Technology, Teaching & Learning Plan
July 2014 - June 30, 2020

Transforming Learning, Powered by Technology
Eastern Carver County Schools
Technology, Teaching & Learning Plan:
Transforming Learning, Powered by Technology

Introduction

The Technology, Teaching & Learning Plan will be implemented based on additional, annual funding of $2,450,000.00 over the next 6 years, beginning July 1, 2014. The Plan was developed in support of the District’s vision to transform learning to be more Personalized, Engaging, and Relevant. Eastern Carver County Schools looked to the National Education Technology Plan 2010 (NETP) for foundational inspiration. The NETP “calls for revolutionary transformation rather than evolutionary tinkering.” It urges our education system at all levels to

- Be clear about the outcomes we seek.
- Collaborate to redesign structures and processes for effectiveness, efficiency, and flexibility.
- Continually monitor and measure our performance.
- Hold ourselves accountable for progress and results every step of the way.

The plan recognizes that technology plays a supportive yet essential role in virtually every aspect of our daily lives and work, and we must leverage it to provide engaging and powerful learning experiences and content, as well as resources and assessments that measure student achievement in more complete, authentic, and meaningful ways. Technology-based learning and assessment systems will be pivotal in improving student learning and generating data that can be used to continuously improve the education system at all levels. Technology will help us execute collaborative teaching strategies combined with professional learning that better prepare and enhance educators’ competencies and expertise over the course of their careers.

1. Technology Needs Assessment:

Parent advisory/site councils (consisting of building administrators, teachers, technology staff, parents, and community members) from each school were asked to lead a discussion using the three questions below. In addition, similar discussions
were held with representatives from Community Education, Parent/Teacher Organizations (PTO), the District Leadership Team, student groups, media and technology staff, Special Education, Early Childhood, and the district Curriculum Advisory Committee. Finally, the **Power Up** initiative provided insight into the potential to transform teaching and learning with technology through one-time funded pilot projects (Appendix A).

**Questions used to guide discussion:**

1: As we continue to implement personalized learning, think ahead to five years from now. Lift the roof off of your school and look inside. What do you see? How do your schools and classrooms look different? What is happening? What are the students doing? What are teachers doing?

2: What technologies and technology related items will be needed to fulfill the vision as you saw it in question 1?

3: How will you prioritize a budget based on the technology needs that you have identified?

A number of common themes emerged from the feedback we received from the various groups. The budget priorities were dedicated to these 4 main areas:

- **TIME**: Teachers need time for professional development – both the tools (hardware and software) and teaching strategies that are supported by technology.

- **ACCESS**: Teachers and students need access to up-to-date devices. The top technology priority in our survey of teaching staff was more sets of devices to share within a school.

- **PERSONALIZED LEARNING**: In our recent survey, 86% of teaching staff agreed with the statement that the role of teachers is changing to a facilitator model. 61% of respondents said that personalized learning would be difficult or impossible without technology to facilitate learning.

- **INFRASTRUCTURE**: We need to update and expand our infrastructure to provide reliable network (wired/wireless) access and adequate storage.
2. **Goals:**
   In designing the Technology, Teaching & Learning Plan, we looked to the National Education Technology Plan (NETP) for guidance in establishing goals and key initiatives for action. These statements from the NETP Executive Summary clearly represent the mission of the Eastern Carver County Schools’ Technology, Teaching & Learning Plan:

**Goal #1 - Learning: Engage and Empower**
“*The model of learning described in this plan... leverages the power of technology to provide personalized learning*”

**Goal #2 - Assessment: Measure what Matters in Real Time**
“*The model of learning requires new and better ways to measure what matters, diagnose strengths and weaknesses... technology-based assessments can provide data to drive decisions on the basis of what is best for each and every student...*”

**Goal #3 - Teaching: Prepare and Connect**
“*[U]sing technology to help build the capacity of educators by enabling a shift to a model of connected teaching... teams of connected educators replace solo practitioners, classrooms are fully connected to provide educators with 24/7 access to data, analytic tools, and resources...*”

**Goal #4 - Infrastructure: Access and Enable**
“*[P]rovides every student and educator... with the resources they need when and where they are needed... infrastructure includes people, processes, learning resources, policies, and sustainable models for continuous improvement in addition to broadband connectivity, servers, software, management systems, and administration tools.*”

