



**San Diego Unified**  
SCHOOL DISTRICT

# **i21 Interactive Classroom Year 3 3rd Quarter**

**Proposition S Update  
May 2012**



# i21 Interactive Classroom

## Prop S Update



- SDUSD is the 2nd largest district in California.
  - Approximately 132,000 students in pre-school through grade 12.
  - 107 elementary schools, 11 K-8 schools, 24 traditional middle schools, 28 high schools, 45 charter schools, and 13 atypical/ alternative schools.
  - Diverse student population - more than 15 different ethnic groups speaking over 60 languages and dialects.
  - Free / Reduced lunch - 59.1%



# i21 Interactive Classroom Prop S Update



The voter-approved bond mandates that we  
...create 21<sup>st</sup> century learning environments...



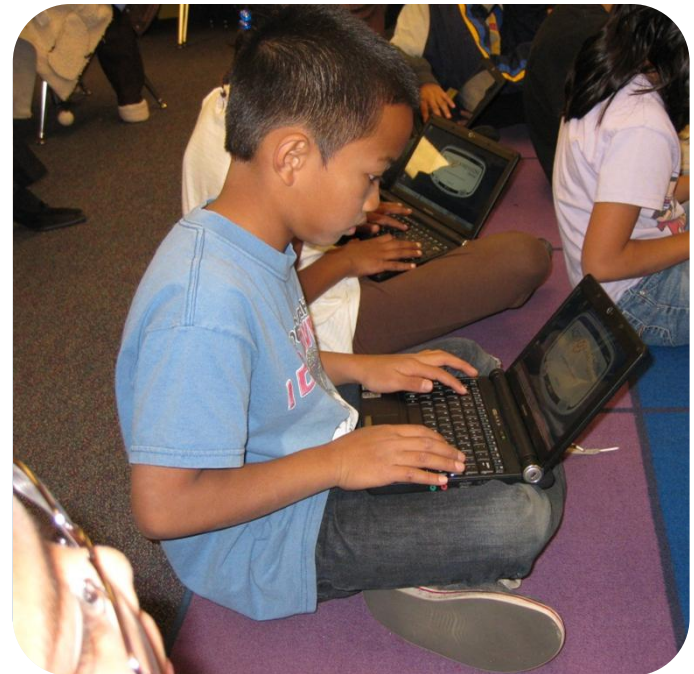
# Bond Initiative

## Prop S Update



... Provide up-to-date classroom and instructional technology required for 21<sup>st</sup> century student learning and teaching...

- *Equip Classrooms*
- *Upgrade Technology*
- *Campus-Wide Wireless*
- *Network Upgrades*





# i21 Goals

## Prop S Update



- Transformation of the learning environment
  - Quality technology-based teaching and learning tools
- Shift in the model for delivering instruction
  - Engaging, student-centered classrooms
- Equitable learning opportunities for all students
  - Allow all students to become expert learners



# Changing the Learning Landscape

## i21 Initiative



...It's an opportunity to change the way we do things based on new tools, resources, and focusing on 21st-century skills that students need to be able to survive in today's world...



# i21 Interactive Classroom

## Prop S Update



i21 classroom initiative aligns with...

- U. S. Department of Ed. Technology Goals
- District 2020 Vision
- Goals for Students Achievement GSA2
- Board Goals
- LEA Plans Component





# Goals for Student Achievement

## Prop S Update



- English Language Arts 2.3.1
- Math 2.3.2
- Science 2.3.3
- Social Studies 2.3.4
- Student will communicate in at least two languages 2.4
- Student explore, understand, and value fine arts 2.5
- **Students will effectively use technology to access, communicate and apply knowledge and to foster creativity 2.6**



