics in employees," says Donald Meyer, president of the Rochester Community School Corporation board. "Those needs turned out to be qualities and life skills that would assist students in school and in the decades following."

Perhaps it's those qualities that have motivated many Rochester businesses to partner with the school system and become actively involved in the paradigm shift.

"It is true that a whole lot of kids are already familiar with technology, but New Tech will expose more kids, to better technology, who otherwise wouldn't have access to it," details Alan Terrell, president of Rochester Telephone Company, Inc. "However, I think there's a good chance that collaborative problem solving will be more valuable than the technology involved. The abilities to communicate effectively, problem solve and deal with conflict resolution are most important in business because that's exactly what takes place every day."

Terrell explains that while his company has not had difficulty finding qualified staff since he has few vacant positions and the jobs are usually higher paying than the average, an uneducated workforce has been a concern in Rochester in the past.

Students remain focused on their computers while biology teacher Amy Blackburn, right, guides a New Tech project. Her students made movies on biodiversity, some of which were to be shown on a local cable channel.

The Rochester school corporation has partnered with state colleges and local businesses in efforts to develop connections through student internships, job shadowing and by raising money in the community. Howe describes her hope to raise $30,000 within the local community as a means to demonstrate local support when applying for grants.

These partnerships and exposure to businesses will likely prove critical, since the workforce in the Rochester area has shown a need for improved preparation. According to the 2000 census, 32% of 19 to 24-year-olds in Fulton County did not have a high school diploma, and only 4% had bachelor's degrees or higher.

At the September presentation, David Shane, president and CEO of LDI Ltd. in Indianapolis and a former senior advisor to Gov. Mitch Daniels on education issues, offered that New Tech will act as a preventative measure against perpetuating antiquated educational strategies as the business world evolves.

"The world still seeks capital, and technology is a changing world," he said. "There's a saying that if your job can be subjected to an algorithm, it probably will be in the near future."

Shane stated that nine out of 10 jobs disappear because of technology.

"What do we do with all the people who lose their jobs to machines?" he asked. "We have to teach people to run those machines."

Perhaps it will ultimately be the collective educational machine in Indiana that benefits most from this new model. Or maybe it won't live up to the billing, eventually prompting educators to revert back to a more traditional, rigid style of teaching in the future.

But if New Tech works as Howe, the Rochester school board and the entire community hope, and it eventually permeates Indiana's instructional landscape, one wonders if tie-dye shirts, fine wine and Reggie Miller may have to settle on becoming the next-best gifts California has ever introduced to the Hoosier state.

INFORMATION LINK

Resources: **Debra Howe, Rochester Community School Corporation, at (574) 223-2159**

Dan McCarthy, Rochester High School, at (574) 223-2176

Nancy Sutton, University of Indianapolis, at (317) 791-5912

New Tech High at www.newtechfoundation.org

New Technology High Schools in Indiana

Working in collaboration with the Indiana Department of Education and New Technology Foundation, and with funding from the National Governors Association Honor State Grant through the Indiana Governor's Office, CELL has been instrumental in providing support, technical assistance and necessary planning to school districts implementing the New Technology High School model and creating a network for school collaboration. CELL brings schools together for critical conversations about New Technology High and provides assistance and resources to school districts launching the model.

Indiana New Tech High Schools	
School	**Status**
New Tech High @ Arsenal Tech (Indianapolis Public Schools)	Opened Fall 2007
New Technology School of IDEAS (M.S.D. of Decatur Township)	Opened Fall 2007
Zebra New Tech High (Rochester Community Schools)	Opened Fall 2007
Columbus Signature Academy (Bartholomew Consolidated School Corporation)	Opened Fall 2008
Bloomington New Tech High (Monroe County Community School Corporation)	Opened Fall 2008
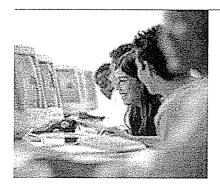
North Daviess Jr./Sr. High School	Opened Fall 2008
(North Daviess Community Schools)	

