Springfield Public Schools #85

21st Century Tiger Project
"Accelerate Learning"

School Board Proposal/Consideration

21st Century Tiger Project-"Accelerate Learning"

District Goals 2013-2018:

1. Improve Student Achievement for All Students
2. Provide a 21st Century Education-Technology is used as a Teaching and Learning Tool
3. Ensure a High Performing Workforce by Incorporating Continuous Improvement
4. Enhance School, Parent, and Community Collaboration
5. Create & Foster an Engaging & Respectful Learning Environment for All

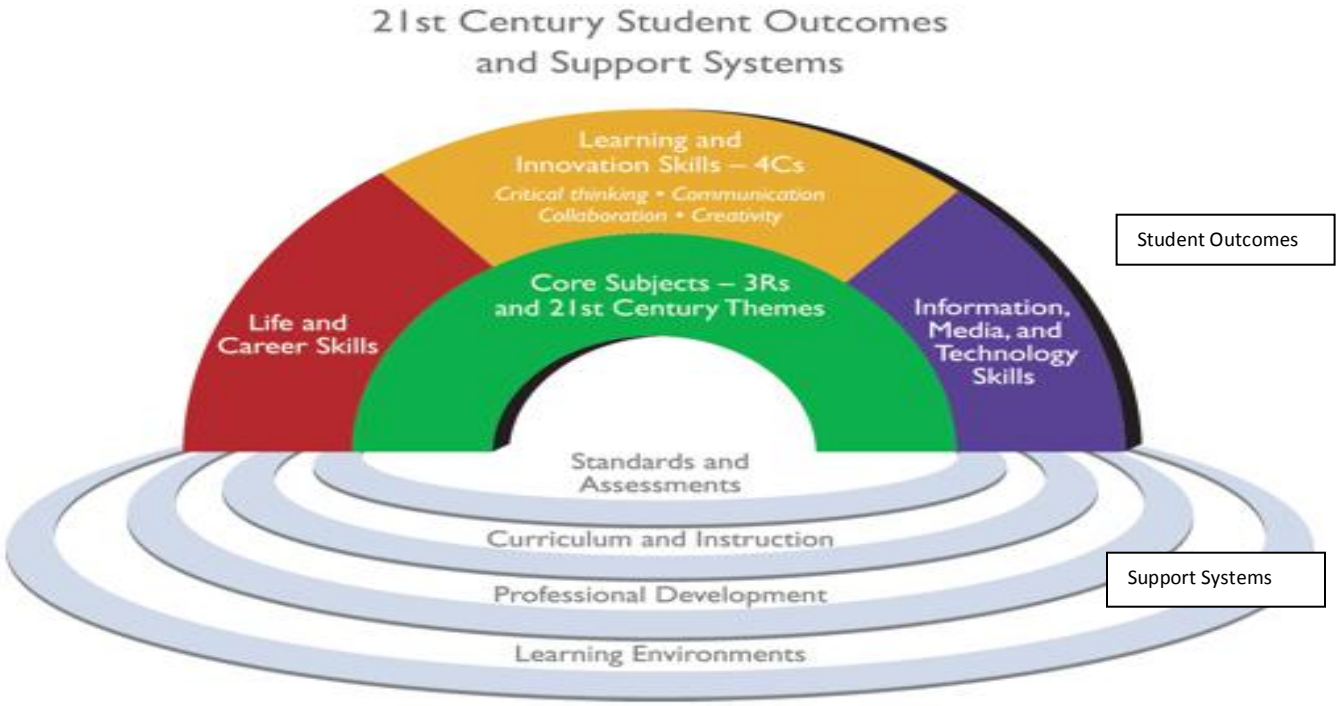
21st Century Tiger Vision Statement:

The 21st Century Tiger project will create a 21st Century learning environment by:
*strengthening the 21st century skills of every Springfield student in each content area
*establishing technological equity for all
*enhancing 21st century teacher pedagogy through training-(integration & facilitation)
*increasing student engagement in learning
*allowing students to learn with technologies that they use on a daily basis.