Exciting  
Easy

Transformation

Anytime-Anywhere

Connected

Kids

Realia  
Creative

Online Visuals

Interactive

Flipcharts

Student-Centered

Data

Collaborative Relevant  
Engagement

ALL-Students

Fun Technology

Current

Learning-Style

Access Active-Learning

24/7

Classroom

Broadband

121

3G

4G

Interesting  
Learning

Digital

Change

Student

Differentiated

Voting

Choice

Achievement

Netbooks

Real-World

Teachers

Integration

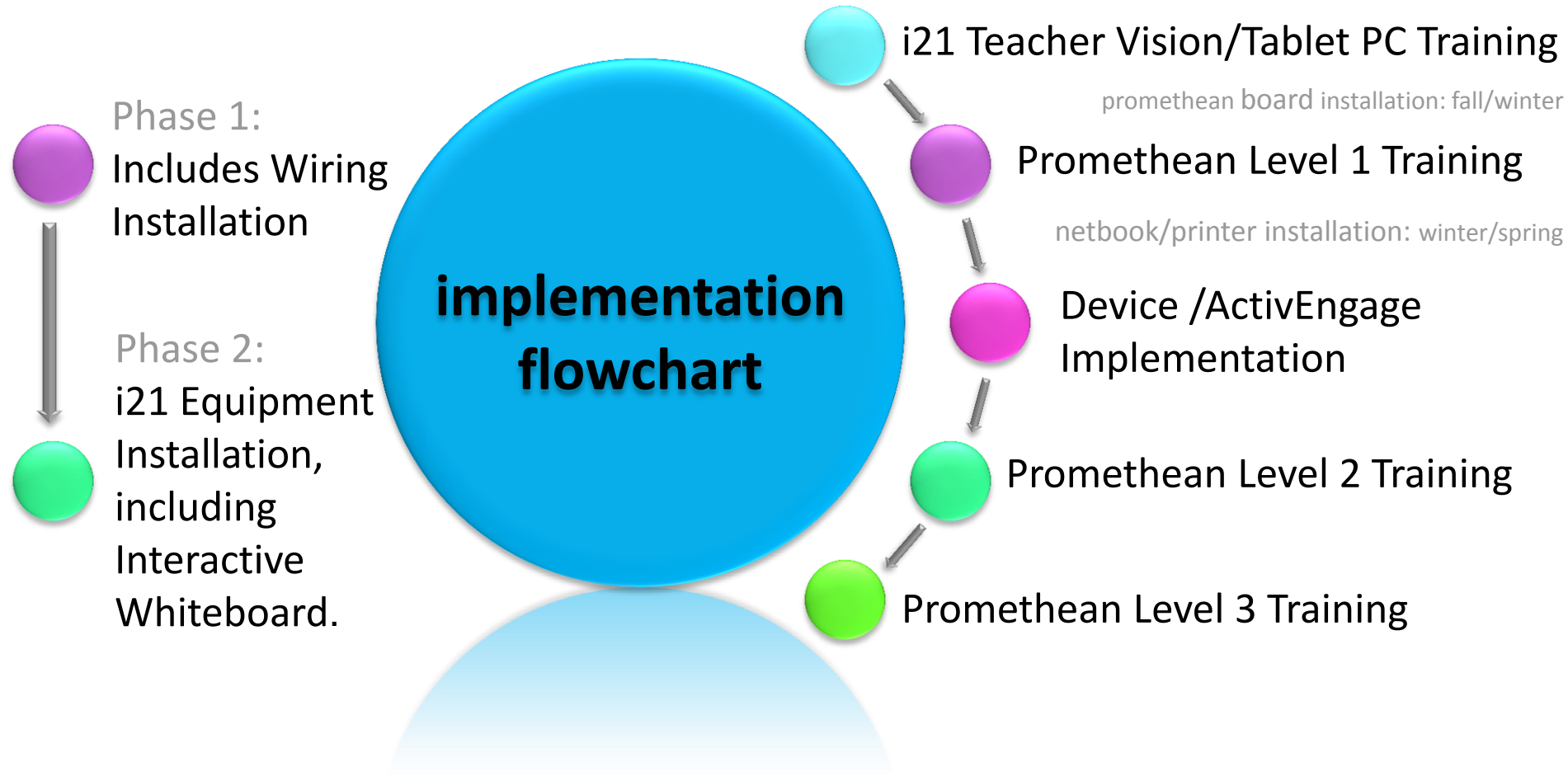
Growth



**San Diego Unified**  
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# Year 3 Update





## i21 Interactive Classroom Update

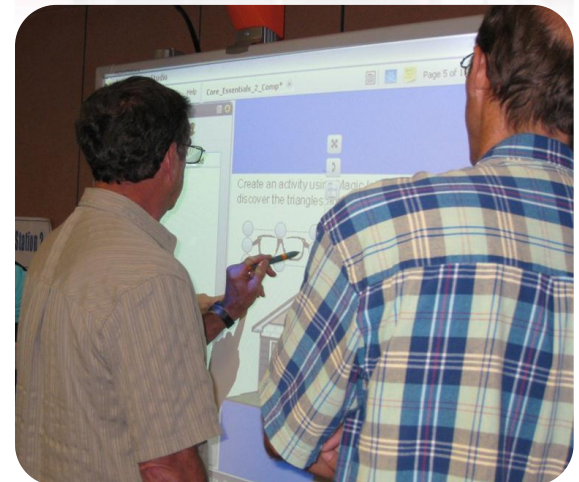
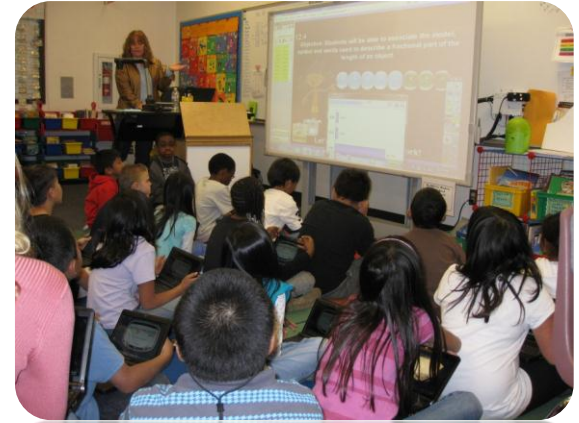
# Year 3 Implementation Totals

## Prop S Update



Promethean boards installed	<b>872</b>
Teacher tablets distributed	<b>872</b>
Student devices to be distributed	<b>30,520</b>
Teachers trained:	
classroom teachers plus	<b>925</b>
Special Ed support	
Promethean Levels 1, 2 and 3	

Approximately 60% of core curriculum classrooms completed in Y1, Y2 and Y3



# Year 3 Implementation – iPads

## Prop S Update



Y3 Student device implementation in two phases

- This Spring and into the Fall of 2012-13 school year

### Phase 1 Purchase

- May – July timeframe for distribution
- Installs based on high need schools first
- 81 schools identified
- 340 iPad carts
- 10,846 iPads
- Split PD model to accommodate late rollout
  - Intro to iPad - Spring
  - Classroom follow up – Spring
  - Instructional implementation – Fall
  - Classroom follow-up - Fall



# Year 3 Implementation – iPads

## Prop S Update



Y3 Student device implementation in two phases

- Phase 2 Purchase
  - September – November timeframe
  - All remaining schools
  - 532 carts
  - 18,088 student devices
  - Training - Fall
    - Intro to iPad environment
    - Instructional Vision and Integration
    - Classroom Follow-up





Impact of delayed student device rollout on the i21 program:

- Impact on classroom implementation for teachers and students
- Impact on department staff
- Impact on professional development delivery model
- Impact on professional development budget