**Goal #5 - Productivity: Redesign and Transform**
*First, we will “apply technology to implement personalized learning and ensure that students are making appropriate progress” towards post-secondary success. Second, we will “leverage technology to manage spending to provide decision-makers with a reliable [and] accurate view of the financial performance of our education system.”*
3. **Initiatives**: *(see Appendix B for additional detail)*

Each goal as envisioned through key initiatives and the benefits associated.
4. **Professional Development Plan:**

An ongoing, multifaceted approach will be used as personalized learning is fully realized in Eastern Carver County Schools. Technology plays an ever-increasing role in reimagining Teaching & Learning. The *National Educational Technology Standards for Teachers* (NETS-T see Appendix C) will be used as an ongoing framework to benchmark progress and success. The McREL (Mid-continent Regional Educational Laboratory) teacher growth and evaluation instrument (Standard IV: Teachers Facilitate Learning for Their Students, *Appendix D*) will be used to document and measure progress. Additional staffing will be required as relevant learning tools become more integrated and pervasive.

- Teacher Workshop Day(s)
- *Summer Academy* (Personalized Learning Aided by Technology: web 2.0 tools, Flipped Classroom, Hybrid/Online facilitation, curriculum-specific, etc.)
- Peer Trainers can be accessed to support to teachers in various initiatives.
- Just-in-Time training within the school day (use of planning time as well as before & after school times)
- Re-define roles of technology and media support
- Late start days (4 per academic year)
- Regular staff, curriculum, and team/department meetings (share successes, challenges, and strategies)
- Media/technology meetings (ongoing staff-development for staff serving in leadership roles)
- Training videos
5. **Evaluation:** In the evaluation of our Technology, Teaching & Learning Plan, we will use multiple sources of input and data to examine its implementation and return on investment:

- **Effects on Student Learning:**
  - Measures of achievement (test scores, homework completion, participation, attendance)
  - Expanded use of digital resources in the classroom
  - Student use of digital resources beyond the classroom and the school day
  - Follow-up surveys with parents, students, and staff
- **Parent communication, sign-up, and utilization of electronic communication and resources**
- **Feedback from the various committees including the Teaching & Learning Advisory Committee**
- **District-level feedback (District Leadership Team, School Board, etc.)**
- **Classroom and site demonstrations to the community**
- **Infrastructure Reports**
  - Bandwidth usage and demand
  - Equipment age, maintenance, and replacement
  - File storage capacity and use
  - Wireless access and capacity
- **Incorporation of technology use into the McREL teacher and principal evaluation systems** *(Appendix D)*
- **Requests for additional training and support**
  - Expanded demand for summer sessions and use of professional development time
  - Expanded utilization of online training and tutorials
  - Investigation into alternative training options and methods
- **Financial Indicators**
  - Shifts in costs to promote efficiency through the use of electronic resources (reduced text and printing costs, efficient payroll costs, etc.)
  - Flexibility in allocation of resources to address changing needs
  - Maximizing utilization of district personnel and resources
6. Budget:

<table>
<thead>
<tr>
<th>Network/Infrastructure</th>
<th>Goals</th>
<th>Example</th>
<th>Yr1</th>
<th>Yr2</th>
<th>Yr3</th>
<th>Yr4</th>
<th>Yr5</th>
<th>Yr6</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data Network, System</td>
<td>1,3,4</td>
<td>Assumes 7 year replacement cycle</td>
<td>$225,000</td>
<td>$250,000</td>
<td>$265,000</td>
<td>$265,000</td>
<td>$265,000</td>
<td>$265,000</td>
<td>By end of year 3, all outdated switches, file storage, servers will be replaced and on a 7 year refresh cycle.</td>
</tr>
<tr>
<td>Servers, Data/ File</td>
<td></td>
<td>High Schools</td>
<td>$200,000</td>
<td>$225,000</td>
<td>$240,000</td>
<td>$240,000</td>
<td>$240,000</td>
<td>$240,000</td>
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<tr>
<td>Storage, Internet</td>
<td></td>
<td>Middle Schools</td>
<td>$275,000</td>
<td>$275,000</td>
<td>$275,000</td>
<td>$275,000</td>
<td>$275,000</td>
<td>$275,000</td>
<td></td>
</tr>
<tr>
<td>access</td>
<td></td>
<td>Elem Schools</td>
<td>$27,500</td>
<td>$32,500</td>
<td>$35,000</td>
<td>$35,000</td>
<td>$35,000</td>
<td>$35,000</td>
<td></td>
</tr>
</tbody>
</table>

