



# Oak Park Elementary School District 97

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TO: Dr. Al Roberts, Superintendent

FROM: Michael Arensdorff, Director of Technology

SUBJECT: Technology Plan Report

DATE: June 3, 2015

Below is a comprehensive description of the proposed three-year technology plan that will cover the 2015-2016, 2016-2017, and 2017-2018 school years. This memo describes the goals of the plan and outlines ways to evaluate the plan's success. There is a detailed description of each line item explaining its importance and the role it will play in the vision. I have worked extremely closely with our curriculum directors to ensure that this plan is focused on supporting instruction and learning. Input was also obtained from our Technology Advisory Committee, which includes parents, teachers, administrators, and students. The current status of this plan would not be possible without the support of these groups.

While the previously approved technology five-year plan was centered on network architecture, infrastructure upgrades, and hardware enhancement, this plan is focused on supporting and leveraging what we have to enhance and transform the instructional experiences for our students and staff. The Technology Advisory Committee was instrumental in the development of the goals and vision, and also helped to fine-tune the budget. Members of that committee also contributed to action planning for the enhancement of curriculum and instructional opportunities our stakeholders have on a day-to-day basis.

Throughout the planning process, I have continued to be budget conscious and worked to minimize the requested amount through efficiencies, negotiating contracts and changes to systems/vendors used. If you have questions, comments or concerns after reviewing this report, please share them with Dr. Roberts. He and I will work together to address them accordingly.

## **Oak Park School District 97** **Technology Department**

**Vision:** To improve and enhance instruction and learning by providing technology tools and professional development to teachers and students, preparing them for today and tomorrow.

### **Beliefs**

- We believe we will redefine the way we **create, communicate, collaborate and critically think.**
- We believe in the importance of and will provide **consistent and equitable access** to all students.
- We believe providing students with innovative tools will offer the power of **choice** with how and what they will create and how they will communicate and collaborate.
- We believe we will work to **modify and redefine** the way teachers teach through consistent professional learning created to provide a common knowledge for all staff, while still meeting the varying level of needs for staff to continue to grow.

## **1:1 Goals & Objectives**

### **Goal #1: Increase student achievement through the successful implementation and enhancement of technology tools**

Objective 1: Improve student learning in all core academic areas (math, reading, science, humanities, social studies, arts, music, physical education, World Language) through personalized learning

*Evaluation Methods: Use formative and summative assessment data*

Objective 2: Implement a system of common assessments and assessment methods that provide constructive feedback through the use of technology

*Evaluation Methods: Inventory the different forms of assessment being used and monitor use of electronic feedback methods*

Objective 3: Increase student engagement and on-task behavior

*Evaluation Methods: Observation of student work (based off benchmark), analysis of attendance and discipline data*

Objective 4: Transform learning environment with a focus on SAMR (Substitution, Adaptation, Modification, Redefinition) and the four C's (Creation, Communication, Collaboration, Critical Thinking)

*Evaluation Methods: A variety of assessment methods, including surveys (teachers, students, parents), access statistics, and measures of progress and student achievement within the classroom setting (projects, classroom assessments)*

**Goal #2: Implement a successful technology professional development program that enhances confidence and technological pedagogy**

Objective 1: Provide consistent and ongoing professional development that infuses technology into the instructional methods, assessment activities, and curriculum/content that is supported by the tools available in our classrooms district-wide

*Evaluation Methods: Staff needs assessments and skills inventory survey as well as other evaluation tools/documents*

Objective 2: Provide support and opportunities to actively participate in professional learning communities aimed at developing more rigorous and engaging curricula that effectively incorporates technology

*Evaluation Methods: School and district technology plans, curriculum maps and documents, and professional development plans*

Objective 3: Provide professional development and planning opportunities that focus on strategies for differentiating instruction

*Evaluation Methods: Staff surveys following PD and classroom observations of implementation*

Objective 4: Improve teaching delivery methods to incorporate necessary 21st Century Learning Skills (Learning and Innovation skills; Information, Media and Technology skills; and Life and Career skills)

*Evaluation Methods: Review/Reflect upon content delivery, student work, results, and evaluations/questionnaires that are observed in person or through video*