# Changing the Learning Landscape

## i21 Professional Development



# Evolution of Instruction

## Prop S Update



Invention



Appropriation



Adaptation



Adoption



Entry



# Evolution of Instruction

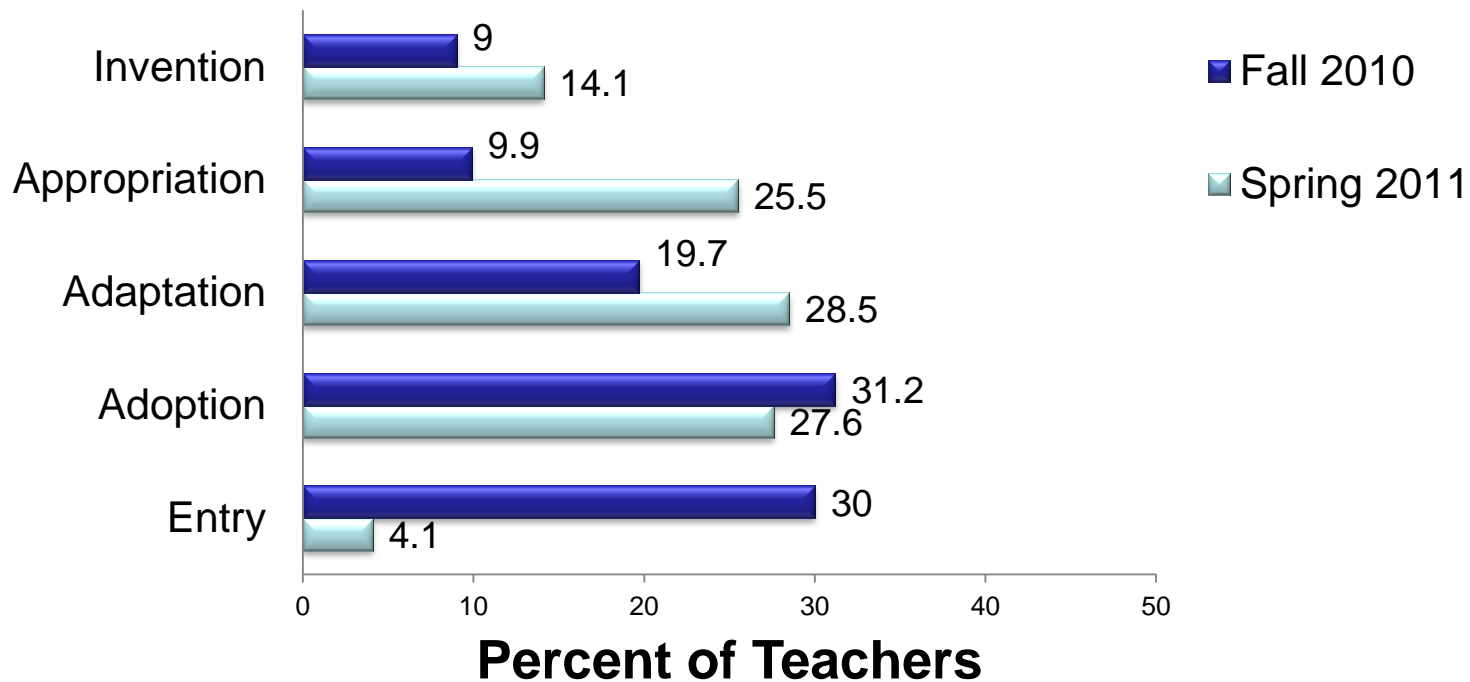
## Year 2 Teachers



### Technology Implementation



Level of Implementation

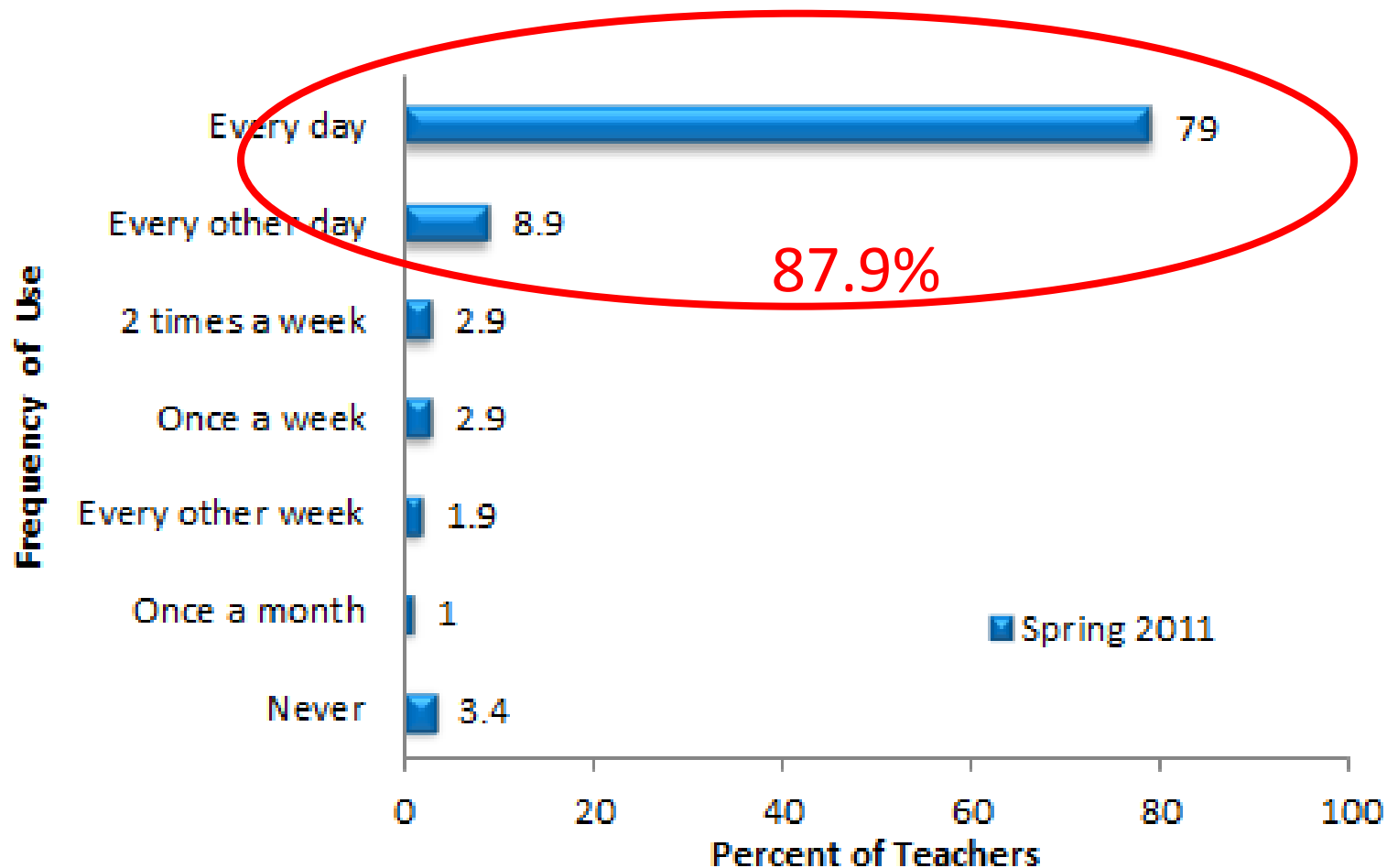


# Technology Implementation

## Year 2 Teachers – Spring 2011



How often do you use the Promethean board as a teaching tool?