| LCD projectors in      | 1,3,4 | Assume a 6 year replacement cycle                                      | $250,000  | $250,000  | $240,000  | $240,000  | $240,000  | $240,000  | By the end of year 3, all projection devices will have been replaced and on a refresh cycle. |
| classrooms replacements |       | High Schools                                                           | $82,500   | $82,500   | $79,200   | $79,200   | $79,200   | $79,200   |                                                            |
| (or other means for    |       | Middle Schools                                                         | $62,500   | $62,500   | $60,000   | $60,000   | $60,000   | $60,000   |                                                            |
| projection)            |       | Elem Schools                                                           | $105,000  | $105,000  | $100,800  | $100,800  | $100,800  | $100,800  |                                                            |

| Wireless Infrastructure | 1-5   | Assumes 4 year life cycle.                                             | $300,000  | $300,000  | $350,000  | $350,000  | $350,000  | $350,000  | By the end of Yr 1, wireless coverage will be added in areas currently without. Yr 4 outdated equipment replaced and on 4 year refresh cycle. |
|                        |       | High Schools                                                           | $199,000  | $199,000  | $215,500  | $215,500  | $215,500  | $215,500  |                                                            |
|                        |       | Middle Schools                                                         | $75,000   | $75,000   | $87,300   | $87,300   | $87,300   | $87,300   |                                                            |
|                        |       | Elem Schools                                                           | $125,000  | $125,000  | $147,000  | $147,000  | $147,000  | $147,000  |                                                            |

| Personalized Learning  | 1,2,3,5 | Personalized Mgt System, Support for flipped classrooms and other media needs such as Video IP for each building | $200,000  | $200,000  | $110,000  | $110,000  | $110,000  | $110,000  | Installation, implementation, and pilot of system in year 1. Additional schools starting yr 2. Yr 3, the use of the personalized learning system will be rolled out to all classrooms/teachers/students |
| System including       |       | High Schools                                                           | $120,000  | $120,000  | $147,000  | $147,000  | $147,000  | $147,000  |                                                            |
| media management        |       | Middle Schools                                                         | $57,500   | $57,500   | $57,500   | $57,500   | $57,500   | $57,500   |                                                            |
|                        |       | Elem Schools                                                           | $57,500   | $57,500   | $57,500   | $57,500   | $57,500   | $57,500   |                                                            |

| Network/Infrastructure Total: | $1,005,000 | $1,000,000 | $965,000 | $965,000 | $965,000 | $965,000 | $965,000 | $965,000 |

| Devices for Students and Staff | 1,2,3 | Replace and add additional devices (e.g. BYOD, device checkout, replace teacher devices, computer labs) | $1,100,000 | $1,105,000 | $1,115,000 | $1,115,000 | $1,115,000 | $1,115,000 | By the end of year 3, all devices purchased in 2009 or earlier will be replaced in all schools. By the end of year 6, the oldest devices will be 6 years old |
|                              |       | High Schools                                                           | $275,000  | $275,000  | $275,000  | $275,000  | $275,000  | $275,000  |                                                            |
|                              |       | Middle Schools                                                         | $250,000  | $250,000  | $280,000  | $280,000  | $280,000  | $280,000  |                                                            |
|                              |       | Elem Schools                                                           | $375,000  | $375,000  | $375,000  | $375,000  | $375,000  | $375,000  |                                                            |

| Devices for Students and Staff Total: | $1,100,000 | $1,105,000 | $1,115,000 | $1,115,000 | $1,115,000 | $1,115,000 | $1,115,000 | $1,115,000 |

| Technology Support | 1,3,5 | Support of teachers in classroom and personalized learning | $150,000  | $150,000  | $160,000  | $160,000  | $160,000  | $160,000  | Additional licensed technology coordinators for instructional support |
|                   |       | High Schools                                                           | $150,000  | $150,000  | $160,000  | $160,000  | $160,000  | $160,000  |                                                            |
|                   |       | Middle Schools                                                         | $150,000  | $150,000  | $160,000  | $160,000  | $160,000  | $160,000  |                                                            |
|                   |       | Elem Schools                                                           | $150,000  | $150,000  | $160,000  | $160,000  | $160,000  | $160,000  |                                                            |

| Technology Support Total: | $345,000 | $345,000 | $370,000 | $370,000 | $370,000 | $370,000 | $370,000 | $370,000 |

| Additional Funding Needed: | $2,450,000 | $2,450,000 | $2,450,000 | $2,450,000 | $2,450,000 | $2,450,000 | $2,450,000 | $2,450,000 |
Appendices
Appendix A: Power Up Projects (One time funding 2012-13)

