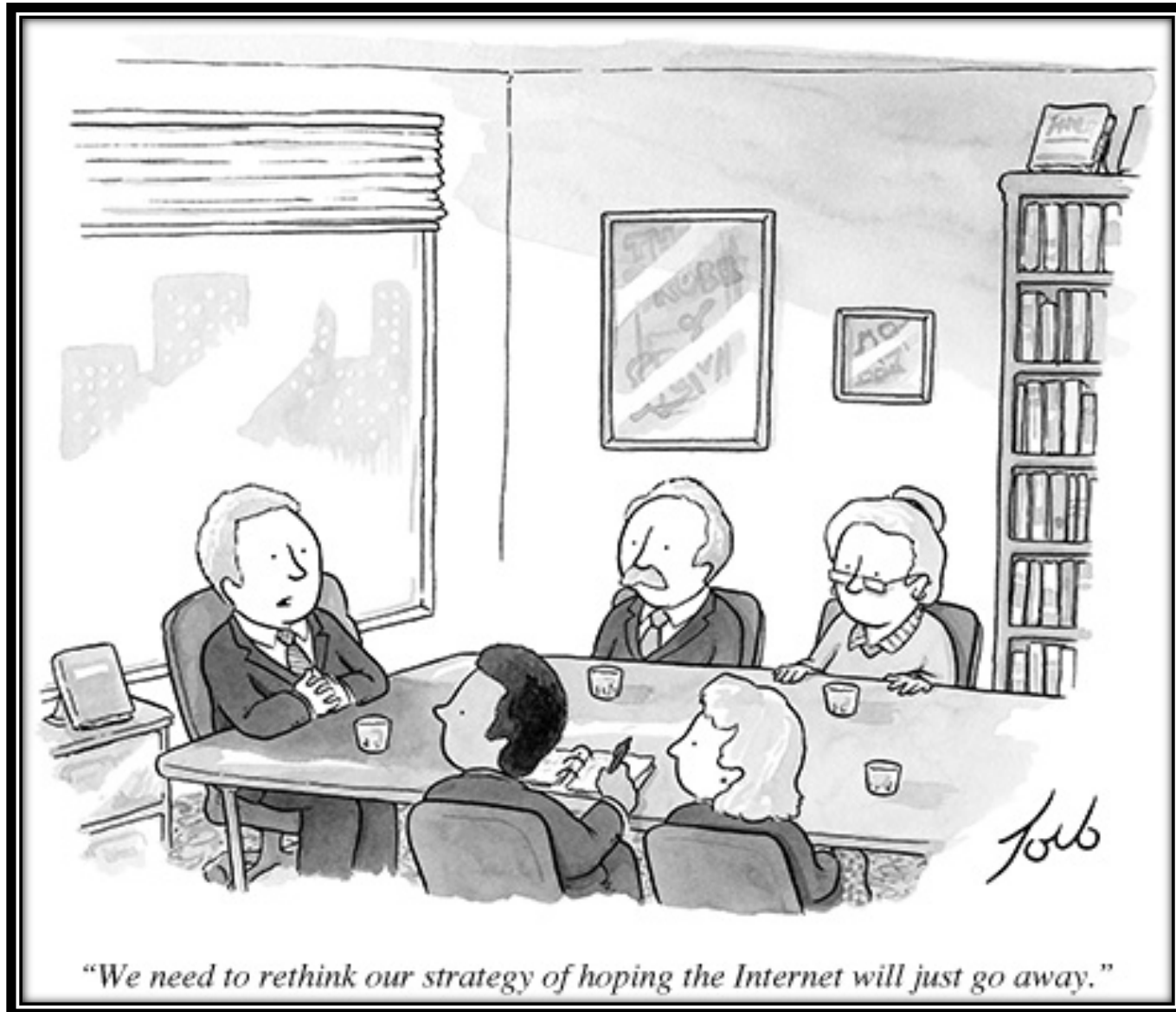


# Learning in the Digital World

Diana F. Rigby, Superintendent  
John Flaherty, Deputy Superintendent  
Gene Warfel, IT Director  
July 24, 2014

