ONE•2•WORLD

TROY SCHOOL DISTRICT

Preface

As we journey into our unknown future...we believe the change process of creating a "One-2-World" initiative will be an exciting time for all of our stakeholders. These 21st century learning tools will enhance our experiences and improve our abilities to adapt in this ever changing world.

This book provides an outstanding overview of why we are creating a "One-2-World" initiative with iPad technologies. What strategies will be most promising and what learning opportunities are available? Our plan is to inspire greatness and support the learners in our community. Access, support, thinking, reflecting, flexibility, and relearning will be essentials in our journey. We will update this book as needed to reflect our fluidity in the ebb and flow of our "One-2-World" plan.

We want to thank all of the teachers that helped us create the recommendation for the technology hardware plan. We also want to thank all the teachers and administrators that helped develop the Troy School District technology standards and for providing the suggestions on how to connect the standards to classroom practices.

We also want to thank Central Office, the Board of Education, and our community for supporting our technology initiative through the 2013 bond.

Compelling Reasons Why

The Troy School District "One-2-World" computing initiative will create relevant, engaging, learning experiences that increase student achievement and open doors to global learning experiences.

Compelling Reasons Why

ONE·2·WORLD

"The TSD thanks our community in supporting the 2013 bond campaign which will allow us to create our 1:1 computing initiative for our Kindergarten-8th graders."

Simon Sinek: How Great Leaders Inspire Action - Simon Sinek has a simple but powerful model for inspirational leadership all starting with a golden circle and the question "Why?" His examples include Apple, Martin Luther King, and the Wright brothers ... (Filmed at TEDxPugetSound, 18:01 minutes)

http://www.ted.com/talks/simon_sinek_how_great_leaders_inspire_action5

Sir Ken Robinson: How to Escape Education's Death Valley - Sir Ken Robinson outlines 3 principles crucial for the human mind to flourish — and how current education culture works against them. In a funny, stirring talk he tells us how to get out of the educational "death valley" we now face, and how to nurture our youngest generations with a climate of possibility.

http://www.ted.com/talks/ken_robinson_how_to_escape_education_s_death_valley

Future Work Skills 2020

http://www.iftf.org/our-work/global-landscape/work/future-work-skills-2020/

Apple Classrooms of Tomorrow - ACOT2

http://education.apple.com/acot2/

The Brain/CoT icon represents the cultural shifts that were necessary in order to bring in a One-2-World initiative. It also represents cognitively vibrant classrooms that focus on students "doing" the critical thinking and problem solving.

"If the language we use to describe an initiative sets the tone and direction for it, and if we want to create a more inspiring vision than giving each student a device, then I have a simple proposition: Let's drop the phrase "one-to-one" and refer instead to "one-to-world." –Alan November

This simple, one-word change takes us beyond the focus on the boxes and wires and alludes to why we are making the investment in the first place. The planning considerations now evolve from questions about technical capacity to a vision of limitless opportunities for learning. ***This change also has enormous implications for the design of staff development. As soon as you shift from "one- to-one" to "one-to-world," it changes the focus of staff development from technical training to understanding how to design assignments that are more empowering—and engage students in a learning community with 24-hour support."*** –Alan November

"Without question, [we] believe every student must have 24-7 access to the internet. However, while one-to-one computing might work as a marketing slogan designed to convince schools to buy as many computers as possible, it is a simplistic and short- sighted phrase that suggests if every student had a device and if every teacher were trained to use these devices, then student learning would rise automatically." – Alan November

"Adding a digital device to the classroom without a fundamental change in the culture of teaching and learning will not lead to significant improvement. Unless clear goals across the curriculum—such as the use of math to solve real problems—are articulated at the outset, one-to-one computing becomes "spray and pray." –Alan November

The TSD has begun the culture shift to prepare for a One-2-World initiative. In 2011 we adopted the Charlotte Danielson model to focus on creating cognitively vibrant classrooms. We simultaneously began to create a Culture of Thinking (Dr. Ron Ritchhart) at two elementary buildings by implementing Visible Thinking routines and the eight cultural forces. In 2012/13 we continued to bring on six more elementary schools and one middle school into incorporating the cultural shifts that included VT routines. We also implemented the BYOD pilot program at all levels to give interested buildings and teachers the opportunity to integrate technology through mobile devices. 2013/14 we continued the VT journey by bringing on the remaining elementary buildings and one other middle school. In 2014 we brought on Math Expressions which shifted our classrooms into engaging rooms that provided "math talk" opportunities to engage our students thinking. Additionally, we added Teacher Learning Labs where teams of educators observe and reflect on best instructional practices currently taking place in our own classrooms. Our vision is to continue to grow the Culture of Thinking (Dr. Ron Ritchhart) district wide and to integrate the "One-2-World" technology initiative to connect our "kiddos" to the global learning environment.

"Perhaps the weakest area of the typical one-to-one computing plan is the complete absence of leadership development for the administrative team—that is, learning how to manage the transition from a learning ecology where paper is the dominant technology for storing and retrieving information, to a world that is digital at it's core all the time." –Alan November

"Leaders must be given the vision and training to:

- Connecting all students to the world's learning resources.

- Model the actions and behaviors they wish to see in their schools.

- Support the design of an ongoing and embedded staff development program that focuses on pedagogy as much as technology.

- Move into the role of systems analyst to ensure that digital literacy is aligned with standards.

- *Ensure that technology is seen not as another initiative, but as integral to curriculum.*

Leaders also must learn how to support risk- taking teachers and creating cohorts of teachers across disciplines and grades who are working on innovative concepts—such as students designing libraries of tutorials to help other students learn, as Eric Marcos has done with Mathtrain.TV.

In a one-to-world approach, the critical question is not, "What technology should we buy?" The more important questions revolve around the design of the culture of teaching and learning. For example, how much responsibility of learning can we shift to our students (see Who Owns the Learning by Alan November)? How can we build capacity for all of our teachers to share best practices with colleagues in their school and around the world? How can we engage parents in new ways? (See [@live-fromroom5](@livefromroom5) on Twitter.) How can we give students authentic work from around the world to prepare each of them to expand their personal boundaries of what they can accomplish?

The irony of many one-to-one programs is the overreach of filtering policies that prevent students from participating in powerful learning practices, such as publishing their work to a global audience. At a time of declining resources within many schools, it's essential to craft a vision that giving every student a digital device must lead to achievements beyond what we can accomplish with paper. Otherwise, let's just stick with the original one-to-one program: one No. 2 pencil per student." –Alan November

Mobile hand held device icon represents that at our high school level all of our students will be able to bring in their own device (BYOD). It is important to recognize that this change process includes the highest level of education that the TSD has to offer. We believe that our high school students have access to their own devices and this opportunity will provide them the opportunity to show how they engage with the technology to produce their learning.

Edutopia Digital Generation Multimedia Portrait: Olivia 17 years old (student living in poverty with access to mobile learning)

http://www.edutopia.org/digital-generation-profile-olivia-video

Why BYOD/mobile devices are appropriate at the high school level

https://www.youtube.com/watch?v=6ILQrUrEWe8&feature=player_embedded

The mobile hand held device icon represents mobile learning at our high school level. All of our high school students will be able to bring in their own device (BYOD). All of our K-8 students will be able to bring their iPad to and from school.

The Wifi icon represents global, mobile, any place and time learning. Our students thrive in dealing with mounting information and media tidal waves. In this ever changing world, the 21st century classroom will move beyond the traditional "four walls" and into a learning environment that is on 24/7. We will need to find ways to connect our students to the global society and across all collaborative networks for them to be successful.