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NEW TECH HIGH

What is New Tech High?   Why New Tech High?   New Tech High in Indiana   News   Resources

Experience New Tech
Seeing is Believing

New Tech is a new way of schooling. Step into any classroom to see students actively and eagerly learning, teachers serving as both partners and guides, and technology used as a portal for limitless academic opportunities. Attend a study tour to experience New Tech firsthand. Indiana's New Tech schools host local study tours throughout the school year that are open to the public. CELL also hosts executive tours to New Tech's flagship schools in Napa and Sacramento, California, where visitors can meet with New Tech's national leaders and most established educators. Reservations are required for all study tours.

Executive Tours
Contact: Trish Wlodarczyk
      wlodarczykt@uindy.edu
      (317) 791-5708

Local Study Tours
New Tech High @ Arsenal Tech
Indianapolis, Indiana
Contact: Laura Dodds
      (317) 634-2423 x263
      laura@techpointfoundation.org

New Tech School of IDEAS
Indianapolis, Indiana
Contact: Tom Wachnicki
      (317) 856-5265
      twachnicki@msddecatur.k12.in.us

North Daviess 21st Century Jr/Sr High School
Elnora, Indiana
Contact: Todd Whitlock
      (812) 636-8000 x1500
      whitlock@ndaviess.k12.in.us

Zebra New Tech High
Rochester, Indiana
Contact: Theresa Shafer
      (574) 223-2159 x5010
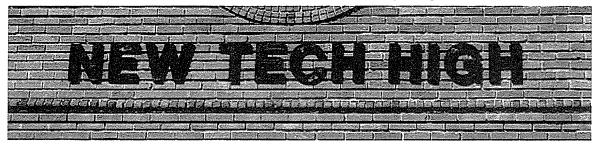   theresa.shafer@zebras.net

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For Interent Explorer users: This site is viewed best with **Internet Explorer 7.0**

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Appendix VIII

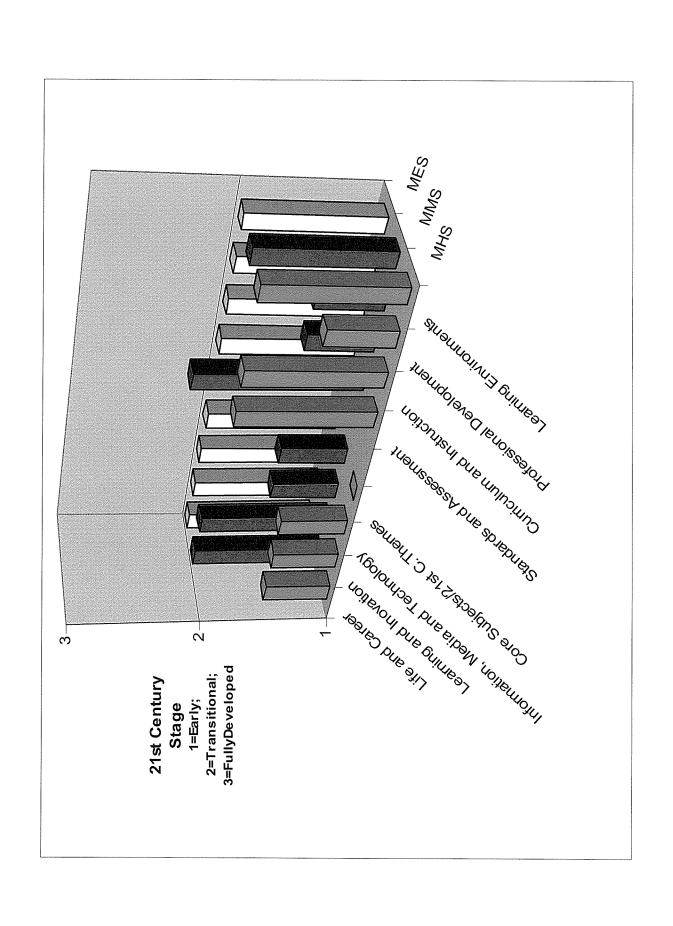## Madeira 21st Century Skills Assessment Form