# DESE



*"We need to rethink our strategy of hoping the Internet will just go away."*

# DESE Goals

- ★ **Strengthening** curriculum, instruction, & assessment
- ★ **Improving** educator effectiveness
- ★ **Turning around** the lowest performing districts & schools
- ★ **Using technology and data** to support teaching & learning

# Learning Goals

- Increase student achievement and prepare students for college and career readiness
- Develop collaboration, communication, critical thinking, creativity, and citizenship in a global society
- Inspire students to apply their understanding of content to solve today's challenges
- “To be effective in the 21<sup>st</sup> century, citizens and workers must be able to exhibit a range of functional and critical thinking skills such as information literacy, media literacy, and technology literacy.” (Partnership for 21<sup>st</sup> Century Skills)

# Learning Environment

- Personalized learning environment with access to range of devices, content, and audiences
- Variety of digital tools and software are selected to construct, share, and publish knowledge to a worldwide audience
- Communication and collaboration with peers and beyond classroom
- Technological skills and information literacy are deeply integrated across all subject areas

# Elementary Schools

- 2 students:1 device
- Laptops, iPads, Digital cameras, ActivBoards, Desktops, Computer Lab
- ActivBoards – daily classroom use for interactive teaching and learning; *Skype*
- iPads – literacy and math activities, creation of videos, music, tutorials, eBooks
- Online writing – *Google Drive, Little Bird Tales, WordPress, Kidblog*

# Elementary Schools

- Multimedia projects, podcasts, blogs, wikis- *Storybird, Kidpix, Photoshop, Garage Band, iMovie, PrintMusic, Music Ace, Keynote, SAM Animation, RAZ Kids*
- Social Studies/Science - *Brainpop, Discovery Education, STEAM projects*
- Online reading and math tools- *Fast Math, Dreambox, iReady, Lexia, Track My Progress, Study Island*
- Digital citizenship activities

# CMS

- 1:1 MacBook Air, ActiveBoards, Desktops, iPads, Digital Microscopes and cameras, Telepresence Robot, Computer lab
- Seamless integration of learning, collaboration, creation and publishing
- Increased access to up-to-date resources
- Immediate teacher feedback to students
- *Google Apps for Education* – all teachers and students
- *Google Calendar* - homework
- *Google Drive* – Online writing and writing portfolios



# CMS

- *Moodle* – Blended online learning, homework, quizzes, Science forums, math reviews
- *Noodle Tools* for research
- *First Class* – Email communication, staff/student collaboration platform
- Art- Digital cameras and online portfolios
- English – *VoiceThread*, *Google Drive*, *iMovie*, *Online Writing Portfolios*, *PollEverywhere*
- Math – Online textbooks, *Socrative student response*, *Edmodo*

# CMS

- Social Studies – *Noodle tools* and research databases, *Google Docs*, *Voice Thread*, *Google Maps*, *Moodle*, *Socrative*, *PollEverywhere*, Online textbooks
- Science – *Moodle*, *Google Docs*, *iMovie*, Digital Microscopes
- World Language – *Skype*, *Voicethread*, *Google Sketchup*, *GoogleMaps*, *iMovie*, *Quicktime*, *Lingtlanguage*, *Quizlet*, *Animoto*, *Voki*, *Infuse Learning*, *Brain Shark*, online textbook

# CMS

- Applied Tech – *West Point Bridge, CAD, iMovie*
- Health – Fitnessgram software
- Music – *Google Docs, Moodle, SmartMusic*
- Computer literacy, applied technology, and multimedia courses

# CCHS

- 1:1 MacBook Airs in Fall 2015, Laptop and iPad carts, Desktops ,Epson Brightlink, ActiVote devices, Computer Labs, Multit-media lab, Digital Imaging lab, Language lab, 3D Printer, ebooks, digital cameras, ipod touch,digital microscopes and probes, audiobooks,Green Screen for CC Weather Services, Digital Recording Studio, Radio station, CCTV, Media Wall
- *Google Apps for Education – Google Docs, Google sites, Google presentations, Google calendar, Blogger*
- *First Class – Email communication, staff/student collaboration platform*

# CCHS

- *Noodle tools* and databases for research
- *Moodle* for online blended learning
- Virtual High School – Online courses
- Online textbooks
- *iPad Apps* – Advanced Earth Science and Environmental Field Studies work, Resource Center skills practice, Special Education classes, Multi-media projects