Edutopia Digital Generation Multimedia Portrait: Jalen 12 years old

http://www.edutopia.org/digital-generation-profile-jalen-video

Tony Wagner, author of the <u>Global Achievement Gap</u> 2008, states that in order "to better understand how young people today are differently motivated, we need to see that they're growing up in an environment that is radically different from previous generations." This Net Generation is growing up tethered to the internet and are motivated to work in a mobile world.

- 87% of teens are online, increasing from 60 percent of 12 year olds to 82 percent of 13 year olds and 94% of 16-17 year olds.

- Teens are on-line an average of 5 days a week, two to three hours a day.

- 67 percent of teens are 40 percent of preteens own a cell phone, spending an average of an hour per day talking. Two thirds of "tweens" and teens who own or have a cell phone sent text messages daily.

- 87 percent of 8-17 year olds play videogames, the vast majority of them on a daily basis.

- 75% of online teens use instant messaging, chatting with an average of thirty-five people per week, for three hours total.

- 75% percent of adolescents spend two to three hours per day down loading or listening to music online.

- 80 percent of 12-17 year olds use some form of social media.

Alarming, this data was found in 2008! It has exploded since it was recorded in Wagner's book. Our students live in a "smaller world," more connected by technology and transport. They thrive in dealing with mounting information and media tidal waves. In this ever changing world, the 21st century classroom will move beyond the traditional "four walls" and into a learning environment that is on 24/7. We will need to find ways to connect our students to the global society and across all collaborative networks for them to be successful.

The students will engage in a rigorous project based, collaborative environment where they will use the devices to construct new learning and engage in meaningful experiences. Teachers will use the technology to create experiences that assist students to make connections to the concepts that are central to literacy, math, science, social studies, and more.

Ultimately, we believe that technology as a tool will help us to teach for Deeper Understanding. We will use the technology to provide students with rich experiences far beyond the reach of traditional classroom materials. The technology will enhance classroom practices so that students aren't just learning content but applying what they have learned in real-world contexts with a global audience. "We will help our students to use 21st century skills such as critical thinking and problem solving to understand and address global issues. We will help them learn from and work collaboratively with individuals representing diverse cultures, religions and lifestyles in a spirit of mutual respect and open dialogue in personal work and community contexts. Ultimately, we believe that through tech collaboration we will learn to understand other nations and cultures, including the use of non-English languages." –Tony Wagner _The Global Achievement Gap_

The Two people icon represents a collaborative learning environment that provides all stakeholders the opportunity to have 2-way communication. The emphasis shifts to a student centered classroom that strives for deep understanding.

Edutopia Digital Generation Multimedia Portrait: Luis 14 years old

http://www.edutopia.org/digital-generation-profile-luis-video

In our student centered/collaborative classrooms we will integrate technology with best practices. We will establish relevant learning spaces where students are directly involved in the discovery of their own knowledge; coupled, with their peers from around the globe.

use of information within the technological world that we visit. Our stakeholders, (teachers, students, administrators and parents) will exhibit a positive attitude toward using technology that supports collaboration, learning and productivity. We believe that our One-2-World initiative will help students learn personal responsibility for lifelong learning and help them to exhibit leadership for digital citizenship. Through the winter of 2014 teachers, parents and administrators discussed the importance of creating digital citizens and together we believe in creating a safe environment that allows for our students learning to beyond the four walls of the classroom and into a relevant 21st century classroom.

The globe icon represents the need for us to prepare our students to be Digital Citizens.

Edutopia Digital Generation Multimedia Portrait: Virginia 14 years old

http://www.edutopia.org/digital-generation-profile-virginia-video

We believe that we need to help our students understand human, cultural and societal issues related to technology and practice legal and ethical behavior. We will advocate and practice safe and responsible

The balance scale icon represents a balanced approach between preparing our students for a career and or college readiness.

Edutopia Digital Generation Multimedia Portrait: Sam 12 years old (using tech to engage her learning to prepare for her future.)

http://www.edutopia.org/digital-generation-profile-sam-video

We will use the technology to ensure that all Troy students are prepared to be career and college ready. We live in a constantly changing world with many demands and success that requires a certain level of technology proficiency. All students will need consistent access to these tools for future success. Students not proficient in basic technology skills and unable to use them productively will be at a disadvantage when compared to other students they will compete with on a regular basis. However, students who do not know how to use technology to produce their thinking and how to use the technology to perform will be at a substantial disadvantage.

The data shows that most jobs of the future have not even been created. It is essential that our students understand how to produce their learning in order to be prepared for their futures. Tony Wagner's research identifies that one of the survival skills for today's learners is to take initiative and to have the entrepreneurialism spirit. The Net generation will need to be self-directed people who can find creative solutions to some very tough, challenging problems. In order to prepare our students to be career and college ready, we will need to help our educators figure out how to use technology effectively in relevant ways. We will need to say to our teachers and students that you need to "fail" forward in order to show that you have stretched your learning.
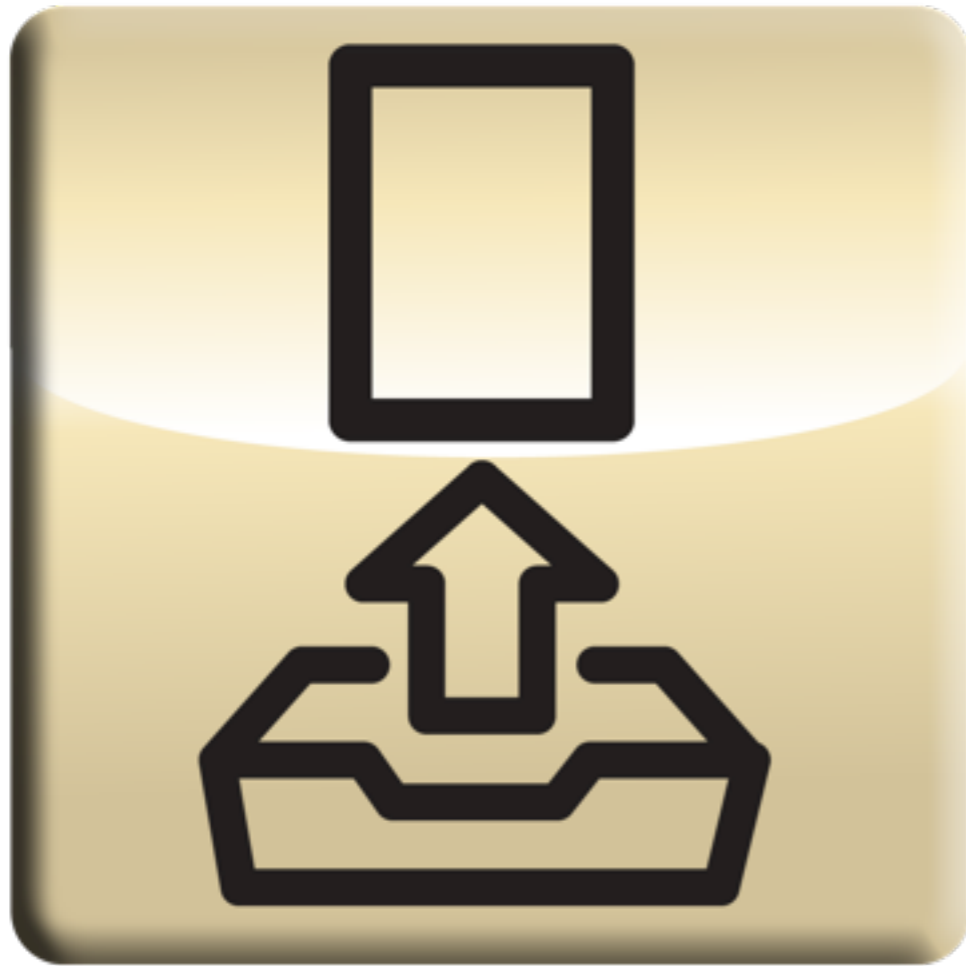
chal authority that tells you what to do to a team-based environment has been both rapid and profound. Similarly, the intensifying rate of change, the overwhelming amount of data and the increasing complexity of problems that individuals and teams face every day in their work are dramatic new challenges for everyone in the organization. All of these changes illuminate the importance of another set of essential survival skills for work today: agility and adaptability." –Tony Wagner *The Global Achievement Gap* These skills incorporate the need for time management around projects, changing landscapes and expectations. Change is the only constant in life and we need to prepare our students for this type of environment.