Assessment Ratings Results Graph

Maderia Schools 21st Century Skills Summary and Partial Inventory

21ST CENTURY SKILLS	Assessment	Examples
Life and Career Skills Flexibility/ adaptability Initiative/self direction Social & cross cultural skills Productivity and Accountability Leadership and Responsibility		
Learning and Innovation Skills Creativity Critical thinking / problem solving Communication and collaboration		
Information Media and Technology Skills Information, Media, and Technology literacy		
Core Subjects and 21st Century Themes Global awareness Financial, economic, business and entrepreneurial literacy Civic & health literacy Interdisciplinary themes Relevance		
SUPPORT SYSTEMS		
Standards & Assessments		
Curriculum and Instruction		
Professional Development		
Learning Environments Facilities Technology infrastructure Scheduling School culture Leadership Community involvement Professional learning communities		

Assessment Ratings:

1 – Early Stage: You have started to consider what changes need to be made to incorporate 21st Century Skills into your school. You understand the role of students, teachers, administrators and partners, and are working to increase the involvement of each stakeholder.

2 – Transitional Stage: You have already implemented a number of important changes to integrate 21st Century Skills into your school. The roles of management and leadership have started to change and you have actively created new partnerships to continue such change.

3 – 21 Century: You have successfully integrated 21st Century Skills into your school and are working towards continual implementation. The roles of all stakeholders are constantly changing to meet local and ongoing needs of you school. You have a vision for your school and students, teachers, administrators, parents and the community work towards this common vision.

21st Century Stage
1=Early;
2=Transitional;
3=FullyDeveloped

MES
MMS
MHS

Learning Environments
Professional Development
Curriculum and Instruction
Standards and Assessment
Core Subjects/21st C. Themes
Learning, Media and Technology
Information, and Innovation
Life and Career

21st CENTURY SKILLS INVENTORY

Madeira High School

LIFE AND CAREER SKILLS	LEARNING AND INNOVATION SKILLS	INFORMATION MEDIA AND TECHNOLOGY SKILLS	CORE SUBJECTS AND 21 ST CENTURY THEMES
* Latin Club - opportunities for leadership, motivation of peers, planning, and creativity. * Honors Jr. English multi-genre project with much initiative and self-direction required * Entrepreneurship class * Online assessment system in mathematics requires flexibility and adaptability in students * Art students routinely engage in peer and self-evaluation of their work	* Lab work in science classes require group work and creativity. Students create the procedure to solve the problem and work collaboratively to write up findings in a formal lab format. * Math classes supplement textbook learning with problem sets from Phillips Exeter Academy which use word problems. Students employ multiple concepts from the course and can use different methods to solve the problems. * Sketch journal which accompanies each book read in sophomore English classes. * Sentence construction using Latin grammar topics requires critical thinking skills. * Students create their own math problems and applications in their math portfolios. * Freshman English students create an idea or product and present using PowerPoint. * Art students work together to prepare for and present a show displaying their work. * Freshman English students do a conspiracy theory project where they must investigate, collaborate, hypothesize and work to justify their conclusions. * Drama Club offered as an extracurricular activity at the high school.	* New laptops are used in the classrooms to find information much more easily than in the past. An example is using the laptops in a math class to find average monthly temperature data for different places around the world. (weatherbase.com) * Group projects using interactive media in Social Studies. * Video production and web design classes are offered. * SMART Boards and TI-Nspire calculators used in Math classes. TI-Navigator will be released in the fall. This system will allow students to share the mathematics they create in their calculator on the SMART Board. * Roman Army Project where students work in groups to produce multimedia presentations on topics such as armor, weapons, etc.	* Anatomy & physiology class curriculum includes scientific basis of healthy habits, causes of major diseases in each body system, use of health care diagnostic technology in lab (EKG, etc.), discussion of current/emerging research and issues in medicine including ethics. * Global awareness addressed through current event articles in Italy/Rome, trip to Italy to see Roman culture and global life. * Teaching comparative government to help students compare and contrast global governments. * Accounting & Entrepreneurship classes offer global views of the business world. * Interdisciplinary themes between Art & History. * Accounting class offered with students doing real life simulations and presentations on those simulations. * New courses offered next year - forensics, environmental science, math - theory of gaming. * Teachers work to find ways to connect the curriculum to students' lives to increase understanding by using relevancy.