**Goal #3: Provide equitable opportunities for student learning with technology tools to enhance the learning experiences and goals**

Objective 1: Facilitate opportunities for individualized instruction and learning through the use of the technology tools

*Evaluation Methods: Observations of teacher-directed and self-directed use of supplemental educational technology and software; observations of extent to which teachers provide students with individual paths to success based on their needs*

Objective 2: Support the delivery of high-quality instruction throughout all classes and schools through the use of technology tools

*Evaluation Methods: Observations as part of the regular evaluation process in classes and schools*

Objective 4: Collaborate with Special Education teachers to identify potential technology tools and technology-based practices to support students with IEPs

*Evaluation Methods: Administer needs assessment and seek feedback from staff/department and evaluate results*

**Goal #4: Provide 99 percent uptime in terms of our data center (i.e. Internet connection, access to files).**

Objective 1: Monitor data center to ensure operation at maximum capacity

Objective 2: Complete regular updates and systems checks to identify areas to improve

Objective 3: Complete a Cisco Active Advisor system check annually on network hardware to determine planning for future budgets and needs to maximize the network operability

*Evaluation Methods: The technology department will monitor the above-mentioned objectives and the help desk to determine success.*

**Goal #5: Regularly evaluate all technology initiatives, programs and infrastructure**

Objective 1: Determine the ideal classroom layout and teaching environment and standardize across the district

Objective 2: Document and evaluate implementation procedures and evaluate student achievement pre and post

Objective 3: Through pilot programs, determine which devices and components of technology to implement district-wide and standardize the strategy and software needed for our district to move forward

Objective 4: Expand program throughout the district

## Past Five-Year Technology Plan Analysis

### 2010-2011

Dell Lease 410 Teacher Laptops	\$132,293 - Completed
Dell Purchase – 90 Teacher Laptops – ARRA	\$ 87,120 - Completed
Professional Development Sessions (8 over summer and 7 during school year)	\$100,000 - Completed
Substitute Cost – 7 school year sessions	\$ 25,000 - Completed
LCD Purchases – General Education (90)	\$ 72,000 - Completed
LCD Purchases – Special Education (60) – ARRA	\$ 48,000 - Completed
Replace Middle School iBook carts	\$152,000 - Completed
System Administrator (Salary & Benefits)	\$ 70,000 - Completed
Increase Teacher Leader from .5 to 1.0	\$ 30,000 - Completed
Introduce 2 Tech Integration Specialists	\$100,000 - Completed
12 IEP Stations – ARRA	\$ 24,000 - Completed
Hand-held Devices	<u>\$ 15,000 - Completed</u>
<b>Total</b>	<b>\$855,413</b>

### 2011-2012

Professional Development	\$ 50,000 - Completed
Professional Development Incentive Cost	\$ 25,000 - Completed
Dell Lease – 410 Teacher Laptops	\$132,293 - Completed
Laptop carts for students – 1500 – Lease	\$300,000 - Completed
LCD Projectors	\$ 80,000 - Completed
Add 2 Tech Integration Specialists	\$100,000 - Completed
Assess iMac Computers – in labs	\$ 0 - Completed
30 iPod Touch with Cart (8 total)	\$ 64,000 - Completed
iPad Learning Lab (10 iPads with cart)	<u>\$ 80,000 - Completed</u>
<b>Total</b>	<b>\$831,293</b>

### 2012-2013

#### Technology Plan

Dell Lease – 410 Teacher Laptops	\$132,293 - Completed
Laptop Carts for students – 1500 laptops	\$300,000 - Completed
LCD Projectors	\$ 80,000 - Completed
Professional Development	\$ 50,000 - Completed
Professional Development Incentive Cost	\$ 25,000 - Completed
Implement VoIP System	\$220,350 - Carried to next year
iMac Assessment Results with Dell Replacement	\$168,000 - Completed
Increase Hand-Held Devices	<u>\$ 75,000 - Completed</u>
<b>Total</b>	<b>\$975,643</b>

### 2013-2014

#### Technology Goals/Plan

Refresh 500 Teacher Laptops	\$161,333 - Completed
Laptop Carts – 1500 – Lease	\$300,000 - Repurposed / Completed