The clock icon represents the need for our students to be agile and have adaptability to our changing world.

Edutopia Digital Generation Multimedia Portrait: Nafizia 13 years old

http://www.edutopia.org/digital-generation-profile-nafiza-video

"The portrait of the New World of Work that is emerging is a complex one. The shift from a hierar-

The inbox/outbox icon with paper represents the digital age of assessment for learning. It represents the opportunity for all assignments/assessments to be transmitted through a digital connection.

Edutopia Digital Generation Multimedia Portrait: Dillon 13 years old

http://www.edutopia.org/digital-generation-profile-dylan-video

We believe the technology devices will help our stakeholders deal with the flow of information. It will be extremely important for all of us to consider the importance of critical thinking in the context of how our students will receive and use the information. We will use the technology to promote deeper understanding of what students know relative to standards through formative assessment. We will then use the technology to provide students with differentiated instructional experiences. "Practice in a classroom is formative to the extent that evidence about student achievement is elicited, interpreted, and used by teachers, learners, or their peers, to make decisions about the next steps in instruction that are likely to be better, or better founded, than the decisions they would have taken in the absence of the evidence that was elicited." --Black and Wiliam

Furthermore, we will use the technology to plan and teach to the strengths and weaknesses of all of the learners in our schools. We will use the technology to ensure that students have opportunities to achieve their personal best and to achieve at the highest levels.

The Question that we need to ask ourselves is, *"Are we creating assessments that our students do not want to miss?"* Through project based learning, on-line assessments and interactive learning opportunities we believe that our students will truly enjoy showing us their true understanding of what they have learned. The technology will help us in assessing our student's communication skills. In dozens of studies over the years, there is data that suggests that our students are not prepared for both college and the workplace, and these skills are only going to become more important as teams are increasingly composed of individuals from diverse cultures. The ability to express one's views clearly in a democracy and to communicate effectively across cultures and networks is an important citizenship skill that we will address. The technology will help us to make their thinking visible. Through apple T.V's, Google drive and other web 2.0 applications we will be able to see the growth of all of our student's communication skills.

The movie projector icon represents the need to have students produce their learning to show the world how they think critically and problem solve.

Edutopia Digital Generation Multimedia Portrait: Cameron 10 years old

http://www.edutopia.org/digital-generation-profile-cameron-video

We feel strongly that within the TSD schools that we have begun to provide time, opportunities, routines and modeling of how and what critical thinking is all about. Movie producers are constantly creating a story through technology and they are constantly problem solving. Students don't naturally want to think critically or problem solve. In a traditional school we are asking students to just give the right answer. In a Culture of Thinking school we are asking them to produce their thinking and understanding around a concept. Child development studies suggest that as soon as a child is capable of abstract thinking, that we need to challenge them to begin to formulate their own positions. We need to challenge them to produce their thinking. We believe technology can be integrated to make their mental "tug-of-wars" visible. We believe that we need to let our kids be much more curious instead of teaching them to pass tests. They need to learn how to ask great questions and to inquire about the world around them. Some might suggest throwing out the textbooks…that the answers are not in the 19th century form of technology. Many feel that the answer is in everything but the books. Problems change and so approaches to problems need to change.

cessing and evaluation information, and so on—and "right-brain" skills such as curiosity, imagination, and creativity. It's not enough to just be trained in the technique of how to ask questions—as lawyers, for example. Employees of the future must also know how to use analytical skills in ways that are often more "out-of-the-box" than in the past, come up with creative solutions to problems and be able to design products and services that stand out from the competition. In other words, they have to be new and improved knowledge workers—those who can think in disciplined ways, but also those who have a burning curiosity, a lively imagination and can engage others [through their performance]." Tony Wagner *The Global Achievement Gap*. The business world is asking for schools to focus on creating students who can think—they're not just bright, they're also inquisitive. They want students/leaders that can perform under pressure, who are engaged in making their companies great and those who are interested in making the world a better place. We believe that the "One-2-World" initiative will give our students a competitive edge as we prepare them for unknown futures.

The music note icon represents that our students need opportunities and have expectations to perform for a larger audience beyond their classroom walls.

Edutopia Digital Generation Multimedia Protrait: Dana 9 years old

http://www.edutopia.org/digital-generation-profile-dana-video

According to Wagner's work, "creativity and innovation are key factors not only in solving problems but also in developing new or improved products and services. And so today's employees need to master both "left-brain" skills—such as critical thinking and problem solving, ac-

Critical thinking is the overarching theme around our three goals. As we strive to create cognitively vibrant classrooms, we are focused on creating a Culture of Thinking (Ritchhart) that fosters a spirit of innovation and Creativity by incorporating inquiry through Collaboration, and Communication across networks.

1. Creativity: all teachers will demonstrate how they have substituted, augmented, modified or redefined an aspect of their teaching that created an opportunity for their students to produce their learning in a creative/tech way.

2. Communication: all teachers will demonstrate how they have used technology to enhance their communication with their students and parents.

3. Collaboration: all teachers will demonstrate how they have integrated technology into the curriculum to show they have provided the opportunity for students to collaborate across networks.

The 3 chain link icon represents the connection we all have to improve our classrooms for our students. It also represents how we are committed to providing our staff the time, resources and professional development needed to help them feel successful. Finally, the 3 chains represent year one's goals for all staff (The 3 C's):

Building Capacity: Initial PD Plan

The Troy School District "One-2-World" computing initiative will create relevant, engaging, learning experiences that increase student achievement and open doors to global learning experiences.

Building Capacity

Have we created knowledge about the issue amongst all staff members?

PD 1) Tell the story about the "One-2-World" logo

PD 2) Learning to Change, Changing to Learn - Daniel Pink Video (5:36) http://www.youtube.com/watch?v=tahTKdEUAPk

- If you want to set the stage for introducing and exploring ideas of tech integration, you might use 3-2-1 Bridge. This question could be posed before watching the video: When you think of integrating technology in your classroom, what are 3 words, 2 questions, and 1 simile or metaphor that comes to mind? After the video ask: Now that you have seen this video, what are 3 words, 2 questions and 1 simile or metaphor that comes to mind? How has this information changed your thinking? (bridge)

- If you would like the group to synthesize the ideas from the video, our suggestion would be Headlines with "what makes you say that" explained on the back.

PD 3) Schooling for Innovation -

Question 1 - Ask this question before viewing the video.

