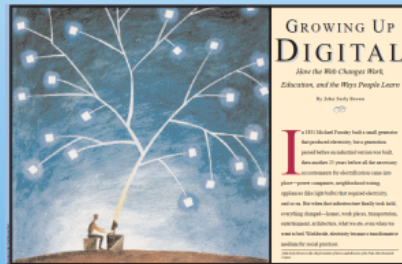




Student Centered Instruction

Supporting Digital Learners





What do we believe?

Clinton Township Board of Education Statement of Beliefs

1. We believe that children come first and that the entire community shares in the responsibility for educating the whole child.
2. We believe that a rigorous and challenging education will help every child become a productive member of society.
3. We believe that effective education prepares children to participate as socially responsible members of the world community.
4. We believe that each child can learn.
5. We believe in life-long learning for all community members.
6. We believe that technology will enhance educational opportunities and productivity.



Where do our beliefs drive us?

Ensure that our curriculum meets (or exceeds) CCSS/NJCCCS. (Common Core State Standards/ NJ Core Curriculum Content Standards)

Deliver curriculum through outstanding instruction.



Provide the supports (to staff and students) necessary for learning.



Curriculum & Instruction Needs and Opportunities

Student Centered

From "sage on stage" to "guide on the side"

From Teaching to Learning

Today's digital learners





Curriculum & Instruction Needs and Opportunities

Student Centered Learning requires:

Cultural shift

Support at all levels

Professional Development

Time

Resources

Technology





Curriculum & Instruction Needs and Opportunities

Technology enhances the process and product.

More current information

Deeper interaction with material

Greater student engagement and excitement

Different needs at different times

inclusion --> enrichment





Curriculum & Instruction Needs and Opportunities

Increased access changes learning



Technological Devices	Flexibility of Use
1 in room	whole class
3 in room	learning centers
6 in room	more dynamic groups
Every student in room	integrated individually

More devices, more flexible instruction



Process

At Superintendent's request, worked with district and building administrators, who in turn worked with their staffs, to identify opportunities to improve 21st century learning.

Here's what we learned ...



Requirements

District

- Catalyst for learning
- Grade appropriate
- Maximize existing investments
- Sustainable
 - Fiscally
 - Tech support
- Visionary
 - But not radical

Classroom

- Access
- Reliable
- Support
- Ease of use
- Ease of integration
- Compatible
- Application knowledge (Professional Development)



Opportunities

- Consistent integration of online subscriptions
- Centers/stations
- Collaboration, group work
- "Flipped" classrooms
- Digital portfolios
- Project-based learning
- Current & varied information
- Easier differentiating
- Data collection



Instructional Software

- Online content
 - Accelerated Reader
 - Learning A-Z
 - Explode the Code
 - Noodle Tools
 - Study Island
 - Gizmos
 - BrainPOP
 - Discovery Learning
- iWork and iLife suites
 - Content creation
- Print resource support



Other Curriculum & Instruction Needs

* Preliminary Estimates

Resources	Professional Development
Teachscape/ Teacher & Principal Evaluation, \$9,780.00 *	\$24,000 *
MAP, \$22,000 * Data analysis PD	\$6,000.00 *
Math grades 6-8, \$40,000 * Math PD, grades K-8	\$15,000.00 *
Leveled Science & Social Studies materials grades K-3, \$20,000 *	
Handwriting grade 2, \$2000,00 *	
English Language Arts Informational texts grades K-5, \$6000.00 * Vocabulary materials grades 4-5, \$9,500.00 * Supplemental reading materials grades 4-5, \$30,000.00 *	\$15,000.00 *



Other Curricular & Instructional Needs

* Preliminary Estimates



Resources	Cost
Curriculum Chairs (20@\$500.00)	\$10,000.00 *
Curriculum Development: Continued refinement Integration Benchmark development	\$10,000.00 *
Technology PD, Google Apps	\$10,000 *
High Scope (Pre-K) PD	\$7,600.00 *