# CCHS

- *Turnitin* – online writing and checking for plagiarism
- *Sanako, VoiceThread* – World Languages
- *SolidWorks*- Engineering and Robotics
- *Java, Eclipse, Bluejay, Processing* – Java programming
- *Motic Images, Chemthink, Logger Pro* – Biology ,Chemistry, Forensic Science, Physics
- *TI Smartview, Graphing Calculator* – Math
- *Goodreads* - English
- *Adobe CS5 Suite, Magna Studio4, Cinema 4D, Mazaika, Sculptris Alpha 6* - Digital Art
- *Final Cut Pro* – Videography courses
- *Logic Pro, Protools, Reason, Sibelius, and Finale* – Recording Studio
- Information literacy, computer programming, and digital citizenship classes

# Professional Development

- Technology Specialists at each school site provide ongoing, sustained teacher training and coaching in technology integration and tech skills
- Teacher leaders at CMS and CCHS coach colleagues in technology integration
- EdTech Teacher trains teacher leaders in technology integration during full year course
- K12 teachers participate in summer institutes to increase tech skills

# Administrative Technology

- *Infinite Vision* – Business office, HR, Employee Web Portal
- *Aesop* – Employee attendance, Substitutes
- *Applitrak* – HR Hiring
- *Aspen X2* – Student Information System , Scheduling, Grading, IEPs for Sped, Parent Portals
- *Mylearningplan* – Professional Development, CCHS Educator Evaluation System
- *Baseline Edge* – CPS Educator Evaluation System and Student Assessment data



# Administrative Technology

- *Atlas Curriculum Maps*- K12 Curriculum
- *First Class* – Email
- *Connect ED* – Parent and School community notification system
- District, school, and teacher webpages
- Social media- Twitter, Blogs, Facebook

# IT Staffing

- Information Technology Director
- Assistant Director
- Network Manager
- Applications Specialist
- Lead Support Analyst
- Senior Support Analyst ( 4 positions, 1 vacant)
- Junior Support Analyst

# CPS K-5

	Laptops	Desktops	iPads	ActivBoards
A	213	118	92	34
T	241	124	51	28
W	293	71	70	30
Teachers	154			

# CPS CMS

	Laptops	Desktops	ActivBoards
--	---------	----------	-------------

- Sanborn 449 137 33
- Peabody 397 144 28
- Teachers 77

# CCHS

Laptop    Desktop    iPads    ActivBoards

Students            671            428            77            75

Teachers            150

# Network Information Hardware

- Total devices on network about 4000
- Total Wireless Access Points 90
- Total Managed Network Switches 47

# Network Management and Monitoring Software

- Intermapper Global Network Monitoring
- Xirrus Wireless XMS Management Suite
- HP Switches Procurve Manager Plus
- Fluke Diagnostics Optiview XG Remote Network Analyzer