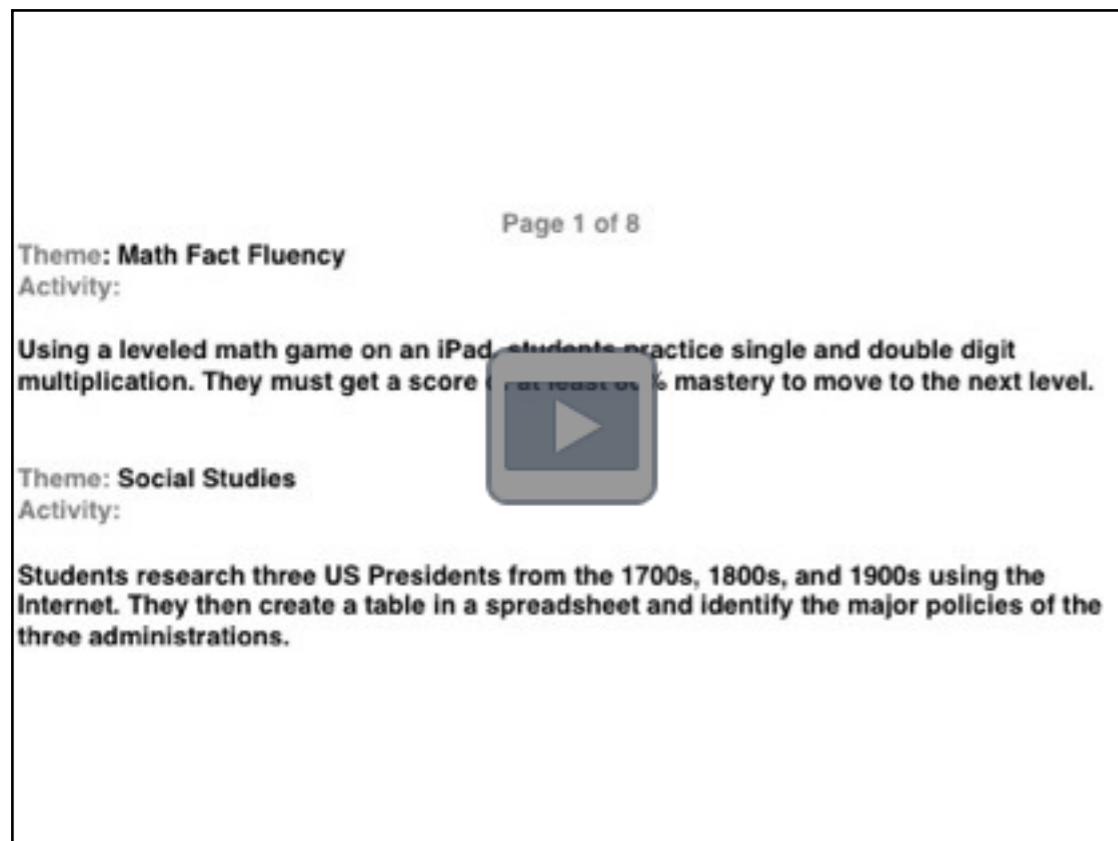What will the world be like 20 or so years from now when your students have left school and are out in the world?

Think about what life was like 20 years ago and all the changes you have seen happen. Then imagine what will happen in the next 20 years. (5 minutes to write and share in a small group)

Tony Wagner (18 Minutes) Video http://www.youtube.com/watch?v=C26sm0vpLL4

After watching Tony Wagner's video - What skills will your students need to be successful in this world you have imagined 20 years from now? (5 minutes)

PD 4) Dr. Ruben Puentedura - Technology in Education: A Brief Introduction (12 minutes) http://www.youtube.com/watch?v=rMazGEAiZ9c

PD Cards (SAMR cards from Apple Trainers)

Page 1 of 8

Theme: **Math Fact Fluency**
Activity:

Using a leveled math game on an iPad, students practice single and double digit multiplication. They must get a score of at least __% mastery to move to the next level.

Theme: **Social Studies**
Activity:

Students research three US Presidents from the 1700s, 1800s, and 1900s using the Internet. They then create a table in a spreadsheet and identify the major policies of the three administrations.

Directions for cards:

- Distribute cards to groups and have them generate ideas or themes the cards fit into

- Sort the cards into a ranking system of High, Medium, and Low

- Connect your ideas and rank the top 4 ideas

- Extend your thinking through a share out

- What challenges you about these ideas?

- What excites you about these ideas?

- How could some of those ideas work in your classroom?

PD 5) TBD - Possibly a TSD Video detailing "One to World"

PD 5) Apple Survey

Mini Success Celebration - Pass out iPads & discuss How to Use

August PD - TBD

🔥 TNT - Explosive Thinking -N- Technology 2014-15 ongoing PD on Tuesdays/Thursdays

Resources

Apple Professional Development Catalog

https://ssl.apple.com/education/professional-development/

Apps for Education

https://ssl.apple.com/education/ipad/apps-books-and-more/

Apple Distinguished Educators on iTunes u

https://itunes.apple.com/us/institution/apple-distinguished-educators/id380379132

Apple Distinguished Educators Keynotes on iTunes U

https://itunes.apple.com/us/itunes-u/ade-keynotes/id441669904?mt=10

Special Education

https://ssl.apple.com/education/special-education/

iPad Business Profile

https://ssl.apple.com/ipad/business/profiles/

3 C's
Connection
Collaboration
Commitment

The Troy School District "One-2-World" computing initiative will create relevant, engaging, learning experiences that increase student achievement and open doors to global learning experiences.

3 C's - Connect, Collaborate, Commitment

Critical thinking is the overarching theme around our three goals. As we strive to create cognitively vibrant classrooms, we are focused on creating a "Culture of Thinking" (Ritchhart) that fosters a spirit of innovation and Creativity by incorporating inquiry through Collaboration, and Communication across networks.

All K-12 teachers will be supported to help them achieve the TSD teaching goal.

All K-12 teachers will show evidence of integrating 3 technologies.

- Communication to stakeholders

- Collaboration across networks

- Creativity/critical thinking

Have we learned from peers who may be ahead of us in the process?

Resources

Apple Education Profiles: Real Stories

http://www.apple.com/education/real-stories/

Burlington High School

http://www.apple.com/education/real-stories/burlington/

Green County Schools

http://www.apple.com/education/real-stories/greene-county/

ESSA Academy

http://www.apple.com/education/real-stories/essa/

Apple Webcasts - Standout Schools

https://edseminars.apple.com/standout-schools/

Challenge-Based Learning

https://www.challengebasedlearning.org/pages/welcome

Horizon Report

http://www.nmc.org/horizon-project

Project Red

http://www.projectred.org

The Six T's of Effective Literacy Instruction

http://www.readingrockets.org/article/96

How To Use Technology To Increase Student Achievement Is Not a Mystery!

http://thejournal.com/articles/2014/01/28/not-a-mystery.aspx?m=2

Are We Using Data as a Hammer or Flashlight?

The Troy School District "One-2-World" computing initiative will create relevant, engaging, learning experiences that increase student achievement and open doors to global learning experiences.

Are We Using Data as a Hammer or Flashlight?

- 49+ hours of laser focused PD increases student achievement by 20%

Resources

Charleston SC: Results from a 1:1 kindergarten pilot measuring early literacy

http://iteachwithipads.net

http://www.apple.com/education/ipad/teacher-stories/kristi-meeuwse/#video-kirsti-meeuwse

Percentage of students reading above grade level	Beginning of the year	End of the year (after iPad program)
1st year of program	39%	100%
2nd year of program	39%	100%

Study Shows HMH Fuse iPad App Can Dramatically Improve Student Achievement

http://www.reuters.com/article/2012/04/10/idUS136790+10-Apr-2012+BW20120410

Motion Math improves fractions knowledge, attitudes

http://motionmathgames.com/landmark-study-motion-math-improves-fractions-knowledge-attitudes/

Canby Oregon school shows significant growth in Grades 3, 4, and 5 in both reading and math

http://learninginhand.com/blog/ipod-touch-in-canby-school-district.html

Achievement and Engagement Data with iOS Devices

https://blogs.edutech.nodak.edu/ndatl/files/2012/10/iPad-Research-Summary-copy.pdf

Prince George's County Buck Lodge Middle School Data

http://tedl.info/gallery/achdatabl11.12.htm

Mooresville's Shining Example

http://www.nytimes.com/2012/02/13/education/mooresville-school-district-a-laptop-success-story.html?pagewanted=all&_r=0

Digital Wish Sustainability Study

http://www.digitalwish.com/docs/DataReport-Sustainability112912-Released.pdf

Relationships

The Troy School District "One-2-World" computing initiative will create relevant, engaging, learning experiences that increase student achievement and open doors to global learning experiences.