Google Apps for Education

Cloud-based productivity suite

- Anytime, anywhere
- Secure (FERPA compliant) and fault tolerant
- Works on most any computer/tablet/phone
- Minimal retraining
- Free! (*and* it will allow us to retire hardware and otherwise cost us to upkeep)
- No ads
- **Amazing collaboration tools**
- **Easy and effective data collection tools**
 - Allows for differentiation





CTMS STEM

<http://ctms-stem.wikispaces.com/Soils>





Science & Math

Explore Learning Gizmos

[http://www.explorelearning.com/index.cfm?
method=cVideos.dspVideo&id=52](http://www.explorelearning.com/index.cfm?method=cVideos.dspVideo&id=52)





Hardware

Current Status of Inventory

- Mostly MacBooks and iMacs
 - Expensive to replace
- Vast majority of student computers from 2006 (7 years old)
- High failure rate
 - 123 machines out of service in the last 12 months
- Reflected on state report cards (only counts machines <5y.o.)
 - State average is 3.6 students : machine
 - CTSD buildings much higher (from 17 to 68)
- Discourages students and staff from using good instructional tools (devaluing existing hardware, software, and prior training)



PARCC Assessment

The Partnership for Assessment of Readiness for College and Career

Online high-stakes testing slated for the 2014-2015 school year.

- Ensure appropriate, adequate, and compatible equipment
- Need to prep students for the content, as well as the context of online assessment
- Need to prep district to handle logistics and support



ChromeOS and Chromebooks

Computer that solely runs a web browser

- Very secure (nothing for viruses to act upon)
- Automatic backups
- Multi-user support
- Integration with Google Apps for Education
- Terrific price point (~\$300)
- Minimal server requirements
- Management tools
- PARCC-ready





Two-Year Roadmap

- Classroom computers (pre-K thru 6)
- 1:1 in CTMS Language Arts
(expanding to 6th grade in 2015)
- Lab sets in CTMS Science
(expanding to 6th grade in 2015)
- Supporting technologies (projectors, Doceri, document cameras) in Spruce Run
- Teachers retain MacBooks
- One Mac-based tech lab per building



Student Devices, Planned

Building	FY13	FY14	FY15
SR	52	129	129
PM	75	82	136
RV	194	212	300
MS	235	321	321
TOTAL	556	744	886
Net		188	142
			330



Benefits

- More (and more consistent) access
- Better classroom experience
- Compatibility with home use
- Lower support & staff overhead
- PARCC-ready
- Fiscally responsible **\$0 (at worst) YOY change**
- Retains value from existing investments
- Viable long-term



Budget Impact

Year	FY14\$	FY13\$	YOY\$ INCREASE (DECREASE)	YOY% INCREASE (DECREASE)
Instructional Hardware	173,680	166,600	7,080	4.25%
Other TechOpEx	104,702	112,462	(7,760)	-6.90%
Total	278,400	279,062	(662)	(0.2)%

*Includes support, repairs, administrative hardware and software



Sustainability

Comparative computer inventory refresh costs for Apple v. Apple/Chrome deployments.

All Mac Inventory (current model)

444 Student Macs @ \$1,089 = \$483,516

112 Student iPads @ \$379 = \$42,448

0 Student Chromebooks

200 Staff Macs @ \$1,089 = \$217,800

756 Devices

Total of \$743,764

\$148,752/yr (5 yr depreciation)

+43% devices, -22% cost

REF:

Apple Lease \$284,159/yr (4 yr lease)

FY13 \$158,200

Apple/Chrome Mix (1 Mac lab/bldg, 1 MacBook/teacher, rest Chrome)

110 Student Macs @ \$900 = \$117,900

112 Student iPads @ \$379 = \$42,448

532 Student Chrome @ \$300 = \$159,600

200 Staff Macs @ \$1,089 = \$217,800

944 Devices (2014)

Total of \$537,748

\$107,550/yr (5 yr depreciation)

1,086 Devices (2015)

(Add'l 144 Chromebooks in grades 2-6)

Total of \$580,948

\$116,190/yr (5 yr depreciation)



Next Steps

Q&A

<http://www.fractuslearning.com/2012/07/09/google-apps-for-education/>

<https://sites.google.com/a/googleapps.com/k12-guide-to-going-google/pd>