Professional Development	\$ 50,000 - Completed
Professional Development Incentive Cost	\$ 25,000 - Repurposed
Reassess Hand-held Needs	\$ 0
Reassess Fiber Needs & Contract	<u>\$ 0 - Completed</u>
<b>Total</b>	<b>\$536,333</b>

### **Detailed Report of Technology Plan and Referendum funds**

Lease 600 Staff Macbook Airls	\$192,176.69 - Completed
Continue to lease student HP and Dell devices (End Dell Lease Feb. 2014)	\$179,995 + Dell - Completed
Purchase and deploy 350/300 SPED/Gen Ed Macbook Airls	\$126,882 - Completed
Purchase and deploy Phase 1 of iPad Minis (1:1 - 800 - 5th grade)	\$371,614.32 - Completed
Purchase/Lease and deploy Phase 2 of 1:1 (iPad Minis) (1:1 - 590 - 4th grade)	\$ 218,426 - Completed
Purchase and deploy 100 iPad Minis for Teachers Assistants	\$ 30,300 - Completed
Purchase and deploy 20 iPad Airls for Social Workers/Therapists	\$ 8,440 - Completed
Purchase and deploy 120 iPad Minis for Title 1	\$ 34,680 - Completed
Purchase 10 Macbook Airls for staff replacements/loaners	\$ 8,290 - Completed
Purchase/Deploy 317 wall-mounted projectors (jointly with school and district repurposed funds)	\$ 456,000 - Completed
Professional Development (Continuous) Ed Tech Teacher, Apple, Train the Trainer, Data Coaches (Daily basis)	\$ 50,000 - Ongoing
Upgrade Web Help Desk Server (transition to virtual server)	\$ 0 - Completed
Purchase 370 Chromebooks to supplement devices	\$102,794.85 - Completed
Purchase 380 iPad Minis for K-2 grades, redeploy 120 iPads to elementary schools	\$ 121,904 - Completed

### **2014-2015**

#### **Technology Goals/Plan**

Refresh student laptop carts	\$300,000 - Completed
Refresh 600 teacher laptops	\$161,333 - Completed
Professional Development	\$ 50,000 - Completed
Professional Development Incentive	\$ 25,000 - Repurposed
Implement New Infrastructure	<u>\$200,000 - Complete</u>
<b>Total</b>	<b>\$736,333</b>

### Detailed Report Technology Plan and Referendum funds

Professional Development (Continuous) Ed Tech Teacher, Apple, Train the Trainer, Data Coaches (Daily basis) - T21 Groups for Middle School (Lead to train the trainer)	\$ 50,000 - Completed
Purchase/Lease Phase 3 of 1:1 (iPad Minis) (1:1 - 700 - 3rd grade)	\$ 270,375 - Completed
Purchase/Lease and deploy Phase 4 of 1:1 (iPad Minis) (Middle School - 2,003)	\$804,081.60 - Completed
Year 2 & 3 of Lease of 600 staff Macbook Airs	\$ 320,000 - Completed
Replace 100 Dell Desktops with 60 Lenovo laptops for Admin Assistants & Admin	\$ 26,255 - Completed
VoIP planning for following school year	\$ 220,350 - Completed
Transition and upgrade Dedicated Internet Connection to 1 Gigabit and WAN network to Comcast with a 10 Gb pipe	\$ 165,000 - Completed
Network Infrastructure Enhancement (servers, switches, routers, wiring)	\$ 200,000 - Completed

### 2015-2016 Technology Plan

#### Operating Budget

Professional Development	\$ 28,000
WAN & Dedicated Internet	\$ 168,000
Computer Maintenance	\$ 150,000
Software Maintenance	\$ 140,000
iLearn Repairs	\$ 0
General Supplies	\$ 5,500
Postage	\$ 2,500
PowerSchool	\$ 33,000
Contract Services – SIMS	\$ 6,000
Annual Network & Data Security Audit	\$ 50,000
eRate Consultant	\$ 6,700