Relationships

Our goal is to help our teachers over the next 4 years to move from a substitution point of integrating technology to a stage where they are redefining how technology is used with and by students. We will provide extensive professional development and opportunities for our teachers to collaborate in order to build bridges in uncharted territory as we take this journey together. Several people and organizations have created models to help people visualize these transformational concepts. The example below illustrates and gives a brief definition of the SAMR levels.
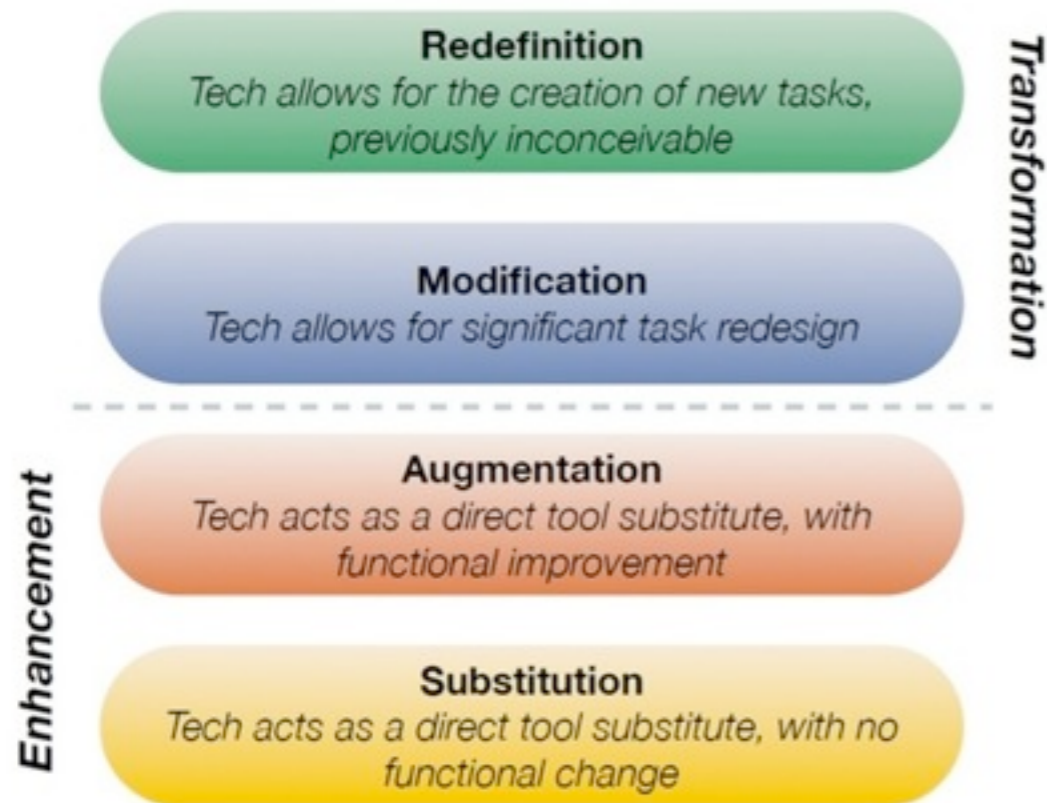
The Partnership for 21st Century Skills (P21) has developed this model to capture the framework of essential learning goals and supports.

This image is the creation of Dr. Ruben Puentedura, Ph.D. http://www.hippasus.com/rrpweblog/
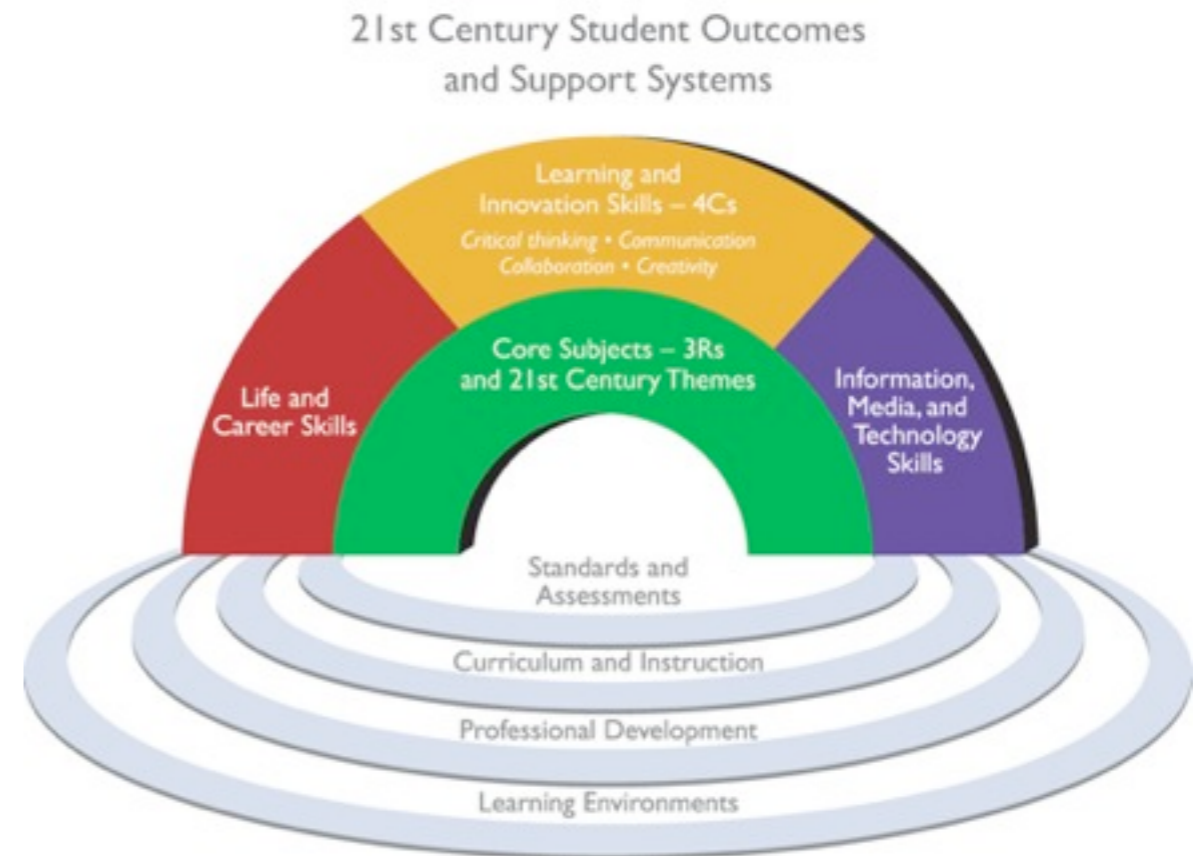
The Learning Project Bicycle Model was established to integrate project based learning with 21st century skills.
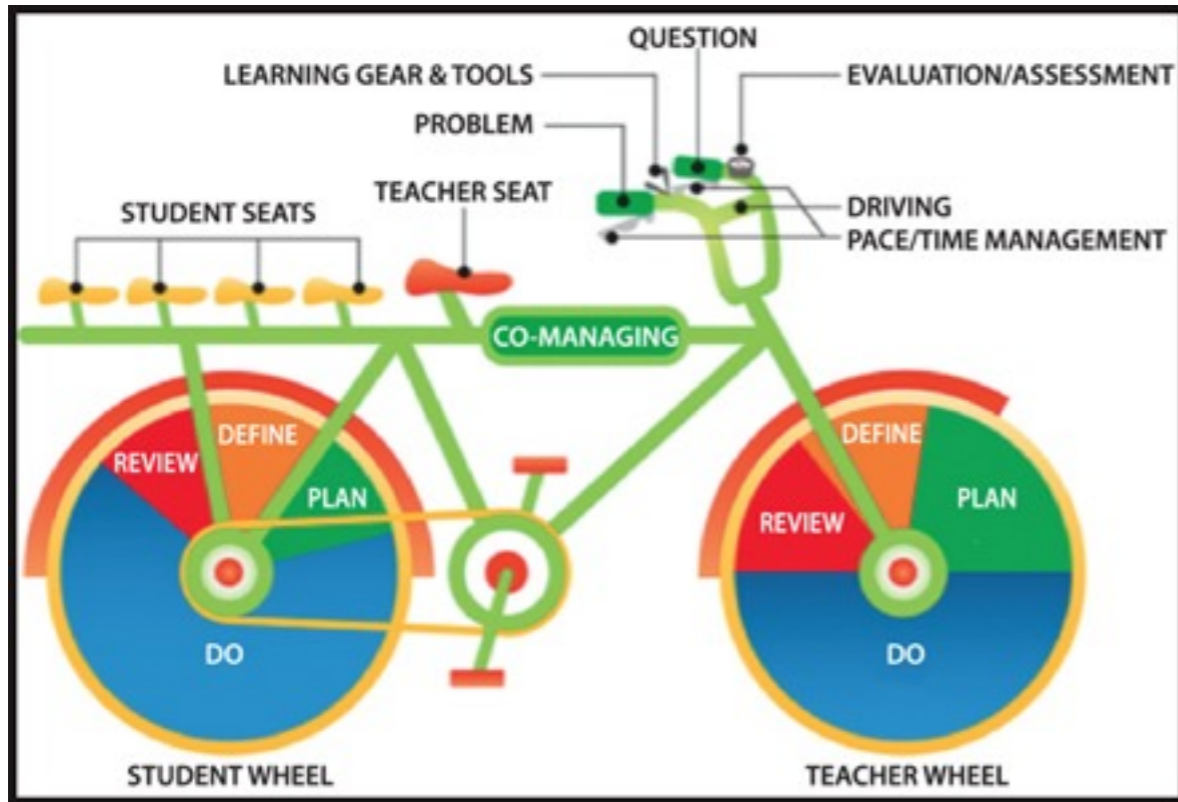
(Trilling and Fadel 2009)