Madeira Middle School

LIFE AND CAREER SKILLS	LEARNING AND INNOVATION SKILLS	INFORMATION MEDIA AND TECHNOLOGY SKILLS	CORE SUBJECTS AND 21 ST CENTURY THEMES
* Students earn Friday recess by being responsible for their actions and their schoolwork. * Students choose their own groups in science class for each unit. * 6th grade class known as CLUE (Core for Learning, Understanding, and Enrichment). Daily class where students rotate to different teachers for enrichment, clarification, testing, etc. * Students are given a Learning Style/Personality Survey at the beginning of the year , which is referred to throughout the year. * 6th grade field trip to 3 different places of worship to learn about diversity and customs of world religions. * Implementation of student council at MMS has provided positive leadership roles and opportunity for service projects.	* Susan Fraley, guidance counselor, works closely with teachers to supplement units with lessons on ways to communicate effectively and on empathy. * Student artwork displayed in hallways and updated frequently. * Math, Social Studies, and Science use an inquiry approach to learning, in conjunction with instruction. These classes also rely on collaborative and group learning styles for teaching and learning. * Destination Imagination (creative thinking competition) and Power of the Pen (creative writing) are offered at the middle school as extracurricular activities. * Looking into scheduling Encore teachers into the grade level teams. * Gifted program includes weekly hands-on challenges requiring creativity. Gifted activities are usually interdisciplinary and drama is often used.	* Some tests and assignments are given on Moodle in Language Arts. * All subjects include internet research and internet based projects throughout the year. * Video & audio podcasts, websites, video for current events in Social Studies. * Students produce daily morning newscast which is broadcast throughout the school. * Senteo (clicker system) is used for class assessment. * All math and science classes have SMART Boards, each grade level has a laptop cart, and each class has 4 desktop computers.	* Major units in 6th grade Social Studies (world geography) emphasize these skills. * Stock Market Club is offered for school wide participation. * Real life problems in math (money, decimals, measurement, etc.) * "March Madness" unit has interdisciplinary themes. * "Pay it Forward" program where students focus on civic awareness by performing 3 acts of kindness towards others in the community.