#### Technology Plan Budget

Infrastructure Enhancements Including fiber relocation to new administration building, completing wiring project, switch refresh and server refresh	\$ 170,500
Kindergarten Device Refresh (iPad 2) PE Teacher Refresh (iPad 2) (trade in value \$31,500 - will cover the cost of cases and apps)	\$ 100,000
iMac Lab Replacement (Chromebooks) (End of Year – to prepare for next year)	\$ 90,000
Admin/Admin Assistant Device Lease	\$ 26,255
Outdoor Wifi Access/with Cameras (dependent on eRate funding & success of pilot)	\$ 93,000

– about 50% will be reimbursed)

### Referendum Budget

Professional Development	\$ 40,000
Final Payment Student MacBook Air Lease	<u>\$ 56,500</u>
<b>Subtotal Operating Budget</b>	<b>\$ 589,700</b>
<b>Subtotal Tech Plan Budget</b>	<b>\$ 479,755</b>
<b>Subtotal Referendum Budget</b>	<b>\$ 96,500</b>
<b>Total</b>	<b>\$1,165,955</b>

### 2016-2017 Technology Plan

#### Operating Budget

Professional Development	\$ 28,000
WAN & Dedicated Internet	\$ 168,000
Computer Maintenance	\$ 150,000
Software Maintenance	\$ 140,000
iLearn Repairs	\$ 0
General Supplies	\$ 5,500
Postage	\$ 2,500
PowerSchool	\$ 35,000
Contract Services – SIMS	\$ 6,000
Annual Network & Data Security Audit	\$ 25,000
eRate Consultant	\$ 6,700

#### Technology Plan Budget

Admin/Admin Assistant Device Lease	\$ 26,255
Staff iPad Refresh (Including trade in value)	\$ 200,000
Device Enhancement for 1 <sup>st</sup> & 2 <sup>nd</sup> grade classrooms	\$ 100,000
Apple TVs or similar	\$ 28,000
Infrastructure Upgrades – Servers, Switches, Routers	\$ 319,000
Professional Development	<u>\$ 40,000</u>
<b>Subtotal of Operating Budget</b>	<b>\$ 566,700</b>
<b>Subtotal of Tech Plan Budget</b>	<b>\$ 713,255</b>
<b>Total Budget</b>	<b>\$1,279,955</b>

### 2017-2018 Technology Plan

#### Operating Budget

Professional Development	\$ 28,000
WAN & Internet (Exploring own fiber and being ISP)	\$ 168,000
Computer Maintenance	\$ 150,000
Software Maintenance	\$ 140,000
iLearn Repairs	\$ 0
General Supplies	\$ 5,500
Postage	\$ 2,500



PowerSchool	\$ 35,000
Contract Services – SIMS	\$ 6,000
Annual Network & Data Security Audit	\$ 25,000
eRate Consultant	\$ 6,700
<b>Technology Plan Budget</b>	
Infrastructure Enhancements	\$ 0
PLTW Device Refresh	\$ 200,000
Professional Development	\$ 40,000
<b>Subtotal of Operating Budget</b>	<b>\$ 566,700</b>
<b>Subtotal of Tech Plan Budget</b>	<b>\$ 240,000</b>
<b>Total Budget</b>	<b>\$ 806,700</b>
<b>Potential Leases/Purchases</b>	
Refresh Staff Laptops (Payment #1)	\$ 0 (If needed, covered by trade-in value for first payment)

## **Explanation of Line Items**

The follow are Professional Development (PD) opportunities we plan to offer as a result of this plan:

1. EdTech Teacher - This offering is continuous PD over an entire school year to encourage ongoing learning and real-time application. For the 2015-2016 school year, the teaching and learning department will build a common foundation of professional development provided to middle school and elementary staff and administrators. The focus of the PD will be to enhance the integration of technology in the classroom, and as a result impact student engagement and educational growth. The PD will be offered through EdTech Teacher, which is a hands-on training service. Roughly 75 staff members will receive direct training from EdTech Teacher. These staff members will then spread their knowledge using a train-the-trainer model. During the 2014-2015 school year, a similar model was used to train a cohort of staff members. It received phenomenal feedback from the 20+ staff members that participated.
2. Apple PD – Annually District 97 surveys all instructional staff to identify the growth our schools and districts are making with how well they are leveraging technology to redefine the learning environment. These surveys help identify professional development needs for the upcoming school year and provide evaluation for the success of past PD.
3. Conferences that are focused on ways staff can leverage technology tools to enhance instruction in ways of collaboration, adaptive learning, personalized learning, with Common Core State Standards at the foundation.
4. Training for staff (Director, IT Infrastructure Manager, Systems Integration Manager, Technology Specialists, Data & Instructional Technology Coaches, PowerSchool Manager)