21st Century Tiger Goals:

1. Accelerate student learning and achievement in all academic grade levels and content areas with an emphasis on developing the knowledge and skills needed for 21st Century success.
2. Provide greater access and equity to students and their families through this initiative.
3. Provide Springfield staff with the necessary tools and training to instruct in a 21st century digital learning environment.
4. This initiative will empower parents and guardians with more tools to become more involved in their child's education.
5. To institute and support best practice in technology integration.

21st Century Tiger Learning Frameworks: (See Appendix A, for more information)



What does the 21st Century Tiger Project include?
Support 1 to 1 Learning with a technology device. Specifically, the 21st Century Tiger Project would request the acquisition and utilization of Ipads or the Ipad Mini for each 5th – 12th grade student and members of the teaching staff. K-4 classrooms would utilize a mobile lab of tablets.

What does the early research in 1 to 1 initiatives show?
Provides students greater access to resources, information, and up-to-date content

Higher student motivation and engagement

Student are more organized

Increased student attendance at school

High levels of self-directed learning

Greater collaboration of not only students, but staff as well

Improved communication between home and school

Many schools have reported high student achievement scores on state tests

What about the device?
The following information is taken from the email publication "Dangerously Irrelevant" *-Laptops. iPads (or other tablet devices). Chromebooks. Maybe even netbooks or ultrabooks… As more schools and districts move toward 1:1 computing, one of the most common questions is 'What device should we get for our students?' The typical response is another question: 'Well, what do you want your students to do?' I wonder, though, if that's the wrong question…*

Here's a short list of what most educators want their students to be able to do with a computing device:

▪ Access information on the Web ▪ Make and store files ▪ Stay organized ▪ Read electronic books, textbooks, magazines, newspapers, etc. ▪ Utilize office productivity tools (word processing, spreadsheets, presentations, etc.) ▪ Use course management systems (Blackboard, Moodle, Canvas, etc.) ▪ Communicate, connect, & share (email, blogs, Twitter, Edmodo, videoconferencing, etc.)	▪ Look at and listen to multimedia (music, podcasts, videos, photos, screencasts, etc.) ▪ Create and edit multimedia ▪ Curate learning resources ▪ Play learning games and engage in simulations ▪ Participate in online courses ▪ Use a variety of other online tools, services, social media, and cloud-based environments ▪ And, perhaps, customize their learning experience with apps

I would venture to say that this brief list covers 95% or so of what educators want students to do. Guess what? ***All of the devices in the first paragraph let students do these.***

Now, granted, some specialized software programs might be needed for particular students and/or purposes… Mainstream purchasing decisions likely won't hinge on the exceptions anyway. As more tools move to the cloud – and as the basic capabilities of computing devices overlap substantially – considerations like price and form factor (e.g., tablet v. having a keyboard; do you need a forward-facing camera?) rise closer to the fore. Some mass configuration/setup issues also may be worth considering.

*Since numerous devices now satisfy the demands listed above, we're making decisions at the margins, not the core. In this kind of environment, perhaps the better question when considering what to purchase is '****If we buy this device for students, what will they NOT be able to do that we and they will wish they could?****'*

Why the Ipad?

1. Laptops too costly for 1 to 1 initiative

2. Netbooks more costly than I-pad, battery life not as good, would require plug ins for classrooms etc.

3. Other tablets are still emerging like the surface, nexus, etc. I-pad is rated higher for educational purposes.

4. User friendly and many students are very familiar with the Apple interface from having I-pod touches and I-phones.

5. Can be managed remotely by a system like Casper/Iboss, etc. – doesn't require tech staff to work with each Ipad individually

6. Many staff will have them for 1-2 school years and have been trained with them

7. The I-pad has:

a. Good pricing options

b. Fast accessibility

c. Daily battery life for the entire school day

d. Multiple educational applications available

e. In districts that have used them, they have proven to be very reliable

f. Access of multiple media types

g. Fast connectivity to internet & email

h. Many neighboring districts using I-pads makes collaboration and sharing of ideas easier and more applicable

i. Less susceptible to viruses, malware, spyware

Why should the 21st Century Tiger Project be considered now?