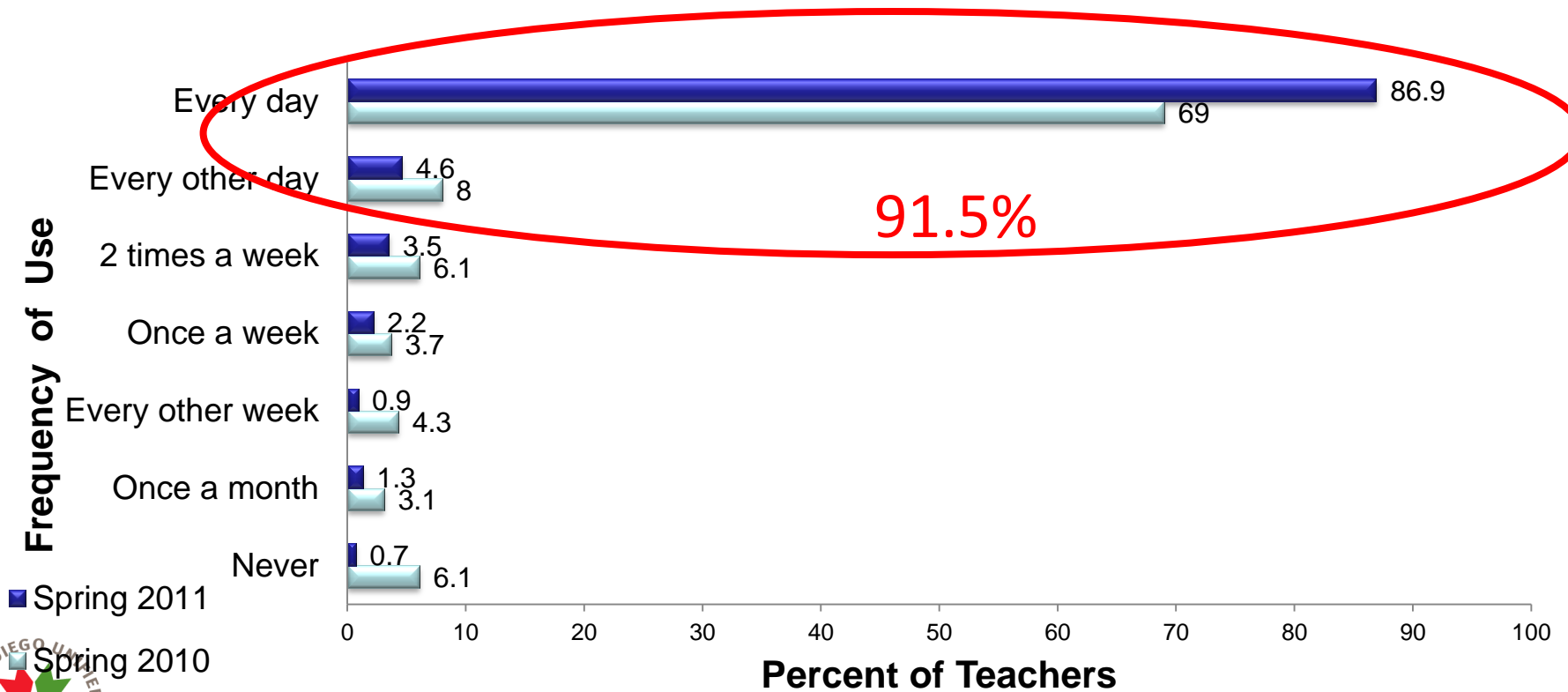


# Continuing Growth - Y 1 Teachers

## Spring 2011



How often do you use the Promethean board as a teaching tool?