## **Infrastructure Enhancements**

Throughout the next three years of this technology plan, our district technology staff will be not only focused on bringing forth efficiencies in processes and unifying solutions across all departments, but to make sure the district infrastructure and network are up to date and operating optimally. As part of this planning process, the technology department completed an active scan of our network infrastructure called, Cisco Active Advisor. The active scan evaluated the infrastructure to provide information on what hardware is out of warranty and end of life. This information is part of the data to support the spend in this line item for the next three years.

As you will see in the attached report, the district has two possible spends in the next two years that will be needed to ensure a stable and supported network. If the district completes the recommended projects as identified in the Cisco Active Scan over two years, the first year would be a band-aid. My proposal is to combine the spend into one (IDF refresh) and complete it for the upcoming school year. By going with my proposed recommendation, it would be more stable, efficient and cost saving (\$74,000). Another

part of this line item will include updating servers through a refresh cycle of at least 3 years, but not longer than 5 years. This ensures our district does not encounter a time in the future that will require a complete overhaul and expensive price tag. This process will also entail the consolidation of physical servers into less physical servers through virtualization. Then, by clustering the servers that have been virtualized, the technology department will be able to create high availability among the virtualized environment in the district. Our goal is to minimize the footprint and increase the high availability of our servers to maximize the uptime. In the first year, the technology department plans to consolidate 25 physical servers into one virtualized server cluster; 10 file servers in one virtualized server; and 12 DHCP servers to one virtualized server to create a high availability clustered environment.

These plans ensure the technology department will not only keep our network up-to-date and running to support our district fully, but also to do so in a way that our technology staff can manage the number of updates and enhancements each year without needing additional staffing or larger service contracts. These enhancements are centered on upgrading servers, wiring, server racks, firewall for disaster recovery purposes, move to the new district office, network storage (NAAS), switches and core switches. Finally, I will also explore options to trade-in old equipment to offset any of these costs.

Below you will find the breakdown of the equipment that will be needed for the backend/infrastructure enhancements for each year.

#### **2015-2016**

1. 2960X: IDF switch upgrade and refresh. (\$84,292)
2. Relocating to the new central office (Fiber moved – applied for eRate funding) (\$10,500)
3. Wiring project at Beye, Holmes & Lincoln (\$56,000)
4. Server refresh (\$20,000)
  - a. Active Directory
  - b. File storage
  - c. Casper Jamf, management of all Apple devices (6000+ devices)
  - d. Web Data
  - e. Kari System
  - f. OCEM
  - g. iCal

#### **2016-2017**

1. Main Core layer three switches (10 sites) (\$241,000 - apply for eRate funding to receive 50% refunded)
2. Virtual Environment upgrade (\$40,000)
  - a. 2 Servers for Clustering
3. Create a DR (Data Recovery) Site at Julian (\$38,000 – apply for eRate funding)
  - a. New DR Firewall (\$30,000)
  - b. NAS/SAN storage for Backup (\$8,000)

## **2017-2018**

1. Based on the Cisco Active Advisor scan, no additional upgrades will be needed until the 2019-2020 school year. The next major refresh will consist of the access points, but those will not need to be upgraded until our district has the equipment that is capable of handling the newer technology standards in the access points.

### **WAN & Dedicated Internet**

Our district transitioned last year from AT&T to Comcast as our WAN fiber provider. This change was a result of my evaluation of our annual budget and leveraging the eRate process to identify cost savings for our Dedicated Internet and WAN network. This change has decreased our annual bill by \$40,000 for 2015-2016 and \$60,000 for 2015-2016 and 2016-2017. During the 2017-2018 school year, I will either explore another contract with a WAN provider or implement the Oak Park D97 Fiber possible option through eRate. Please see below for more details regarding the possible Oak Park D97 Fiber option.