# Internet Connectivity

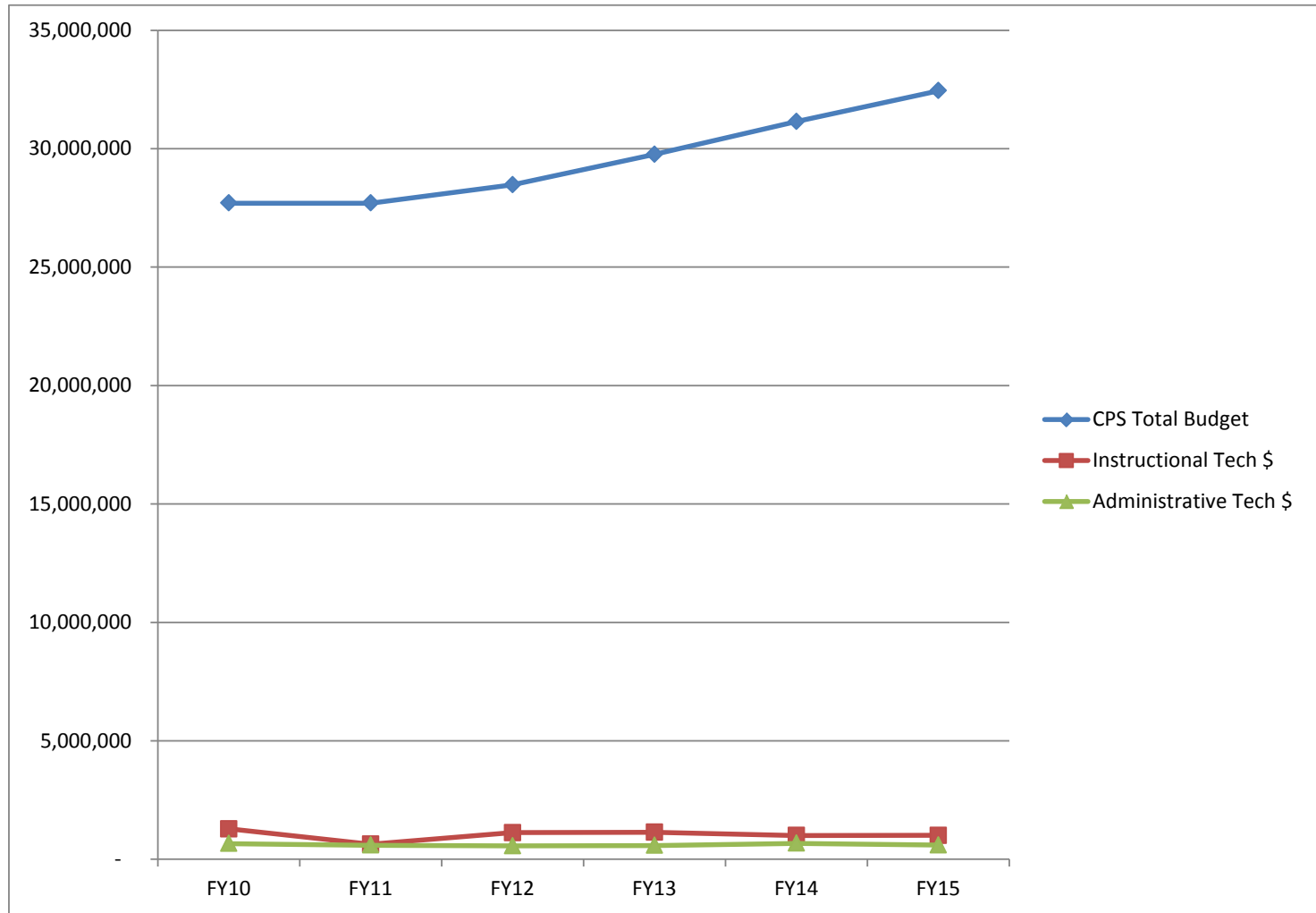
- 1 GBs fiber connection through Town of Concord DSCI connection
- 100 mbs backup connection through Cogent



# Financial Information

<b>CPS</b>						
	<b>FY10</b>	<b>FY11</b>	<b>FY12</b>	<b>FY13</b>	<b>FY14</b>	<b>FY15</b>
	<b>EXPENSES</b>	<b>EXPENSES</b>	<b>EXPENSES</b>	<b>EXPENSES</b>	<b>EXPENSES</b>	<b>BUDGET</b>
<b>TOTAL COMPUTER INSTRUCTION</b>	<b>1,285,468</b>	<b>639,006</b>	<b>1,124,508</b>	<b>1,143,575</b>	<b>1,002,400</b>	<b>1,011,372</b>
<b>SALARIES</b>	415,226	444,192	418,695	474,003	495,229	516,022
<b>NON-SALARIES</b>	870,242	194,814	705,813	669,572	507,171	495,350
<b>TOTAL INFO. TECH.SERVICES</b>						
	<b>661,061</b>	<b>595,004</b>	<b>561,882</b>	<b>583,936</b>	<b>673,575</b>	<b>600,612</b>
<b>SALARIES</b>	264,979	269,450	270,876	294,884	322,782	302,889
<b>NON-SALARIES</b>	446,082	325,553	291,006	289,052	350,793	297,724
<i>-- less commitments to Tech Stabilization Funds</i>	<i>50,000</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>
<b>NON-SALARIES</b>	<b>396,082</b>	<b>325,553</b>	<b>291,006</b>	<b>289,052</b>	<b>350,793</b>	<b>297,724</b>
<b>CPS Total Budget</b>						
	<b>27,699,200</b>	<b>27,699,200</b>	<b>28,474,200</b>	<b>29,755,538</b>	<b>31,140,538</b>	<b>32,440,538</b>
Instructional Tech \$	1,285,468	639,006	1,124,508	1,143,575	1,002,400	1,011,372
Administrative Tech \$	661,061	595,004	561,882	583,936	673,575	600,612
Instructional Tech as % of Budget	<b>4.6%</b>	<b>2.3%</b>	<b>3.9%</b>	<b>3.8%</b>	<b>3.2%</b>	<b>3.1%</b>
Administrative Tech as % of Budget	<b>2.4%</b>	<b>2.1%</b>	<b>2.0%</b>	<b>2.0%</b>	<b>2.2%</b>	<b>1.9%</b>
<b>Total Technology as % of Total Budget</b>						
	<b>7.0%</b>	<b>4.5%</b>	<b>5.9%</b>	<b>5.8%</b>	<b>5.4%</b>	<b>5.0%</b>