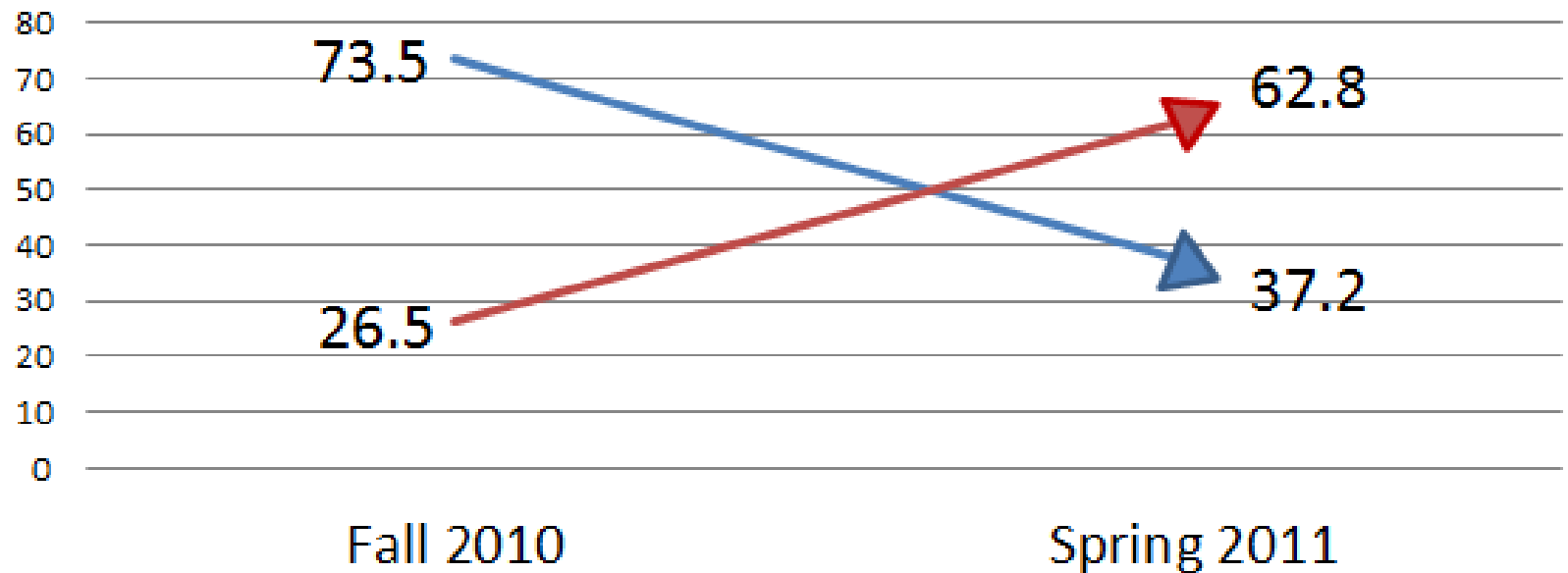


# Changing the Learning Landscape

## Year 2 Teachers – Spring 2011



### Shift in Instructional Practice Year 2 Teachers Pre and Post Survey



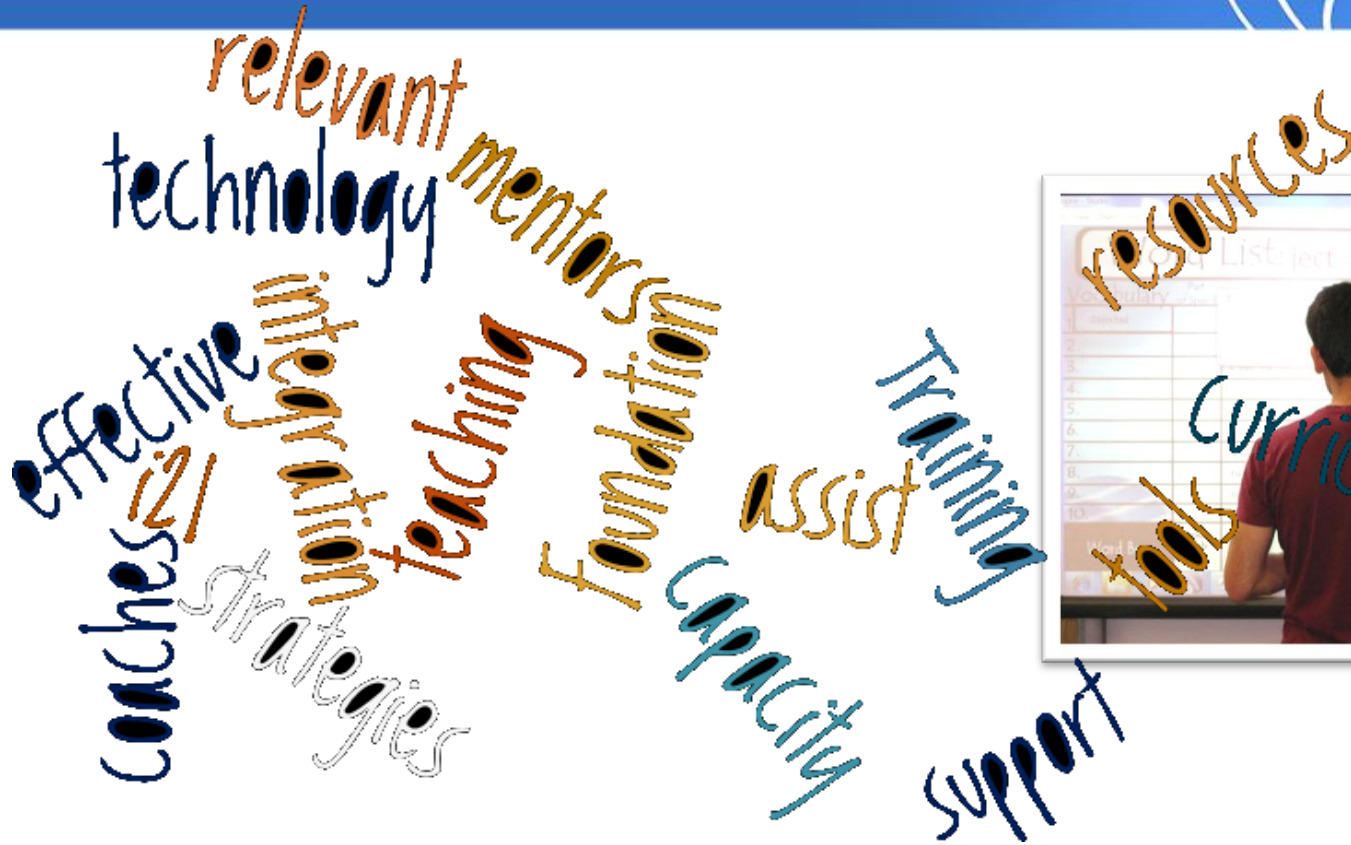
— Use of Lecture / notetaking / reading the textbook to introduce new information

— Use of Digital Tools - Promethean flipcharts / video / websites to introduce new information



# Building Capacity

## i21 Digital Teacher Leaders



Key teachers who are academic leaders at their individual schools will serve as i21 Digital Teacher Leaders to build site capacity.



# Building Site Capacity

## Role of i21 Digital Teacher Leaders



- Collaborate with i21 teachers and Ed Tech Resource Teachers
- Develop strategies to promote instructional use of i21 technology
- Function as an onsite resource for all other i21 teachers in their school.
- Be their site's information conduit for the latest technology updates, training on new software programs and other digital initiatives.
- Develop flipcharts to add to the district's curriculum warehouse.
- Work with the site administrators to identify further needs for training
- Attend monthly meetings/trainings with IT/Ed Tech Teams to receive the latest information or participate in advanced training.
- Serve in this capacity for the 2011-12 school year.







**San Diego Unified**  
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# Learning On the GO

**1:1 Laptop Program**  
**2011- 2012**



**LOGO**

**Taking i21 to the Next Level**



# LOGO

## Taking i21 to the Next Level



...SDUSD's **Learning-on-the-Go** initiative, education doesn't stop at the schoolyard gate or the library door. Through the LOGO pilot's off-campus wireless Internet connectivity, students now have **access** to digital textbooks and other **innovative** resources that allow them to learn in a **real-world** context, inside the classroom and beyond...





### 6<sup>th</sup> grade at:

- Knox MS
- Lewis MS
- Longfellow
- Mann MS
- Dana MS
- Pershing MS
- Wilson MS
- Montgomery MS

7<sup>th</sup> and 8<sup>th</sup> at Innovation MS

6<sup>th</sup>, 7<sup>th</sup> and 8<sup>th</sup> at Millennial Tech MS



### What students receive:

- Netbook with broadband access
- Netbook bag with student ID
- Charger
- Filtered internet
- Electronic textbooks
- Software programs including those for word processing, video editing, creating flipcharts, and electronic notebooks. All are compatible with District infrastructure and supported by the IT Dept.