#### **Oak Park D97 Fiber (Potential Future Option for 2017-2018)**

Preliminary investigation regarding District 97 fiber options reveal the potential to transition from paying monthly Comcast bills to purchasing fiber from another provider. The provider would lay fiber that would be owned by District 97 and connected to all of our buildings. This option would provide our district with the ability to scale to 10gb to each building (10 times current bandwidth) from 1gb.

While the costs may not be drastically different, the increase of 10 times the capacity will provide the growth needed for many years to come and potentially reduce costs by partnering with other organizations. I have been communicating with other districts that have made this transition and heard very positive outcomes from their transition, as well as, some prohibiting issues.

The biggest issues that I have heard from the other districts include: Costs to upgrade the backend infrastructure, additional personnel to manage partnerships, the difficulty of working with other organizations (including state and federal entities) and longer contracts/agreements that are required of such agreements.

### **Computer Lab Transition (2016-2017 SY)**

With our growing student population and the fact that our computer lab machines are over seven years old and no longer able to be upgraded to a newer operating system, I am proposing to remove the labs at the end of the 2015-2016 school year. Doing so will provide more space in most of the buildings for classroom locations and/or flexible learning space.

I am proposing that the district add one cart of 25 Chromebooks for each elementary school and one cart of 30 Chromebooks for each middle school to replace the singular lab of 25-30 iMacs. The district will not need to purchase carts because we will be able

to reuse the carts that have already been purchased a few years back for the HP student devices. By purchasing Chromebooks, the district will provide more access to a different operating system that many may use in the future. To replace the iMacs with iMacs or another Mac device, the cost would be at least three times more than replacing with a Chromebook (iMac/Macbook = \$900 vs. Chromebook = \$300). With the purchase of 300 Chromebooks to replace the lab, the district would be well under a budget for a direct replacement. Finally, waiting till the end of the 2015-2016 school year will provide time to discuss with teaching and learning, as well as, building administrators for how to maximize these spaces for the best learning environment.

### **Administrative Assistant Device Lease**

Upon starting in this role as Director of Technology, I familiarized myself with all leases that the district has entered into. One that needed to be addressed during the 2014-2015 school year was the administrative assistant lease. The technology department began researching models, collected feedback from the end users (administrators, administrative assistants), and formed a small evaluation group. That group consisted of two technology staff members, one building administrative assistant and one central office administrative assistant. The group attended a device showcase that featured 8-10 different companies and each had five plus models to evaluate. The technology department looked at weight, battery life, durability, quality, life span and overall functionality.

Following our visit, the technology department selected these to evaluate further: Dell, Lenova, Toshiba and Samsung. Following the evaluation, the Lenova device was the most durable, had the second longest battery life, second lightest in weight and most importantly found that it has proven to last for many years. Our technology department is planning for the device to last five plus years, which would extend beyond the final payment of the lease. The cost was about \$100-\$200 more per device over three years, but has a much longer lifespan, which will offset costs in the long run.

### **Computer Maintenance**

1. Computer Repair & Replacements
  - a. Over the 2015-2016 school year, the technology department received 2 out of the 600 staff Macbook Airs and 4 out of the 650 student Macbook Airs that required purchasing equipment for the repair or that we had to send out to a repair shop. We will look to complete more if not all of these repairs in-house in the future with the hiring of three technology specialists this school year that have excellent experience with Mac hardware repairs. Our department will continue to train and develop all Mac skillsets with each staff member.
  - b. Over the last year the technology department has replaced 9 staff Macbook Airs/Pros due to liquid damage and hardware repairs that were too costly for it to be worth repair.

2. Projector bulb replacement
  - a. Over the last year the district has purchased 10 projector bulbs throughout the district. I am anticipating the need to purchase more over the next three years as many of the 80 non-Nec brand wall mounted projectors are about three to four years old.
  - b. In year three of the technology plan, I have proposed \$21,000 for a bulb refresh for all of the new NEC wall-mounted projectors that were purchased last year (317). These bulbs should last at least three years and some may even last up to 5 years. Our technology staff will provide proper care/maintenance twice per year on cleaning out the filters to help with the bulb life.
3. New Staff device purchases
  - a. I have worked closely with our Human Resources department to ensure our numbers are accurate for the upcoming year. Last year, there were over 45 hires and the collaboration with HR provided the ability to budget and purchase enough devices to address new positions, while still having some on hand as loaners, as needed.