Provide 21st Century tools and resources is integral and necessary to develop 21st Century Workforce Skills

All students would have access to equal technologies

Some teachers have had 1 to 1 technology(Ipads) for two years (PAWS, Pieschel, SAF, CRIC)

All elementary teachers have Ipads (PAWS)

Elementary special education students and staff have been using Ipads for two years (Pieschel $)

High School teachers will have Ipads starting the 2013-14 school year. (Pieschel, SAF $)

Elementary may have a mobile cart of I-pads for 2013-14 school year. (PAWS pending)

What has occurred at Springfield to ready us for the 21st Century Tiger Project?

2009-10 – Establishment of Professional Learning Communities has allowed a dedicated time for staff to meet and work on district initiatives.

2010-11 – New mobile lab in the elementary global exploration classroom. New mobile lab in the science classroom awarded from Samsung. Elementary special education students begin utilizing Ipads, donated by the Pieschel and Springfield Foundations, for interventions. Staff received Google Docs training.

2011-12 – Elementary teaching staff received an I-pad through PAWS grant. Summer of 2011, improved infrastructure in elementary by improving the wireless access points. Apple training day for teachers in August 2012. 2 staff members received advanced training with Ipads. 2 staff members begin pilot of the flipped-classroom.

2012-13 –Summer of 2012, improved infrastructure in the high school by improving wireless access points. Site visits to Minnetonka High School. High school teaching staff received an I-pad through Pieschel and Springfield Foundation grants.

21st Century Tiger Project Support System Needs

Expand teacher technology integration and facilitation training to allow for a nice transition into curriculum

Access to a technology integrationist

Expand Help Desk Support

Device Management System

Improved Internet Capacity

What are the main components of the 21st Century Tiger Project?

1. The following would occur for students in grades 5-12 upon completing mandatory requirements;
a. Each student in grades 5-12 would receive a district owned Ipad (Ipad 2 or Ipad 3 or Ipad Mini) to support the vision and goals of the 21st Century Tiger Project.
2. Each grade level of K-4 (Pre?) will receive one mobile cart of Ipad's (Ipad 2 or Ipad 3 or Ipad Mini) to use between classrooms on a daily basis to support the vision and goals of the 21st Century Tiger Project.

3. Consistent and continuous high quality staff development, training, and support to improve instructional methodologies in integration of this technology into a 21st century digital learning environment.

How will the 21st Century Tiger Project be evaluated?

1. Assessment data will be collected annually and compared to previous years for trend analysis.

2. Student survey data – created and collected by technology committee.

3. Staff survey data – created and collected by the technology committee.

4. Annual evaluation of movement along the MILE guide by the technology committee.

Proposed Timeline for the 21st Century Tiger Project:

1. Summer 2013
a. All teaching staff have an Ipad
b. July – August 2014: One(1) or Two (2) days of summer boot camp for teachers around teaching in a 1 to 1 digital environment. These trainings will build on previous trainings with the integration specialist.

2. Summer 2014
a. Order equipment needed for 5-12 project

b. Install district apps on respective I-pads

c. Organize student deployment plans and sessions for August

3. July – August 2014:

Deployment and Training for Students and Parents:

a. Monday, August 11: Grades 9-12

b. Tuesday, August 12: Grades 5-8
i. Explanation of Program

ii. Review Devices Policies and Handbook

iii. Gather Signed Paperwork and Collect Fees

iv. Device Deployment

v. Student and Parent Skill Sessions

4. January 2015: Mid-year data collection

5. May 2015: End of year data collection

6. May 2015: Parent Follow-up Survey

7. May 2015: Device check in for summer maintenance/redistribution

8. May – July: Discussion of modifications for the following year

Financing the 21st Century Tiger Project: (see Appendix A)