Learn more about how libraries and technologies are being used to support learning at http://www.schoollibrarymonthly.com/articles/Trilling2010-v27n1p43.html

- Twitter - #tsdTNT

- This twitter/social media will help teachers and administrators from around the district share their personal success stories.

- Safe place for teachers to get ideas from their colleagues

- Opportunity to share how we have "failed forward" learning how to integrate critical thinking skills with technology in our classrooms

- Potentially expand this idea to students and parents with different hashtags

- 4 year plan to create digital integrated classrooms

Resources

Five Things Students Say They Want from Education

http://www.eschoolnews.com/2011/07/28/five-things-students-say-they-want-from-education/

Understanding Digital Kids (Ian Jukes)

http://www.educationthatworks.net/uploads/7/8/3/0/7830610/understanding_digital_kids.pdf

Standards

The Troy School District "One-2-World" computing initiative will create relevant, engaging, learning experiences that increase student achievement and open doors to global learning experiences.

Standards

TSD believes in highly rigorous standards for students, teachers, and administrators. To this end, technology committee members, including teachers and administrators, have been reviewing and adapting industry standards to meet our needs. The International Society for Technology in Education (ISTE) is the premier nonprofit organization established and committed to serving educators. They are an established organization serving more than 100,000 members across the globe. We are confident these standards are pertinent to supporting and growing our community of 21st century learners and have adopted them as the TSD standards.

The ISTE Standards for students, teachers, coaches, and administrators are centered on 6 categories:

1. Creativity and innovation

2. Communication and collaboration

3. Research and information fluency

4. Critical thinking, problem solving, and decision making

5. Digital citizenship

6. Technology operations and concepts

More information regarding these standards and organization can be found at: https://www.iste.org

Their motto is: Connect. Share. Thrive.

Resources

Common Sense Media Digital Literacy Curriculum

http://itunes.com/commonsensemedia

Frequently Asked Questions

The Troy School District "One-2-World" computing initiative will create relevant, engaging, learning experiences that increase student achievement and open doors to global learning experiences.

Frequently Asked Questions

This section will be dedicated to Frequently Asked Questions (FAQ). We will update the list regularly as well as post it to our main school district website.

The Technology Design Plan calls for providing students in grades K-8 with an electronic device. In grades K-2 a mini iPad will be provided to each student. In grades 2-8 an iPad Air will be provided to each student. The rollout plan for these devices has a phase in approach that will take 2 years to accomplish the goal of assigning a device directly to each student.

• All teachers will receive an iPad Air in Spring of 2014

Year One (Fall 2014)

• Kindergarten, First and Second Grade - Each classroom will receive a 10-pack of mini iPads

• Third Grade - 1:1 iPad Air for all students using the existing iPad 2's within the district

• Fourth and Fifth Grade - Each grade level will receive a cart of 30 iPad Air devices

• Sixth Grade - 1:1 iPad Air for all students

• Seventh and Eighth Grade: Each grade level will receive a cart of 30 iPad Air devices

Year Two (Fall 2015)

• Kindergarten, First and Second Grade - Provide the necessary iPad Minis to each and every student in these grades

• Third Grade - Each student will receive an iPad Air

• Fourth Grade - Students will be using the iPad Air assigned to them from the previous Year One (each student will have their own iPad)

• Fifth Grade - Each student will receive an iPad Air (iPads from the carts will be utilized to complete the 1:1 process)

• Sixth Grade - Each student will receive an iPad Air

• Seventh Grade - Students will be using the iPad Air assigned to the from the Year One (each student will have their own iPad)

• Eighth Grade - Each student will receive an iPad Air (iPads from the carts will be utilized to complete the 1:1 process)

Q: How will we handle parent requests when they do not want their children to use the iPad even in school? Can they opt out of using the technology?

A: As they can now, parents will be able to "opt out" their child when it comes to using the Internet. However, they cannot "opt out" of their child using a computer. There is a way that the Internet can be disabled on their device; but they would still use that device for other purposes (Apps, word processing, etc.).

Q: What will be the policy for devices traveling home?

A: Third graders will be taking their iPads home.

Q: What will be the policy for insurance of the devices?

A: TBD

Q: Why do we need all of these devices?

A: TSD will create a culture of 21st century learners that are curious, connected, collaborative, creative and committed to the global environment that ensures achievement for all.

Our technology purchases will support:

1. Student Centered Classrooms- We will use the technology to have classrooms where students are directly involved in the discovery of their own knowledge. Through collaboration and cooperation with each other using technology, students will engage in learning that is challenging. Students will use the devices to construct new learning and engage in meaningful experiences. Teachers will use the technology to create experiences that assist students to make connections to the concepts that are central to literacy, math, science, social studies, and more.