#### **Staff Devices**

1. Staff Macbook Airs –
  - a. The 2015-2016 school year will mark the third year with these devices. The final payment of \$159,999 will be made at the end of the 2014-2015 SY. I believe that our district can extend these devices within our annual computer maintenance budget for the 2016-2017 and 2017-2018 budget years. This translates to an offset of \$320,000 in the technology plan for staff laptops. With that being said, it is anticipated that in the 2018-2019 SY, a refresh on 500+ Macbook Airs will be needed. The first year of the new refresh may be able to have a partial cost offset by trading in the old devices. This will also align with our refresh cycle of every five years for our laptops.
2. Staff iPads
  - a. Staying in line with a refresh every four years on tablets, the staff will require a refresh of these 400+ iPad 4 devices to take place in the 2016-2017 school year. This cycle is focused on functionality and determining the best time to leverage the trade-in price to offset costs. I have found through research that doing so prior to the fifth year of usage is the best option of return to recycle the older devices. In addition, it has been identified these devices to lose significant functionality and the ability to update going into the fifth year. It is recommended to purchase these devices, as you will see in the above line item.

3. Classroom Apple TVs or similar interactive capability
  - a. Similar to the iPad time frame, our district technology department will look to refresh the Apple TVs in the 2016-2017 school year. We will have 400 classroom/learning spaces that include an Apple TV. We will continue to investigate either the Apple TV or another solution to ensure interactive capability. This will also be a recommended purchase.

## **Software Maintenance**

1. SmartNet
  - a. This is an annual licensing for maintenance and service on our servers/hardware that are supported with Microsoft SMARTNet.
2. Canvas
  - a. Both of our middle schools have adopted a Learning Management System (LMS) during the 2014-2015 school year called Canvas. About 20 staff members piloted and evaluated multiple solutions in the 2013-2014 SY and arrived at Canvas as the selected solution for Brooks and Julian. This solution has provided our staff with a unified solution to post class content (assignments, due dates, syllabi, etc.), manage workflow digitally, and manage a webpage all in one place. I truly believe that having one solution has and will continue to provide cohesiveness between both buildings. Both buildings have fully adopted this LMS in their classrooms and are using Canvas for staff meetings, as well as, information to be shared from the building administration. This has helped staff take on the student view and have a better understanding of how students interact with the instructor as a course. This solution will continue to be an ongoing license that is paid out of this account without any increase in budget. We (myself and data coaches) are in the process of piloting a few learning management solutions at the elementary schools.
3. Casper Suite
  - a. This software is a solution that our district uses to manage important updates, push applications and monitor assets on all of our Mac devices (Macbooks, iPads, iPad Minis). This cost is per device and is used for all Mac devices district-wide. I continue to monitor this line to ensure it continues to be the best solution to accomplish our needs and negotiate the pricing structure.
4. Mobile device applications
  - a. Apple has made a transition in the way they allow districts to manage applications, which has made the process easier and resulted in cost savings for districts. Our district can now purchase applications under our account and distribute them to staff members, as needed, using Casper Suite. Additionally, if a staff member leaves or no longer requires an application for various reasons, the technology department

can retract the application back into our district account. This process will save money in the future for staff and student devices, especially during a device refresh process. I have also allocated a small amount of this line for new applications for staff and students each year to ensure we continue to support the teaching and learning process.

### **General Supplies**

1. Tech staff supplies – tools, adapters, cords, containers, etc.
2. PD session supplies – including food and supplies for trainings and meetings.

### **Postage**

This line item is used for shipping devices/hardware to be repaired. It has also been used to pay for shipping of equipment to us or back to companies upon end of lease.