1. Use of current revenues:

a. Designate textbook curriculum adoption funds to this (no more hard cover textbooks). We would still need to provide College Now books to students.

b. Evaluate desktop computer lab replacement cycles

c. Use savings from diminished use of paper and consumable product use (we should be moving toward a more paperless system)

d. Support from district general fund (a project of this size will need general fund support, this may mean taking from programs and positions). Once you start with a 1 to 1 environment, there is no going back!

2. New Revenue

a. Consideration for the Board to establish an annual Technology fee of $40 per student in grades 5-12.

i. Payment of fees prior to receiving device

ii. District will work with families who need a payment plan

iii. Family maximum of $120 would be in place

iv. This would cover one student breakage of a device, family would be responsible for anything beyond that.

v. We would evaluate revenue vs expense after the first year to monitor proposed changes (i.e. purchasing insurance for each device etc.)

3. Projected Revenue Streams: (see Appendix A)

4. Projected Expenses: (see Appendix A)

Financing the 21st Century Tiger Project

Appendix A

Projected Revenue

Item	Annual	3-Year	4-Year
Curriculum Adoption Savings	$ 18,000	$ 54,000	$ 72,000
Technology Capital Reconfiguration	$ 10,000	$ 30,000	$ 40,000
Paper and Consumable Savings	$ 3,630	$ 10,890	$ 14,520
Capital Dedication to Project	$ 15,000	$ 45,000	$ 60,000
Technology Fee	$ 15,600	$ 46,800	$ 62,400
General Fund Repurposing	$ 20,000	$ 60,000	$ 80,000
Totals	$ 82,230	$246,690	$328,920

Projected Ipad Leased Expenses

Item	Quantity	Item Price	Total
Ipad 2's 16 GB	530	$ 379	$200,870
Bretford Carts for K-4	5	$ 2,600	$ 13,000
Covers	530	$ 45	$ 23,850
Projected Total			$ 237,720

Projected Technology Infrastructure

Item	Quantity	Item Price	Total	
I-Boss viaSWSC(Device Management System)	650	$ 2.50	$ 1,625	* recurring cost
Additional Bandwidth		$ 5,000	$ 5,000	* recurring cost
Apple Macbooks for Carts	5	$ 1,700	$ 8,500	
Apple TV	10	$ 99	$ 990	
Ipad Camera Connection Kit	10	$ 29	$ 290	
Volume Voucher for apps	15	$ 1,000	$ 15,000	*recurring 4 for $4000
Additional Help Desk Time		$ 16,000	$ 16,000	* recurring cost
Additional Integration Teacher Support	.5 FTE	$ 30,000	$ 30,000	* recurring cost
Misc.		$ 7,500	$ 7,500	*recurring cost $2500
Projected Total			$ 84,905	*recurring $ 59,125

Projected Staff Development

Item	Quantity	Item Price	Total	
Summer Boot Camp (44 Staff)	2	$ 11,403	$ 22,807	for 2 yrs (1/2 next 2 yrs)
Sub Costs(Time with Integration Specialist)	44	$ 100	$ 4,400	for 2 yrs (1/2 next 2 yrs)
New Teacher Training	2	$ 750	$ 1,500	for 4 yrs
				$ 15,103.4
Projected Total			$ 28,707	