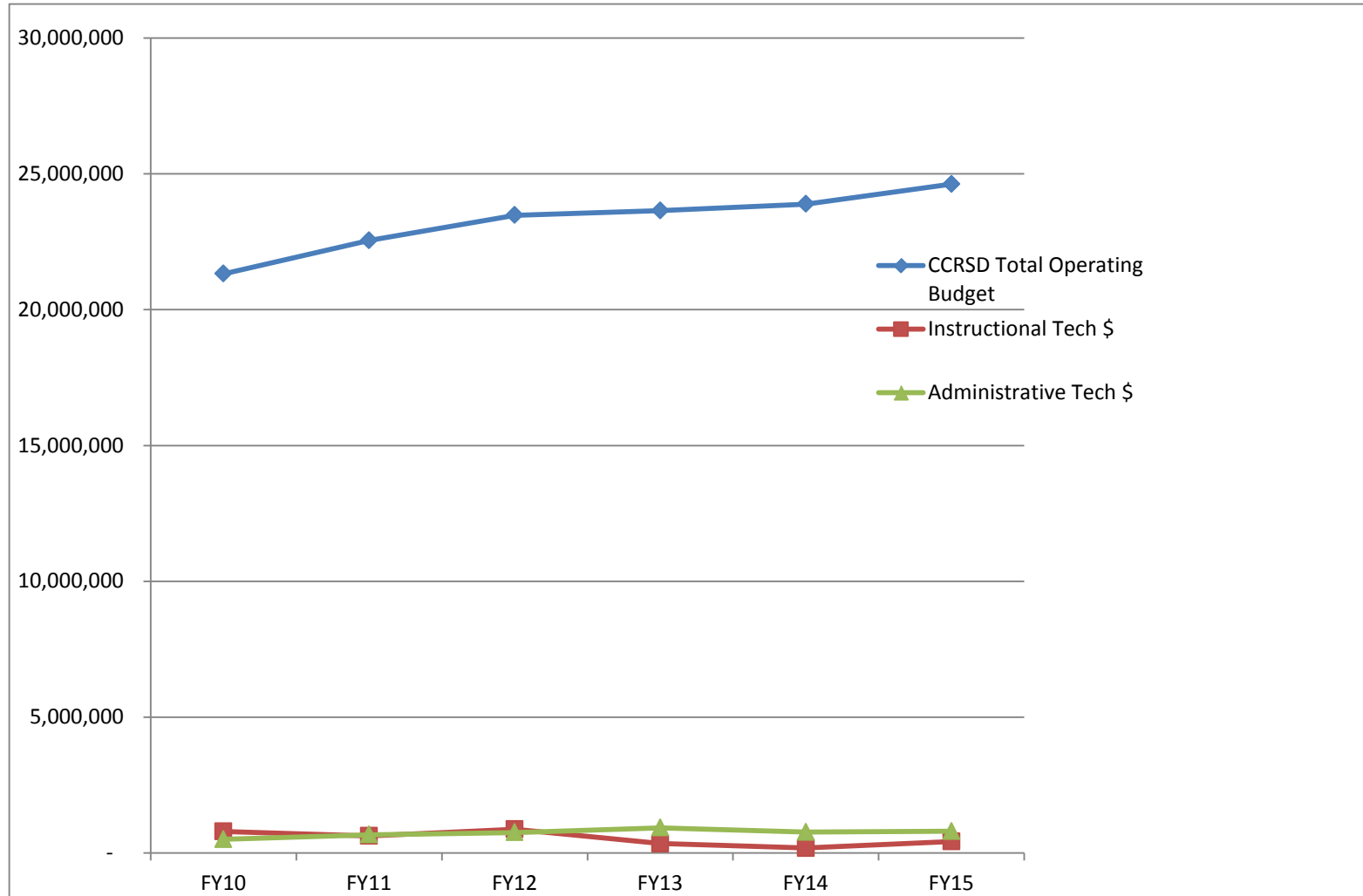
# Financial Information



# Financial Information

<b>CCRSD</b>						
	<b>FY10</b>	<b>FY11</b>	<b>FY12</b>	<b>FY13</b>	<b>FY14</b>	<b>FY15</b>
	<b>EXPENSES</b>	<b>EXPENSES</b>	<b>EXPENSES</b>	<b>EXPENSES</b>	<b>EXPENSES</b>	<b>BUDGET</b>
<b>TOTAL COMPUTER INSTRUCTION</b>	<b>798,393</b>	<b>630,347</b>	<b>878,921</b>	<b>352,946</b>	<b>186,901</b>	<b>427,977</b>
<b>SALARIES</b>	0	43,769	91,932	97,761	105,490	102,960
<b>NON-SALARIES</b>	798,393	586,578	786,989	255,185	81,411	325,017
<b>TOTAL INFO. TECH. SERVICES</b>						
<b>TOTAL INFO. TECH. SERVICES</b>	<b>504,630</b>	<b>675,781</b>	<b>753,503</b>	<b>928,539</b>	<b>769,246</b>	<b>804,124</b>
<b>SALARIES</b>	374,018	381,704	441,442	437,701	458,676	489,243
<b>NON-SALARIES</b>	168,199	544,077	812,061	735,838	310,570	314,881
<i>-- less commitments to Tech Stabilization Funds</i>	<i>37,587</i>	<i>250,000</i>	<i>500,000</i>	<i>245,000</i>	0	0
<b>NON-SALARIES</b>	<b>130,612</b>	<b>294,077</b>	<b>312,061</b>	<b>490,838</b>	<b>310,570</b>	<b>314,881</b>