LIFE AND CAREER SKILLS	LEARNING AND INNOVATION SKILLS	INFORMATION MEDIA AND TECHNOLOGY SKILLS	CORE SUBJECTS AND 21 ST CENTURY THEMES
Madeira Elementary School			
* 4th grade students on the leadership team set positive examples and plan school wide activities. * 3rd grade students run the post office and take on leadership roles.	* Art Week is a highly creative project-based activity for the entire elementary school.	* 2 Scanners used to scan homework, turn into PDF's and email to parents or put on teacher webpage. * 3 Document Projects in the elementary school. These allow teachers to display information so that the entire class can easily view.	* Global awareness - Participation in World Math Day where students in grades 1-4 try to answer as many online math problems in 24 hours as they can. MES answered 143,768 problems.
	* Gifted program at the elementary level incorporates all subject areas in each unit, including music, art, and drama.	* 5 Digital cameras have been purchased to be used by each grade level. Teachers also create end of year DVD's, use pictures as story starters, and create PowerPoint presentations using pictures.	* Recent 2nd grade musical about the environment inspired some students to research and present information regarding cafeteria trays. Their research was presented to parents, teachers and board members.
* 4th grade student leaders - Students campaign to become class leaders with 2 chosen from each class. They are in charge of the recycling program, project of the month, mitten and glove project, and the caring project to help students at MES become more caring by sharing ways to care on the morning announcements.	* The Foss science program is inquiry/project based where students use the scientific process and complete hands on experiments.	* SMART Boards in 4th grade rooms. 5 more have been purchased for lower grade levels. SMART Boards come with SMART Notebook software which makes it possible for teachers to create content rich, dynamic lessons that address specific student skills.	* Rainforest Interdisciplinary Project - 1st grade project to study the rainforest using the graphic organizer in computer lab to help with research. A rough draft is prepared with the facts found through a bookmarked website, the draft is typed in computer lab, edited, and finalized. A picture of a rainforest animal is part of the project which is then displayed in the 1st grade hallway.
* 4th grade "Lights, Camera, Action" Class. Students are in charge of producing Friday morning announcements.		* 30 computers in lab used to teach keyboard navigation, keyboarding, Microsoft Word, PowerPoint, Excel, graphic organizers, Internet navigation, research skills and problem solving using software.	* SHAC group has sponsored assemblies and other opportunities to promote health literacy.

SUPPORT SYSTEMS

STANDARDS & ASSESSMENTS	CURRICULUM AND INSTRUCTION	PROFESSIONAL DEVELOPMENT	LEARNING ENVIRONMENTS
Madeira High School			
* moodle.madeiracityschools.org and www.classmarker.com are assessment tools used at MHS.	* Many Math classes going to online textbooks, online homework in conjunction with TI-Nspire calculators.	* The Teachers Teaching with Technology group has been helpful. * Greater teacher focus on becoming facilitators of student learning vs. direct instruction.	* Staff development time has been spent on introducing the Professional Learning Community initiative. * 21st Century Skills research has been shared in both community and parent meetings.
* Current Ohio standards are written at the application level, thus emphasizing the importance of transferring learning to other situations to enhance problem solving.	* In search for new textbooks - the science department is looking at books and resources that support and encourage 21st Century Skills.	* Staff in-service time has been allocated to identifying 21st Century Skills and how they can be observed in the classroom and measured. * Math teachers have typically sought out their own professional development.	* Staff is beginning to work on using SMART goals to drive their objectives. * 40 hour community service requirement for graduation.
Madeira Middle School			
* Individual math performance assessments * Science performance assessments	* Novels: personal and community connections to character actions	* Instructional Leaders have had some training on 21st Century Skill teaching techniques	* Professional learning communities, i.e. book studies, are a way to work with teachers from other schools and obtain class credit. * Staff engaged in data analysis.
* Quality assessment based on state standards * Moodle and Senteo class assessment		* Administrative support of out-of-school professional development opportunities.	* New scheduling system with wikis for middle school and high school teachers to communicate about leveled classes. * Supportive community and strong PTA are positives. * New building provides great learning/teaching environment.
Madeira Elementary School			
* Content standards and quality assessments have been a focus of professional development for past 2 years.	* Recent addition of a technology instructional leader position (volunteer) to building leadership team.	* The elementary professional development plan has been cohesive and has included book studies, collaborative work, looking at student work and outside speakers. Use of technology has been a focus with before-school training offered.	* New building is a facility conducive to team work. The projectors, student computers and teacher laptops have enabled the infusion of more technology into instruction.

Appendix IX

Madeira Schools 21st Century Staff Questionnaire

21st CENTURY SKILLS STAFF QUESTIONNAIRE

STRENGTHS

Peers

We do a good job trying to teach with 21st century methods

We teach content as it relates to the world today through technology and media.

Staff posses 21st century skills

Focus on intervention and individualizing instruction to not only meet student's needs but to challenge them

Experienced teachers with strong knowledge base

Increased awareness of problem solving skills and open ended questions.

We do extremely well teaching core content and very well teaching learning and innovation.