Projected 21st Century Tiger- 4 year Budget

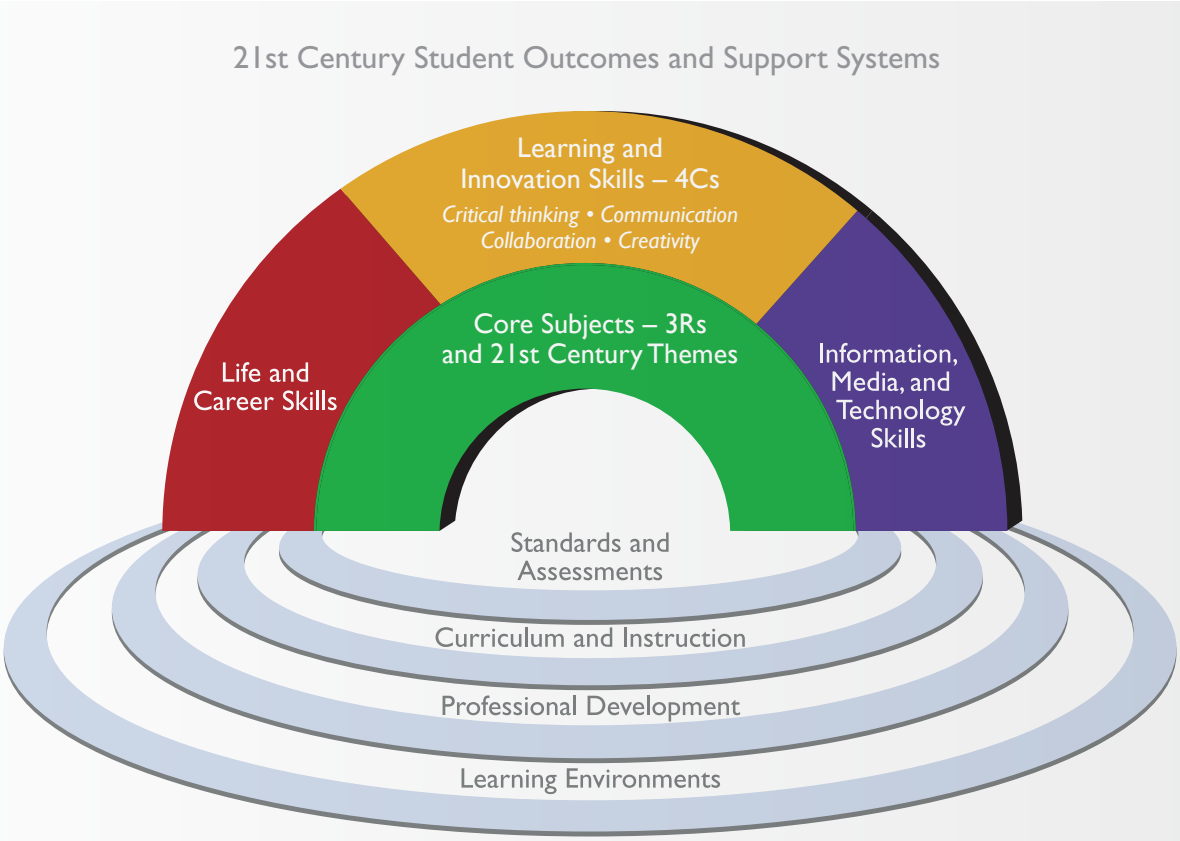
Item	2013-14	2014-15	2015-16	2016-17	Total
Revenues	$ 82,230	$ 82,230	$ 82,230	$ 82,230	$ 328,920
	(9-12 & 1cart)	(7-8 & 2carts)	(5-6 &2 carts)		
Lease-Principal	$ 25,030	$ 42,230	$ 59,430	$ 59,430	$ 237,720
Lease-Interest	$ 1,195	$ 2,015	$ 2,836	$ 2,836	$ 11,345
Infrastructure	$ 84,905	$ 59,125	$ 59,125	$ 59,125	$ 262,280
Staff Development	$ 28,707	$ 28,707	$ 15,103	$ 15,103	$ 87,620
Total Expenses	$139,836	$132,077	$136,495	$136,495	$ 598,965
Rev/Exp Comparison	$ (57,606)	$ (49,847)	$ (54,265)	$ (54,265)	$ (270,045)
Per pupil Overage - 500 res students	$ (115.21)	$ (99.69)	$ (108.53)	$ (108.53)	$ (540.09)
Total Project Cost Per Pupil	$ 279.67	$ 264.15	$ 272.99	$ 272.99	$ 1,197.93

Appendix B

Partnership for 21st Century Skills

Framework for 21st Century Learning

The Partnership for 21st Century Skills has developed a vision for student success in the new global economy.