### Site Support:

- Ongoing professional development
- i21 workshops
  - “Flipping” the classroom
  - Classroom visitations
  - Collaboration days
- Intro to TSS
- Designated Tech RT
- Administrator Support





**82%** of students would prefer to do assignments at home on a computer.

**86%** of students said they learn better when teachers incorporate technology such as videos, interactive websites, and online games into their instruction.

**38%** of students do not have internet at home



- **91%** of parents said that they prefer that their child use a school-issued computer that includes software used at school, as well as filtered internet with built-in safeguards.
- **95%** of parents said that if given the choice they would like this program to continue next year.





“Having wireless internet is so great because my child can do her homework/school work any where and that is so important especially because she is back and forth between family because I am a single mom and work full time...”

“His organizational skills, desire to work, and his interest in his education has also vastly improved as a result of this netbook. This program is invaluable to him and also to students who would not otherwise have this opportunity.”

“Fantastic program. Has helped us tremendously as we do not have a computer or internet at home. Now I check grades and my child has access to everything she needs to be successful.”

# The LOGO Experience

## Innovation Middle School



### What does our 1:1 Mobile Learning look like?

- Personal learning devices
- Extended learning: 24/7 access
- Focused instructional delivery
- Creativity and collaboration
- GSA 2.6 put into practice
- Responsibilities and Acceptable Use
- Student voice, choice, and project-based learning



# The LOGO Experience

## Innovation Middle School



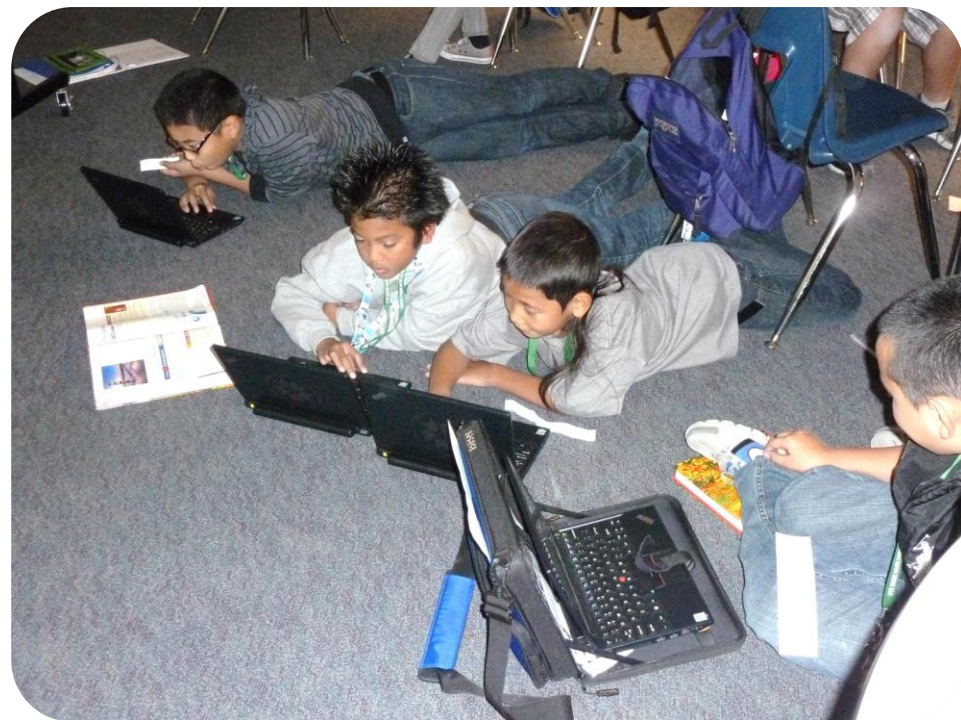
### Impact of our 1:1 Mobile Learning...

- **99%** teacher retention over 4 years
- API gain of **43 points**, 767 in 2010 to 810 in 2011  
(highest growth for any middle school in SDUSD)
- Increased accountability for students and adults alike
- Creativity and collaboration efforts for students and adults
- Ability to differentiate instruction with “just in time” support
- Presentations/projects to authentic audiences motivates students to achieve higher levels of quality