Discussion regarding 21st century skills is gaining momentum.

Some classrooms have embraced 21st century skills acquisition.

Teachers are open minded to change.

Teachers remain current in their own fields of study.

Staff is phenomenal and works hard to make sure students are learning skills they need for the future.

Continue to build critical thinking skills in all areas.

Dedicated, forward thinking staff.

Teachers willing to be flexible and change

Students

Talented students.

Tech savvy students.

Students have mastered basic skills and can move to higher level skills through critical thinking.

Students have information and media literacy

Very prepared for the OGT

Administration

Demonstrate social responsibility

Administrative support for change

Commitment to high quality academic performance by staff and students.

Realize the need to develop methods to relate to students in the 21st century.

Support progressive educational strategy.

Support team planning time

Principal observations and evaluations on teachers with conference time to discuss ways to improve.

Technology

Integration of technology into everyday activities

Upgrades in technology

Plans in place to upgrade/replace computers

Top notch tech department- efficient work order system in place, excellent trouble shooters

Moving in correct direction

Staff inservices to learn new technology

Technology availability

Increasing use of technology

Subject Specific

Science and math strong

Science department budget keeps the program current

Math curriculum blends traditional with problem solving approach

Physical education working to link the connection between success and physical fitness

Great reading and writing program

Incorporating classes such as art, band, chorus and computer into the classroom

Facilities

Buildings/facilities allow space for collaboration, meetings, storage

Parents

Supportive in general

Parents support progressive educational strategies

Parents value education

Parents/ community encourage service projects

Special Programs

Book studies focus on communication and explaining thought processes across the curriculum

Other Comments

Personalized setting for learning- students don't get lost in the system

Flexible scheduling in MMS allows for teaming and cooperative learning

21st CENTURY SKILLS STAFF QUESTIONNAIRE

WEAKNESSES

Peers

Much of our student learning is teacher directed

Lack of media specialist to advise staff on new resources

Non-technical staff members need to be convinced that time to learn new technology is worthwhile

Traditional teacher centered instruction blended with collaborative problem solving and various forms of assessment will be challenging to implement for some

Worries/anxiety over test scores

Communicating to students the importance and relevancy of developing their whole mind

Incorporating (and believing in the value of) topics such as cultural awareness, media literacy, economics, communication, collaboration, problem solving and resourcefulness

Interdisciplinary units

Teachers who have access to technology and don't take advantage- ie having smart boards available in Math and Science classrooms where some teachers never use them and other teachers who don't have them but would use them all the time

Student/staff ratio is more challenging in some grades so it will be more difficult to reach a wide variety of needs effectively

It is a struggle to teach students to be self motivated

We teach to a 20th century test

Training/Professional Development

Lack of planning time/professional development to help learn to use resources to the fullest

Training is only addressed halfway

Need ongoing inservice in how to incorporate critical thinking and problem solving skills into the regular classroom curriculum

Need clear focus for technology training

Students

Students are overly dependent on teachers to show them "how to learn."

Students are pampered and enabled and they resist going above and beyond- only want to do the minimum

Lacking social interaction, interpersonal skills

Lack critical thinking

Students rarely will read a textbook or do other research for help on a topic if they don't understand the lecture

Students think it's more efficient to go straight to the teacher for clarification rather than trying to figure it out themselves

We don't do enough to develop a higher frustration tolerance in students

Too high a percent of students won't work through a problem seriously so do not get the benefit of mistakes

Students not motivated for truly outstanding work or to reach their potential because accepted levels for As and Bs are too low

Lacking personal responsibility

Don't view some things as purposeful

Technology

Latest technology not available

Sometimes we put too much focus on technology; we need more social connection

May cause lack of individualized instruction and use of each student's own learning style if computers used too much to teach and test

Reliability of equipment

Sound from computer to projection is poor

Don't have computer access for all students

Lack of use of technology- relying on traditional methods

Curriculum

Little learning of global concerns, life skills

We are not teaching specific computer skills (ie: Word, Excel) beyond expecting them to use programs to complete projects for other classes