21ST CENTURY STUDENT OUTCOMES

To help practitioners integrate skills into the teaching of core academic subjects, the Partnership has developed a unified, collective vision for learning known as the Framework for 21st Century Learning. This Framework describes the skills, knowledge and expertise students must master to succeed in work and life; it is a blend of content knowledge, specific skills, expertise and literacies.

Every 21st century skills implementation requires the development of core academic subject knowledge and understanding among all students. Those who can think critically and communicate effectively must build on a base of core academic subject knowledge.

Within the context of core knowledge instruction, **students must also learn the essential skills for success in today's world, such as critical thinking, problem solving, communication and collaboration.**

When a school or district builds on this foundation, combining the entire Framework with the necessary support systems—standards, assessments, curriculum and instruction, professional development and learning environments—students are more engaged in the learning process and graduate better prepared to thrive in today's global economy.

Publication date: 03/11

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Core Subjects and 21st Century Themes

Mastery of **core subjects and 21st century themes** is essential to student success. Core subjects include English, reading or language arts, world languages, arts, mathematics, economics, science, geography, history, government and civics.

In addition, schools must promote an understanding of academic content at much higher levels by weaving **21st century interdisciplinary themes** into core subjects:

- **Global Awareness**
- **Financial, Economic, Business and Entrepreneurial Literacy**
- **Civic Literacy**
- **Health Literacy**
- **Environmental Literacy**

Learning and Innovation Skills

Learning and innovation skills are what separate students who are prepared for increasingly complex life and work environments in today's world and those who are not. They include:

- **Creativity and Innovation**
- **Critical Thinking and Problem Solving**
- **Communication and Collaboration**

Information, Media and Technology Skills

Today, we live in a technology and media-driven 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. Effective citizens and workers must be able to exhibit a range of functional and critical thinking skills, such as:

- **Information Literacy**
- **Media Literacy**
- **ICT (Information, Communications and Technology) Literacy**

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, such as:

- **Flexibility and Adaptability**
- **Initiative and Self-Direction**
- **Social and Cross-Cultural Skills**
- **Productivity and Accountability**
- **Leadership and Responsibility**

21ST CENTURY SUPPORT SYSTEMS

Developing a comprehensive framework for 21st century learning requires more than identifying specific skills, content knowledge, expertise and literacies. An innovative support system must be created to help students master the multi-dimensional abilities that will be required of them. The Partnership has identified five critical support systems to ensure student mastery of 21st century skills:

- **21st Century Standards**
- **Assessments of 21st Century Skills**
- **21st Century Curriculum and Instruction**
- **21st Century Professional Development**
- **21st Century Learning Environments**

For more information, visit the Partnership's website at www.P21.org.

PARTNERSHIP FOR 21ST CENTURY SKILLS

Member Organizations

- American Association of School Librarians
- Adobe Systems Incorporated
- Apple Inc.
- Blackboard
- Cable in the Classroom
- Cengage Learning
- Cisco Systems
- Crayola
- Dell
- Education Networks of America
- ETS
- EF Education
- GlobalScholar
- Houghton Mifflin Harcourt
- Hewlett Packard
- Intel® Corporation
- JA Worldwide
- KnowledgeWorks Foundation
- Learning Point Associates
- LEGO Group
- McGraw-Hill
- Measured Progress
- MHz Networks
- Microsoft Corporation
- National Academy Foundation
- National Education Association
- netTrekker
- Oracle Education Foundation
- Pearson
- PMI Educational Foundation
- Verizon
- Walt Disney Company