	<b>504,630</b>	<b>675,781</b>	<b>753,503</b>	<b>928,539</b>	<b>769,246</b>	<b>804,124</b>
<b>CCRSD Total Operating Budget</b>						
<b>CCRSD Total Operating Budget</b>	<b>21,318,240</b>	<b>22,545,306</b>	<b>23,475,041</b>	<b>23,646,307</b>	<b>23,886,464</b>	<b>24,618,112</b>
Instructional Tech \$	798,393	630,347	878,921	352,946	186,901	427,977
Administrative Tech \$	504,630	675,781	753,503	928,539	769,246	804,124
Instructional Tech as % of Operating Budget	<b>3.7%</b>	<b>2.8%</b>	<b>3.7%</b>	<b>1.5%</b>	<b>0.8%</b>	<b>1.7%</b>
Administrative Tech as % of Operating Budget	<b>2.4%</b>	<b>3.0%</b>	<b>3.2%</b>	<b>3.9%</b>	<b>3.2%</b>	<b>3.3%</b>
<b>Total Technology as % of Total Budget</b>						
<b>Total Technology as % of Total Budget</b>	<b>6.1%</b>	<b>5.8%</b>	<b>7.0%</b>	<b>5.4%</b>	<b>4.0%</b>	<b>5.0%</b>

# Financial Information



# Summary Comments

- Students/Teachers are using a variety of digital tools for learning
- Digital citizenship skills need to be developed in early grades
- Job-embedded professional development and technical support for teachers are necessary
- Administrative technology creates efficiencies