Complete Project descriptions can be found at: http://PowerUp.District112.org

**BCE Micro Math Lessons**
Project Description: Created in this project are instructor-prepared multimedia “micro lectures” to enhance math skills... (cont'd)

**Bluff Creek - On the Air (Podcast Radio)**
Bluff Creek Podcast Radio engages student intellects and imaginations through the world of podcasting. Emulating Minnesota Public Radio... (cont'd)

**Chanhassen Elem. - Stem Plus**
Our students will need to be creative, innovative, collaborative, adaptable, and flexible thinkers in order to prosper in the 21st century... (cont'd)

**Chanhassen/Chaska High - Chemistry Flipped Mastery/Digital Biomedical Classroom**
Our goal is to use the “Flipped Mastery Classroom” model in our Chemistry courses with the assistance of technology tools... (cont'd)

**Chanhassen/Chaska High Schools - TV Studios In A Bag**
Students upper-level video production classes at Chanhassen and Chaska High School will have the opportunity to take a film studio with them... (cont'd)

**Chaska Elementary - Learning Lab**
The Chaska Elementary School Learning Lab is designed to engage students in 21st century learning through hands-on practice in Science... (cont'd)

**Chaska High - Online Tutorial in Math Support Classes**
Students in my Geometry Lab and Algebra 2 Lab classes will have new technology-driven opportunities to build individual success... (cont'd)

**Chaska Middle East - Personalized Face-to-Face & Online Learning**
eLearning Modules: Personalized Face-to-Face and Online Learning with a Team of Support Students who need an individualized, flexible approach... (cont'd)

**Chaska Middle East, West & Pioneer Ridge - Enhanced Inquiry, Earth and Space Science**
Our goal is to change the learning experience of our students through more integrated information during earth and space science labs... (cont'd)

**Chaska Middle East, West & Pioneer Ridge - Learning English with Technology**
We aim to help close the achievement gap through the use of technology. We will be using computer tablets in our English Language classrooms... (cont'd)
Chaska Middle East - History and Language Arts Integration
The one-size-fits-all approach to learning that was developed back in the mid-1800s worked well until the information explosion following the... (cont'd)

Chaska Middle West - Classrooms Without Ceilings
No longer will students progress at the rate of a lesson per day driven by a teacher’s pace. Instead, seventh grade students at Chaska... (cont'd)

Chaska Middle W. - Flipping the Classroom 180°
Wouldn’t it be nice if homework didn’t feel like homework? And class time was spent more one-on-one with the teacher, going deeper... (cont'd)

Clover Ridge - The World At Their Fingertips
We envision a school without walls or ceilings; a place where students can truly become 21st Century learners. Students need to become... (cont'd)

East Union - Empowering Learners Through Personalization
Students at East Union and Victoria Elementary will be developing a program that further supports personalized learning and continuous... (cont'd)

Elementary Music - Compose, Create, Comprehend!
Music and language arts teachers in all elementary buildings collaborate and team teach lessons that lead students to experience the natural... (cont'd)

Jonathan - 4th Graders Connecting, Collaborating, Creating
Through the use of technology in education, we continue to redefine how our students learn. Giving our fourth grade students at Jonathan ... (cont'd)

Jonathan - The 21st Century Learner
The 21st Century Learner: Create, Communicate, Collaborate Fourth grade students at Jonathan Elementary School, during Media Technology class,... (cont'd)

Kindergarten Center - iWonder
Mahfauz, the Egyptian Nobel Laureate said, “You can tell whether a man is clever by his answers. You can tell whether a man is wise by... (cont'd)

Pioneer Ridge - Historical Inquiry and Global Citizenship
Through the use of technology, students will have access to extensive historical information and primary and secondary sources. They will be able... (cont'd)
Pioneer Ridge - Knowledge For the Future
Knowledge has often been said to be the key to success, but research has shown that one’s ability to organize, present, and use knowledge ... (cont'd)