2. Assessment For Learning- We will use the technology to promote deeper understanding of where students are at relative to standards through formative assessment. We will then use the technology to provide students with differentiated instructional experiences. "Practice in a classroom is formative to the extent that evidence about student achievement is elicited, interpreted, and used by teachers, learners, or their peers, to make decisions about the next steps in instruction that are likely to be better, or better founded, than the decisions they would have taken in the absence of the evidence that was elicited." Black and Wiliam

3. Teaching for Deep Understanding- We will use the technology to provide students with rich experiences far beyond the reach of traditional classroom materials. The technology will enhance classroom practices so that students aren't just learning content but applying what they have learned in real-world contexts with an audience far beyond the school.

4. Teach to Students Differences- We will use the technology to plan and teach to the strengths and weaknesses of all of the learners in our schools. We will use the technology to ensure that

students have opportunities to achieve their personal best and to achieve at the highest levels.

5.   Career and College Readiness- We will use the technology to ensure that all Troy students are prepared to be career and college ready.   We live in a constantly changing world with many demands and success that requires a certain level of technology proficiency.   All students will need consistent access to these tools for future success.   Students not proficient in basic technology skills and unable to use them productively will be at a disadvantage when compared to other student's they will compete with on a regular basis.

Q: Why the iPad?

A: The Apple iPad/iPad mini devices were selected from a group of over 20 different devices for the following reasons.

1.   At the lower grade level the Apple devices are a powerful tool that allows students and teachers to present information graphically. It is simple and easy to use. Here is an example:

a.   Instead of trying to describe what a solar system looks like, the iPad presents a graphical screen that students not only can see but control. The ability for a student to engage in learning by controlling what they interpret as information as well as connect with what they are doing is powerful.

b.   Children have endless access to valuable information such as a dictionary and thesaurus, which previously were only available in printed format. Interactive technology makes learning more engaging and memorable.   When students can connect, create, and see what they are learning, it ties in with our visible thinking models being used in daily instruction.

2.   At the elementary grade levels, larger devices like laptops and notebooks are not practical solutions.

a.   The iPad's instant on feature means no waiting for boot up.

b.   Extended battery life means the machine can run all day without charging

c.   In the proper cases, iPads have shown solid use for as much as 3 years. They are reliable and are well supported.

3.   No other instructional device has as many applications geared for elementary students than the iPad.   With our formative assessment model, we can immediately identify student instructional needs and assist with selecting an application (in most cases free) for students to practice with to enhance their performance. In a 1:1 model it is even more valuable because each student can work on items at their own level. Instruction for students becomes customized for each student.

Q: How will they use them?

A: Here are some examples of formative assessment and enriched learning experiences that will result as students use these tools in Troy.

1. Students will gather information through internet searching, group projects, visible thinking exercises, check reference sources and find apps to help them understand large concepts.

2. Students will create audio and video outside the classroom and connect it to in class activities and will display their ability to understand and connect concepts.

3. Students will preview content at home, the night before class begins activating prior knowledge that connects to the next learning objective. Then in class, the student uses the iPad to explore resources regarding the learning objective. Then the student opens a PDF and answers questions electronically to assess learning and emails their responses to the teacher.

4. Students will become familiar with the use of these tools as a resource at an early age allowing our students to focus on higher concepts being presented.

Q: What professional development will be offered?

A: 2014 Fall Professional Development Day- Wednesday, August 27 Athens High School

• Teachers will select 4 sessions (from 36 offered) that will offer formative assessment applications for the iPad for teachers. These sessions will be led by principals, Apple trainers, coordinators, TLLs.

o Possible sessions

1. iPad Basics (Apple Trainer)

2. iMove(Apple Trainer)

3. Edmodo for Elementary, Secondary

4. iTunes University

5. Classroom Management with iPads (Apple Trainer)

6.   Socrative

7.   Strip Designer

8.   Show Me

9. Explain Everything

10. Idea Sketch

11. Popplet

12. iThought

13. Puppet Pals

14. Glogster

15. Doink

16. Flipbook

17. Go!Animate

18. Bubbl.us

19. Conceptboard

20. iMovie

21. Talkr

22. Wallwisher

23. Twitter

24. Audacity

25. Google Docs

26. Imagination Maps

27. MindMash

28. Inspiration Maps

29. Course Notes

30. Creative Book Builder

31. Skype

32. Notability

33. Prompster Pro

34. Word Press

35. Garage Band

36. Quizcast

37. Pages

38. Fotobabble

39. iTunes

40. Adding apps to student devices

41. Weebly

2014-2015

• Strategies for iPad use will be embedded in all course and grade level meetings.

• Ongoing, voluntary after school sessions will be held in the fundamentals and practicalities of iPads for instruction and learning

• 20 a.m. and p.m. subs will be reserved for Tuesdays, Wednesdays, and Thursdays throughout the school year to promote iPad use as a tool for formative assessment and differentiation (mid-October-February) Instructional rounds and teacher labs will share technology successes and strategies as appropriate to teacher learning and development

• Coordinator and Teaching and Learning Leader work will continue to support curriculum alignment, effective instruction, and quality assessment practices, using technology when appropriate in authentic, meaningful ways
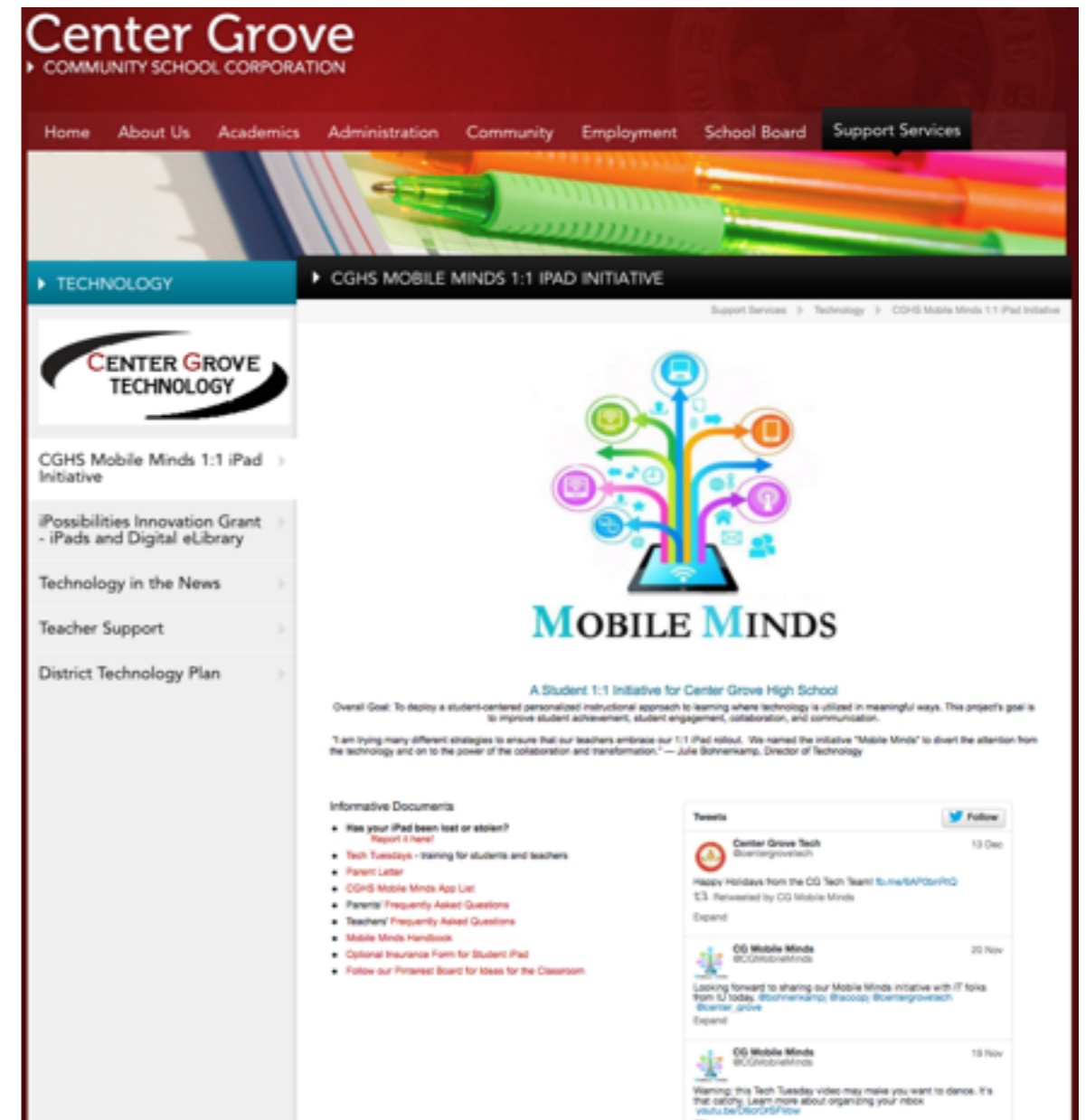
Website