# The LOGO Experience

## Anytime...Anywhere



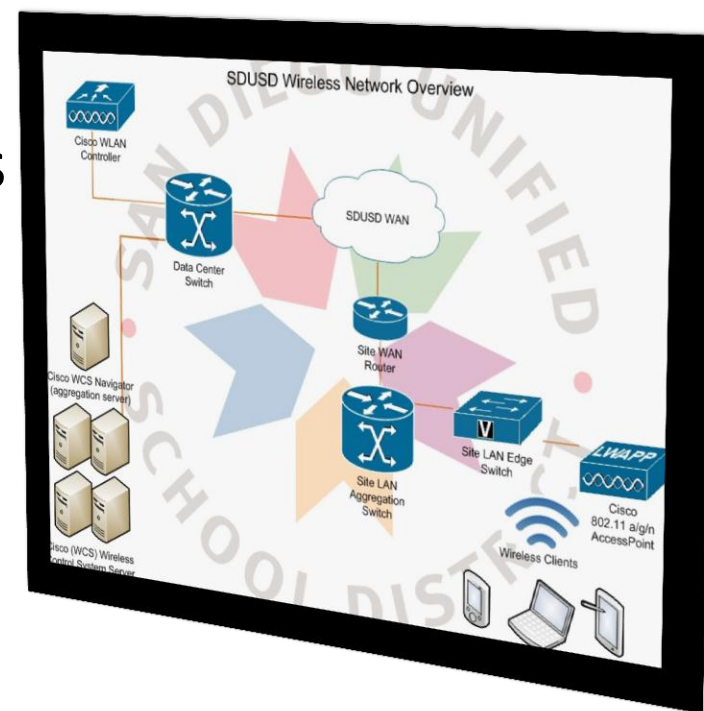


# Infrastructure Upgrades and Equipment

# Campus-wide Wireless Upgrades

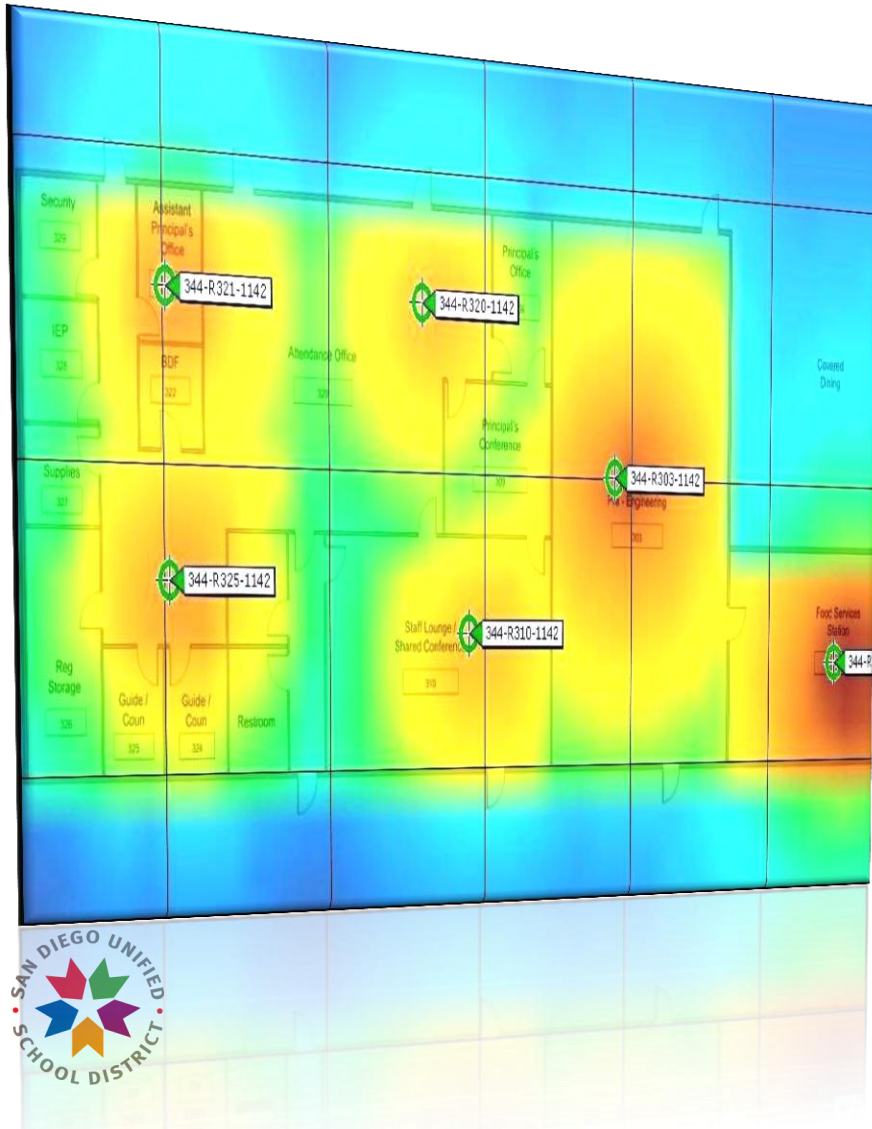
## Wide Area Network

- Approximately 11,000 dual band Cisco 802.11a/g/n access points will be deployed for indoor and outdoor client access over 5 years
- As of July 2011
- -5,143 access points installed
- -2,640 rooms with i21WIRELESS
- -Over 46 schools are now campus



wide

# Campus-wide Wireless Wide Area Network Upgrade



Centralizing controllers into the Data Center cuts down on service visits to remote sites..

Cisco Wireless Control System (WCS) with Cisco Mobility Services Engine allows staff to easily track client device location and monitor critical network performance statistics

# i21 Interactive Classroom Equipment





# Teacher Tablet

## Software for Teachers



- ActivInspire Version 1.5.3144
- ActivEngage 1.1.17
- Document camera software SDP 50DX
- USB Viewer, SDP 860 USB Viewer
- 3.3.2
- Firefox 3.6.8
- Internet Explorer 8.0.7601.17514
- Lanschool Student 7.4.2.2
- Kurzweil 3000 Version 11
- Microsoft One Note 2010
- Microsoft Office 2010
- Google Earth 5.2.1.1329
- Geogebra 3.2.42.0
- Snipping tool



# Student Netbook

## Software for Students



ActivInspire Version  
1.5.3144

ActivEngage 1.1.17

Firefox 3.6.8

Internet Explorer

8.0.7601.17514

Lanschool Student 7.4.2.2

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Microsoft One Note 2010

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Snipping tool



i21 sustainability estimates  
after 5-year rollout is complete

# I21 Sustainability

## Netbooks after 5 years



Student computing device in a 1:1 model					
Grade Level	Quantity	Estimated Price	Estimated Annual Repair Costs	4 Year Replacement Cycle Annual Costs	
6-12	55820	\$350.00		\$4,884,250.00	
3-5	26690	\$300.00		\$2,001,750.00	
<b>Sub Total</b>	<b>82510</b>			<b>\$6,886,000.00</b>	
Yearly Netbook Incidental Repair-Loss 3%	2475	\$350.00	<b>\$866,355.00</b>		

(Student computing device replacement is based on a 4 year replacement cycle. The optimal cycle is 3 years but the national average ranges 4-5 years)



# I21 Sustainability

## Teacher Tablet after 5 years



Teacher Computer Replacement				
	Quantity	Estimated Price	Estimated Annual Repair Costs	4 Year Replacement Cycle Annual Costs
Number of TeacherTablets in Core Rooms	5800	\$1,000.00		\$1,450,000.00
Yearly Tablet Incidental Repair 2%	116	\$500.00	\$58,000.00	

(Teacher computing device replacement is based on a 4 year replacement cycle. The optimal cycle is 3 years but the national average ranges 4-5 years)



# I21 Sustainability

## Promethean Board after 5 years



Promethean Boards					
	Quantity	Estimated Price	Estimated Annual Repair Costs	4 Year Replacement Cycle Annual Costs	Annual Support Agreement After Year 5 of Prop S
Promethean Maintenance Agreement					\$850,000.00
Bulb Replacement every 4 years	5800	\$250.00		\$362,500.00	
Yearly Bulb Incidental Replacement 2%	116		\$29,000.00		
<small>(Promethean board life expectancy is estimated to be 18-20 years with proper maintenance)</small>					
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# I21 Sustainability