No specific class on keyboarding- students consistently waste time making many keyboarding mistakes

Writing needs to be enhanced and strengthened

Alternate assessments- portfolios

Life and career skills

Health and wellness awareness

Only able to offer limited number of modern languages due to our small size

Need more language and culture knowledge

Schedule

Need more than 48 minutes per day with students

Need time to practice

Community

Not using parents and local businesses

Parents will not be open minded about change

Parent complaints about things like students' consequences of own actions- ie: missing deadlines

Financial

Financial dependence on levies

Lack of funding for additional staff to enrich, accelerate and support cooperative learning

Limited finances

21st CENTURY SKILLS STAFF QUESTIONNAIRE

OPPORTUNITIES

Students

Begin to hold students accountable and responsible for their decisions

Students are eager to embrace technology and collaboration

Want multiple job skills now that they see the current economic environment

A high % are capable learners which gives us the potential to make many adaptations and adjustments

Training/Professional Development

Because we are small it is easier to effectively inservice teachers and to track progress toward goals that reflect 21st Century skills

Professional development that goes beyond assessment and gives teachers time to collaborate with one another and develop curriculum

Technology

Connect to students via technologies they are comfortable with

Utilize technologies students already use for means other than entertainment and social networking

Tech teams

Use of technologies that will require students to work together

So many students have great resources- why can't we allow students to bring laptops from home if they have them and take advantage of these resources? We can strive to find ways to control internet use, etc.

Curriculum

Integrate subject areas

Offer new electives

More music electives

Interdisciplinary units

Providing intuitive, interactive and individualized instruction

More experiences in writing and creating

Family and consumer science electives

Experiences with alternative fuel sources and recycling challenges

Experiences with non-fiction and many challenges in the world

Collaboration

Reach out to other schools in the area, state, and world to help, understand, and collaborate

Resources

We have so many! We need to use them!

Community/Parents

Parent education- keeping them informed, keeping their trust in our decision making

Utilize business leaders to help move us forward

Implementing plans that reflect sound thinking for the future

We can look at global situations with the help of the community

Many educated parents who are willing to be involved and give time- use them, their knowledge and experience

Other Opportunities

Being at the forefront! We can be leaders.

Determining a course- this will be the trickiest part

To provide experiences with diversity

To foster more creativity

Develop self esteem in students

21st CENTURY SKILLS STAFF QUESTIONNAIRE

THREATS

Peers

Too much assistance and accommodation of students

Teachers who see this initiative as just one more thing to do- may delay implementation

Lost opportunities due to untrained staff

Staying in textbooks and classrooms

Lack of Time

For quality assessment

For training

For collaboration

For dedication to change

Financial

Lack of funding for staffing

Lack of funding for new technology

Phased in funding methods cause inconsistency in what is available in classrooms- those phased in last are behind the ball from the start

Lack of money for training

Lack of money for after school programs that are not sports related

Standardized Testing

Overemphasis on passing of OGT

Conforming to changes in testing every few years- the time and effort it takes to implement

Tests become a major focus and stifle students

Students and Parents

More rigor and critical thinking are threatening to students and parents

Possible decreased time for extracurricular activities

Preoccupation with academic standing and GPA

Possible decreased grades with more demands

Parents not educated in tools so not readily equipped to help

Fear of lack/loss of content

Dislike of more subjective grading

Resistance to life and career skills

Student perception of creative classes

Students who have learned to value only the grade

Students don't feel a sense of obligation and deadline

Other Threats

Length of school year

Size of school system- harder to meet diverse needs when course offerings are limited by size

Status Quo

Tradition! If it's not broken, it doesn't need to be fixed.

Schools that offer specific skills are threats because their students are going on to college, the workforce, etc, and are able to do things. Our kids are eons behind.