Pioneer Ridge - Student Voice and Choice: A Readers and Writers Workshop
Language Arts X students will be propelled into a Brave New Digital World able to demonstrate employable 21st century skills in a competent,... (cont'd)

Specialized Education - Interactive Opportunities
Four special education teachers will transform their teaching by incorporating interactive technology in their instruction with students ages... (cont'd)

Transportation: Learning Beyond the Bricks
Student learning should not be limited by time or place. By providing Internet access on a number of school buses, we allow students access... (cont'd)

Victoria - Empowering Learners Through Personalization
Students at Victoria Elementary and East Union will be developing a program that further supports personalized learning and continuous ... (cont'd)
Appendix B: Initiatives:

**Elementary Schools: Personalized Learning, Continuous Progress**
- Access to personal learning devices that support access to updated, digital-rich curriculum and dynamic resources
- Personalized learning supported through the implementation of a Learning Platform, providing 24/7 access to learning plans, digital tools, and resources that accommodate individual student needs
- Maintain and replace technology resources (e.g.: devices such as tablets, laptops, PC’s, and LCD projectors) as required to meet changing needs
- Benchmark technology competencies required for staff to ensure consistency in implementation and communication (NETS-T, *Appendix C*)
- Professional development opportunities scaled to changing needs and delivered in a multi-faceted approach (job-embedded, peer trainers, before/after school, Technology Coordinator/Coach, Summer Academy)
- Increased wireless access and internet bandwidth supporting access to robust, digital curriculum, differentiated instruction, global communications, and varied and appropriate learning and teaching opportunities

**Middle Schools: Engaging, Digital Curriculum**
- Personal learning devices transform targeted curriculum areas: The pervasive use of digital tools for instruction and learning provide students and teachers with engaging, relevant content and the means to tailor instruction, demonstrate progress, communicate and collaborate, and extend learning experiences beyond the school hours and walls
- Personalized learning supported through the implementation of a Learning Platform, providing 24/7 access to learning plans, digital tools, and resources that accommodate individual student needs
- Maintain and replace technology resources (e.g.: devices such as tablets, laptops, PC’s, and LCD projectors) as required to meet changing needs
- Benchmark technology competencies required for staff to ensure consistency in implementation and communication
- Professional development opportunities scaled to changing needs and delivered in a multi-faceted approach (job-embedded, peer trainers, before/after school, Technology Coordinator/Coach, Summer Academy)
• Increased wireless access and internet bandwidth supporting access to robust, digital curriculum, differentiated instruction, global communications, and varied and appropriate learning and teaching opportunities

**High Schools: Learning Personalized for Each Student**

• Pervasive use of personal learning devices to access global resources as they benefit learning and instructional opportunities
• Promote and support a *Bring Your Own Device* (BYOD) model while providing access to devices as-needed to support curriculum changes that mirror real world experiences
• Ongoing evaluation of technology use in the curriculum for rigor and effectiveness
• Expansion of hybrid and online courses the benefit from the collaborative/social learning preferences of students
• Personalized learning supported through the implementation of a Learning Platform, providing 24/7 access to learning plans, digital tools, and resources that accommodate individual student needs
• Maintain and replace technology resources (e.g.: devices such as tablets, laptops, PC’s, and LCD projectors) as required to meet changing needs
• Benchmark technology competencies required for staff to ensure consistency in implementation and communication
• Professional development opportunities scaled to changing needs and delivered in a multi-faceted approach (job-embedded, peer trainers, before/after school, Technology Coordinator/Coach, Summer Academy)
• Increased wireless access and internet bandwidth supporting access to robust, digital curriculum, differentiated instruction, global communications, and varied and appropriate learning and teaching opportunities
Effective teachers model and apply the NETS·S as they design, implement, and assess learning experiences to engage students and improve learning; enrich professional practice; and provide positive models for students, colleagues, and the community. All teachers should meet the following standards and performance indicators.