## After the 5 year rollout is complete



i21 Sustainability Estimates					
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(Teacher computing device replacement is based on a 4 year replacement cycle. The optimal cycle is 3 years but the national average ranges 4-5 years)					
<b>District Annual Cost</b>			953,355.00	\$8,698,500.00	\$850,000.00
<b>\$10,501,855.00</b>					

\* Prior to i21, the district spent on average annually \$10,680,375 on computers

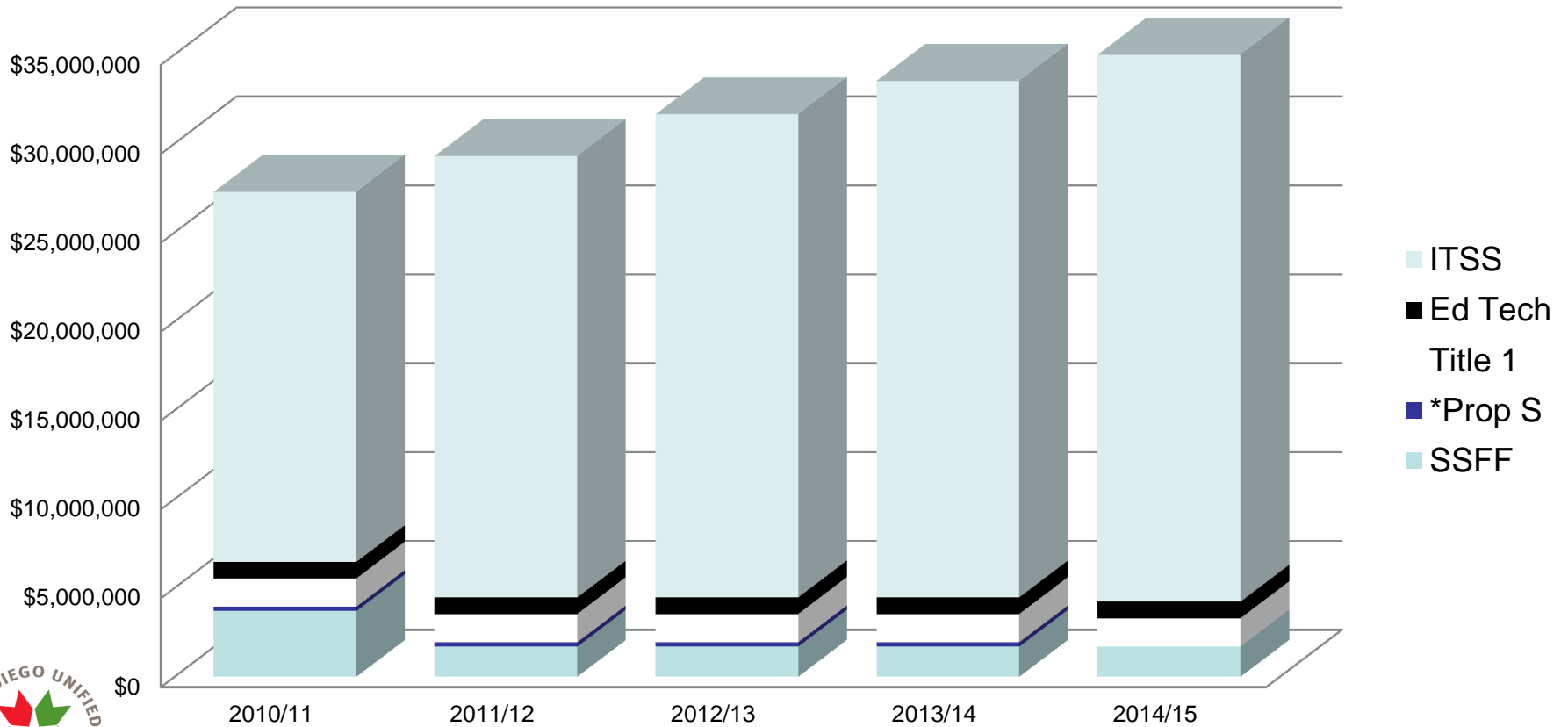


# I21 Sustainability

## 5 Year Technology Plan Budget



ITSS 5 Year Technology Plan Budget  
Fiscal Years 2011-2015







# District Road Map



# 2009-2011



Professional development journey begins.

Building i21 site capacity.

Solid network infrastructure.

Just-in-time assessment.

Installation of i21 classroom suite.



2009-2011

2011-2012

2012-2014

# 2011-2012



An evolving learning experience.

Increased access to digital resources, intervention programs and classroom websites.

Business intelligence drives decision-making.

24/7, 365 access to learning.

Leadership development.



2011-2012

2012-2014

i21 roadmap

# 2012-2014



Digital textbooks begin to replace print material.

Personalized instruction meets the needs of the 21<sup>st</sup> century learner.

Digital dashboards with drill-down access to a variety of real-time district data.

50% of high school students will take at least one course online.

All core classrooms are equipped for the 21st century.



2012-2014



“The i21 instructional program is in the **vanguard** of true 21<sup>st</sup> Century instructional strategies...”

“...a **leading example** of where public education is headed as school districts learn to harness the potential of technology to enhance student achievement through an **engaging student-centric** approach that **mirrors the digital world** in which they live...”





# Questions





### Level 1 - Entry

Instructional technology is textbook-based; tools are blackboards, worksheets, and overhead projectors. Teachers have little experience with computer technology.



# Evolution of Instruction

## Adoption



### Level 2 - Adoption

Teachers may be concerned about how technology can be integrated into daily instruction . Technology is interspersed among traditional whole-group lectures, recitations, and seatwork.

# Evolution of Instruction

## Adaptation



### Level 3 - Adaptation

Technology becomes thoroughly integrated into traditional classroom practice. Lecture, recitation, and seatwork remain the dominant form of student tasks but students use word processors, databases, some graphic programs for approximately 30-40% of the school day.

# Evolution of Instruction

## Appropriation



### Level 4 - Appropriation

A milestone evidenced by a change of personal attitude toward technology. Teachers begin to replace old habits with new and use technology effortlessly as a tool to accomplish real work.

# Evolution of Instruction

## Invention



### Level 5 - Invention

Interdisciplinary project-based instruction, team teaching, and individually paced instruction become common. Students were busier, more active; the classrooms buzz. Students can be observed helping other students over technology hurdles and they help their teachers. Teachers adapt to the more empowered status of students.