Focus on academics may be lost

21st CENTURY SKILLS STAFF QUESTIONNAIRE

Vision Statements

A relationship between students, teachers, and parents where all parties are striving together to enhance the learning of students. Ultimately our goal is to prepare students for the world, so we should provide a rigorous, creative, and innovative learning environment for students.

Madeira Schools can be a leader in the area of 21st learning skills because of the small school population and the technology plan to update the district technology on a regular basis.

Due to the size, Madeira can be a role model for other schools in the areas of technology and teaching.

A school system that keeps up with the times in terms of preparing students for a changing world, but one that retains the small town advantages that make it special.

To provide opportunities for all students to learn through the use of technology and to provide training for teachers when the technology is available in their classrooms.

Dynamic classrooms where student learning is initiated with dynamic teaching and learning that continues on a global basis with good technological support.

Classrooms that are connected outside the community. Technology in use for real world applications. Students communicating with each other, relating what they are learning and how this impacts their lives. Having a culture of self reliance, care and understanding for different points of view.

Students who are confident, resourceful, globally aware, curious, and ready to problem solve.

Textbooks online, not in book form. More online discussions and work. Interactions with other schools and the business world.

Every student has their own laptop and is able to use technology to demonstrate their knowledge in other ways than writing a paper- create a video, web page, pod cast, animation, etc. Technology will enhance, not replace traditional methods.

Provide foundation for students to work confidently as an independent worker or member of a group- people skills, give and take.

We will continue to be an excellent high achieving district if we continue to focus on what's best for each individual child.

I think any real change will need to be embraced by both parents and teachers. Honestly, I don't think most parents want changes, and I'm not sure that many teachers do. We see this as just another initiative that will be pushed aside three years from now.

Motivated and excited students in school everyday willing to learn and go beyond.

Our kids must learn more, learn it better, be able to present the learning better and make application of their learning in a real world context. This will not happen in a 180 day, 8 – 3 school day, brick and mortar environment. School must be "bigger" (world wide), longer (all year), and more inclusive (outside our campus. School is and will be much more a part of our lives over a long period of time. The rigor in our schools in the years ahead must be much more greater than we have now, but patiently greater. Our schools (US schools) are time driven rather than master driven or skills driven.

I am confident that Madeira will continue to be a school district with vision and foresight as we proceed deeper into the 21st century. We will continue to attract families who value education. We will continue to have administrators and educators who support outcomes that benefit students. As a teacher, my goal is to continue to be an advocate for young scholars and their successes, adapting my teaching methods and strategies for student interests as well as connections to the real world. My dream classroom would be an environment that exudes optimistic, curious energy and fosters thinking outside the box. Student expression in writing, reading, talking, drawing, doing, presenting, and creating will be encouraged. Communication will be multi-dimensional and far reaching; providing avenues for students to communicate with themselves, in small groups, as a large core group, and with those outside the confines of our classroom will be the norm. Students will be in tune with philosophy, culture and the arts, while also being proficient in other subjects which the modern world requires.

My vision would be to help develop students with a strong sense of consciousness and high achieving skills, which will enable them to problem solve and make the world a better place.

It is difficult to have a vision of Madeira Schools in the 21st century when my hopes clash with what I see coming from governmental leaders. The testing movement is coming and I can't help but believe it's going to drive our entrance into the 21st century. I would like to picture a school setting where students can reach their individual academic potentials while not being held back by where the class needs to be. I would like to picture a school where students enjoy learning for it's own sake and push themselves to learn how to learn on their own. I would like to picture a school where the students care far more about the improvement of their thinking and character than the results on a report card.

Give the students the responsibility and use the teacher as facilitator.

I see Madeira as a place where a community of learners come together with the tools they need to succeed. I see students with their own laptops to use in every class with enough controls in place to keep them under control. Even further in the future, I see our schools as 24 hour facilities shared by students and the community. I see teachers by day as facilitators helping kids work through self study programs, and by night helping students work through assignments. Or maybe these two things blend…