1. Facilitate and Inspire Student Learning and Creativity

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

a. Promote, support, and model creative and innovative thinking and inventiveness
b. Engage students in exploring real-world issues and solving authentic problems using digital tools and resources

c. Promote student reflection using collaborative tools to reveal and clarify students’ conceptual understanding and thinking, planning, and creative processes
d. Model collaborative knowledge construction by engaging in learning with students, colleagues, and others in face-to-face and virtual environments

2. Design and Develop Digital Age Learning Experiences and Assessments

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

a. Design or adapt relevant learning experiences that incorporate digital tools and resources to promote student learning and creativity
b. Develop technology-enriched learning environments that enable all students to pursue their individual curiosities and become active participants in setting their own educational goals, managing their own learning, and assessing their own progress

c. Customize and personalize learning activities to address students’ diverse learning styles, working strategies, and abilities using digital tools and resources
d. Provide students with multiple and varied formative and summative assessments aligned with content and technology standards and use resulting data to inform learning and teaching

3. Model Digital Age Work and Learning

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

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

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

a. Advocate, model, and teach safe, legal, and ethical use of digital information and technology, including respect for copyright, intellectual property, and the appropriate documentation of sources.

b. Address the diverse needs of all learners by using learner-centered strategies providing equitable access to appropriate digital tools and resources.

c. Promote and model digital etiquette and responsible social interactions related to the use of technology and information.

d. Develop and model cultural understanding and global awareness by engaging with colleagues and students of other cultures using digital age communication and collaboration tools.

5. **Engage in Professional Growth and Leadership**

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

a. Participate in local and global learning communities to explore creative applications of technology to improve student learning.

b. Exhibit leadership by demonstrating a vision of technology infusion, participating in shared decision making and community building, and developing the leadership and technology skills of others.

c. Evaluate and reflect on current research and professional practice on a regular basis to make effective use of existing and emerging digital tools and resources in support of student learning.

d. Contribute to the effectiveness, vitality, and self-renewal of the teaching profession and of their school and community.

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Appendix D: McREL

### Standard IV: Teachers facilitate learning for their students

<table>
<thead>
<tr>
<th>Observation</th>
<th>Developing</th>
<th>Proficient</th>
<th>Accomplished</th>
<th>Distinguished</th>
<th>Not Demonstrated (Comment Required)</th>
</tr>
</thead>
<tbody>
<tr>
<td>✔️</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>❑ Understands developmental levels of students and recognizes the need to differentiate instruction.</td>
<td>❑ Understands developmental levels of students and appropriately differentiates instruction.</td>
<td>❑ Identifies appropriate developmental levels of students and consistently and appropriately differentiates instruction.</td>
<td>❑ Encourages and guides colleagues to adapt instruction to align with students' developmental levels.</td>
<td>❑ Encourages and guides colleagues to adapt instruction to align with students' developmental levels.</td>
</tr>
<tr>
<td></td>
<td>❑ Assesses resources needed to address strengths and weaknesses of students.</td>
<td>❑</td>
<td>❑ Reviews and uses alternative resources or adapts existing resources to take advantage of student strengths or address weaknesses.</td>
<td>❑ Stays abreast of current research about student learning and emerging resources and encourages the school to adopt or adapt them for the benefit of all students.</td>
<td>❑ Stays abreast of current research about student learning and emerging resources and encourages the school to adopt or adapt them for the benefit of all students.</td>
</tr>
</tbody>
</table>

b. Teachers plan instruction appropriate for their students. Teachers collaborate with their colleagues and use a variety of data sources for short- and long-range planning based on the state standards. These plans reflect an understanding of how students learn. Teachers engage students in the learning process. They understand that instructional plans must be consistently monitored and modified to enhance learning. Teachers make the curriculum responsive to cultural differences and individual learning needs.

| ✔️          |            |            |              |               |                                  |
|             | ❑ Recognizes data sources important to planning instruction. | ❑ Uses a variety of data for short- and long-range planning of instruction. Monitors and modifies instructional plans to enhance student learning. | ❑ Monitors student performance and responds to individual learning needs in order to engage students in learning. | ❑ Monitors student performance and responds to cultural diversity and learning needs through the school improvement process. | ❑ Monitors student performance and responds to cultural diversity and learning needs through the school improvement process. |

c. Teachers use a variety of instructional methods. Teachers choose the methods and techniques that are most effective in meeting the needs of their students as they strive to eliminate achievement gaps. Teachers employ a wide range of techniques including information and communication technology, learning styles, and differentiated instruction.

| ✔️          |            |            |              |               |                                  |
|             | ❑ Demonstrates awareness of the variety of methods and materials necessary to meet the needs of all students. | ❑ Demonstrates awareness or use of appropriate methods and materials necessary to meet the needs of all students. | ❑ Ensures the success of all students through the selection and utilization of appropriate methods and materials. | ❑ Stays abreast of emerging research areas and new and innovative materials and incorporates them into lesson plans and instructional strategies. | ❑ Stays abreast of emerging research areas and new and innovative materials and incorporates them into lesson plans and instructional strategies. |
### d. Teachers integrate and utilize technology in their instruction.
Teachers know when and how to use technology to maximize student learning. Teachers help students use technology to learn content, think critically, solve problems, discern reliability, use information, communicate, innovate, and collaborate.