The Troy School District "One-2-World" computing initiative will create relevant, engaging, learning experiences that increase student achievement and open doors to global learning experiences.

Website

The TSD website will need an area dedicated to the One to World initiative to keep all stakeholders informed and up-to-date on the various aspects of the technology being implemented into our classrooms. Center Grove Community Schools have created a website that is user friendly when it comes to housing a wealth of information in one spot at their website: http://www.centergrove.k12.in.us/Page/8242.

A screen shot of the website is below:

Laser Focused Learning for All

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Laser Focused Learning for All

Resources and references will be critical in our journey to improve learning in our 21st century classrooms. Understanding why, how, and what, will be essential when integrating new learning tools. We will develop relevant information to further the learning of all involved.

Many experts in the field of education, business, technology, and change process, are leading the way in their research and writing as future-focused visionaries. This is just a sample of the current books which center on being proactive in preparing our students to be career and college ready.

Creating Innovators by Tony Wagner

"When information is ubiquitous and free, and when basic education is available to billions of people worldwide, only one set of skills can ensure this generation's economic future - the capacity for innovation."

"What are the skills of innovators? Why is innovation so critical to America's future—and to the future of the planet? What must parents, teachers, mentors, and employers do to develop the capacities of many more young people to be the innovators that they want to be—and that we need them to become? What do the best schools and colleges do to teach the skills of innovation? What are some of the most forward-looking employers doing to create a culture of innovation?" from Creating Innovators website.

Disrupting Class by Clayton Christensen and Michael Horn

Drive by Daniel Pink

The Global Achievement Gap by Tony Wagner

The Heart of Change by John Kotter

Inevitable by Charles Schwahn and Beatrice McGarvey

Switch by Dan and Chip Heath

Surpassing Shanghai by Marc Tucker

21st Century Learning Skills by Bernie Trilling and Charles Fadel

Possibilities

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Possibilities

INTERACTIVE COMPONENTS

New technologies will allow learners create, collaborate, and communicate using emerging tools to enhance understanding. Interactive technology is expanding and will become the norm in communicating allowing users to manipulate the visual model. A simple free downloaded image has been used to illustrate this point.

Interactive 10.1 Manipulate this object it to see all angles

3D images can be downloaded and embedded into books
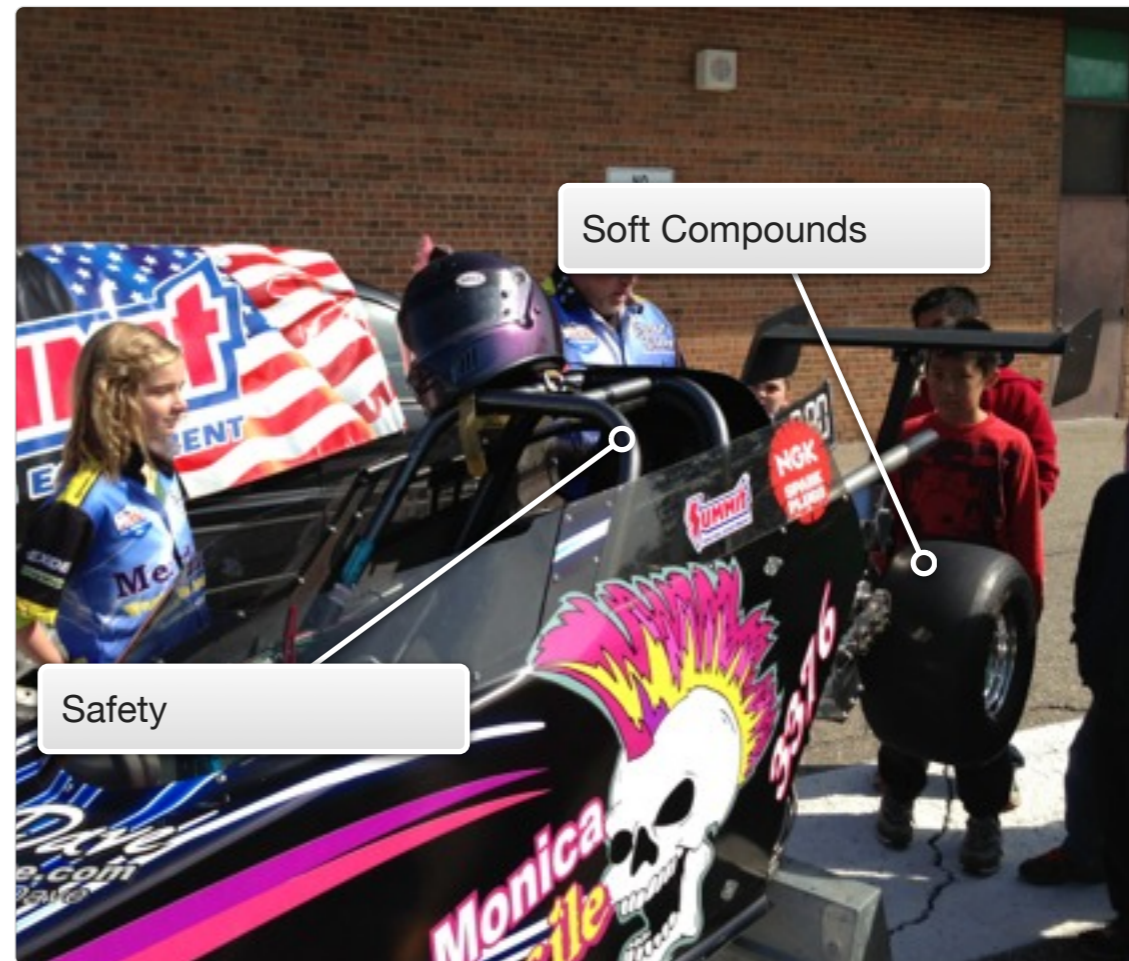
Possibilities

PICTURES

iBook users can load pictures into their books and call attention to specific areas.

This type of medium allows for endless possibilities when students are creating and using books.

What if students were required to publish the learning yearly in iBooks?

Interactive 10.2 Touch the words for interaction

References

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