<table>
<thead>
<tr>
<th>Observation</th>
<th>Developing</th>
<th>Proficient</th>
<th>Accomplished</th>
<th>Distinguished</th>
<th>Not Demonstrated (Comment Required)</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>- Assesses effective types of technology to use for instruction.</td>
<td>- and</td>
<td>- Integrates technology with instruction to maximize student learning.</td>
<td>- and</td>
<td>- Provides evidence of student engagement in higher level thinking skills through the integration of technology.</td>
</tr>
</tbody>
</table>

### e. Teachers help students develop critical thinking and problem-solving skills.
Teachers encourage students to ask questions, think creatively, develop and test innovative ideas, synthesize knowledge, and draw conclusions. They help students exercise and communicate sound reasoning, understand connections, make complex choices, and frame, analyze, and solve problems.

| ✓ | - Understands the importance of developing students’ critical thinking and problem-solving skills. | - and | - Teaches students the processes needed to | - and | - Encourages and assists teachers throughout the school to integrate critical thinking and problem-solving skills into their instructional practices. |
|   | - Demonstrates knowledge of processes needed to support students in acquiring critical thinking skills and problem-solving skills. | - and | - Think creatively and critically. | - and | |
|   |                                                | - and | - Develop and test innovative ideas. | - and | |
|   |                                                | - and | - Synthesize knowledge. | - and | |
|   |                                                | - and | - Draw conclusions. | - and | |
|   |                                                | - and | - Exercise and communicate sound reasoning. | - and | |
|   |                                                | - and | - Understand connections. | - and | |
|   |                                                | - and | - Make complex choices. | - and | |
|   |                                                | - and | - Frame, analyze, and solve problems. | - and | |

### f. Teachers help students work in teams and develop leadership qualities.
Teachers teach the importance of cooperation and collaboration. They organize learning teams in order to help students define roles, strengthen social ties, improve communication and collaborative skills, interact with people from different cultures and backgrounds, and develop leadership qualities.

| ✓ | - Provides opportunities for cooperation, collaboration, and leadership through student learning teams. | - and | - Encourages students to create and manage learning teams. | - and | - Fosters the development of student leadership and teamwork skills to be used beyond the classroom. |
|   | - Organizes student learning teams for the purpose of developing cooperation, collaboration, and student leadership. | - and | | - and | |
Appendix E: Research

Personalized Learning:

- Summary of Wisconsin’s CESA #1 efforts to transform public education, with a focus on personalized learning. [http://www.personalizelearning.com/2012/02/jim-rickabaugh-on-institute-cesa-1.html](http://www.personalizelearning.com/2012/02/jim-rickabaugh-on-institute-cesa-1.html)

Hybrid/Blended Learning:


One-to-One and BYOD:

- Summary by James Rosso found at [http://k12blueprint.com/k12/blueprint/story_impact_1_1.php](http://k12blueprint.com/k12/blueprint/story_impact_1_1.php)

Increased Student Achievement:
• Pleasanton, California: Increase in middle school achievement data in math, language art, writing, state tests, and overall GPA for students enrolled in a 1:1 program, versus those not enrolled. http://www.funkphd.net/7741_tech/Learning%20With%20Technology%20The%20Impact%20of%20Laptop%20Use%20on%20Student%20Achievement.pdf


• Omaha, Nebraska: Westside High sees increase in ACT and SAT scores, along with student engagement, after implementing a 1:1 program. http://www.nelovesps.org/story?TN=PROJECT-20110414035102


Return on Investment:
Reduced printing at Gibbon-Fairfax-Winthrop High School: http://www.marketplace.org/topics/tech/high-school-gives-all-students-ipads-and-somehow-it-all-works-out?refid=0