### **Project Lead the Way (MacBook Pros)**

The MacBook Pros for Project Lead the Way (PLTW) follow a similar refresh cycle as our other devices, which means they must be updated every four to five years. Following the board's approval, myself, teaching and learning directors, and the PLTW team lead will plan to deploy new devices for the 2017-2018 SY. PLTW currently has 120 Macbook Pros. I have reached out and will continue to gather feedback on these devices and know this curriculum requires some varying needs. Preliminary conclusions are that the PLTW program will need devices that can support more graphically intensive programs. Myself along with the teaching and learning directors will also continue to work with the PLTW team to identify how the new curriculum may change the needs of the tools in their classrooms. I would also recommend to either sell these devices to a recycle company to offset some of the \$200,000 refresh cost or redeploy them within the district. This may also offset the purchase of other devices in the tech plan, but will be determined once the trade-in value is established for these devices during the 2017-2018 SY.

### **Enhance 1<sup>st</sup> & 2<sup>nd</sup> Grade Device Access**

Upon discussions with curriculum directors, data coaches, and teachers, our goal is to enhance the access of devices for our first and second grade classrooms. During the 2014-2015 SY, the district purchased at least five devices for every classroom. Our district has seen them used in many ways and mostly as centers, which was the intended use. It has been identified that our district needs to provide more learning opportunities to maximize the use of these devices throughout the district. Our district will accomplish this through continued development of our staff by: data coach training/co-teaching, other external professional development (EdTech Teacher), and focused on specific small group instruction strategies of integrating technology. Following the continued professional development during the 2015-2016 school year, our district will look to enhance the number of devices in first and second grade to reach a 2:1 student to device ratio in each classroom, which would require the purchase of 230 iPad Minis. This will only be completed after the teaching and learning/technology department can identify successful usage and need for additional devices in these classrooms to enhance the learning environment, as well as, provide more equitable opportunities for our students.



### **Kindergarten Refresh & All iPad 2's (PE Department)**

Once again following the refresh cycle of four to five years for tablets, the kindergarten and all other iPad 2 devices will be up for a refresh in the 2015-2016 SY. While these devices can be used beyond the four to five year window, the integration with other Mac devices will not be consistent and reliable, which will lead to disruptions to classroom instruction. I have researched the value that the recycle companies would give for our devices in a refresh, and currently they are offering \$105 per iPad 2 and only \$30-40 for the first iPad. This information is another reason I am recommending that our district refresh all iPad 2 devices this summer to take advantage of the higher recycle value, and avoid the potential of not being able to upgrade and losing functionality. By completing the trade-in during the summer of 2015 will offset about \$105 of the \$400 for the new iPad Air (including case).

### **Database of Materials**

One of the high priorities for the Teaching and Learning Department, which came from the Technology Advisory Committee, is to support our staff members to quickly access instructional resources and have them readily available. This is an idea that came out in various work groups and visionary planning. The goal is to offer resources that are: easily accessible, shareable, sortable via tags or other filters, and viewable by grade level/department/standard. The resources in this database may include, but not limited to: unit plans, lesson plans, common formative and summative assessments, rubrics and other curriculum resources.

### **Student Technology Fee Collection/Expenditure/Repairs**

I will provide a full report this summer (2015) with the total number of student devices that required repairs, replacements, and associated costs. I will also include a recommendation for a technology fee for the upcoming school year. Last year, I stated it was difficult to provide a firm recommendation as there was only one grade level that was taking them home on a daily basis and only two grade levels that currently had devices deployed to them.

### **Data and Security Audit**

Over the last couple months, I have been compiling the requirements for a data and network security audit. I have received two proposals and will be seeking at least one more in order to evaluate and make a proper recommendation for the upcoming year. At this time, to complete a full data and network security audit the district will need to spend up to \$50,000. I do not expect to complete this full audit on an annual basis, but do plan to complete smaller audits following the initial full audit next year (2015-2016). I will also have these proposals go to the Technology Advisory Committee to receive feedback and recommendations. I have this line item built into the each of the next three years, with the larger internal and external audit cost during the first year.

### **Outdoor Wi-Fi Access/Cameras**

During the spring of 2015-2016, our two middle schools will have the possibility to pilot outdoor access points for various reasons. Following this pilot, if successful, I would look to move forward with this line item to install access points, wiring and cameras at

all buildings in the district. I have included the installation of cameras for this project to ensure monitoring activity around the Wi-Fi access as I expect these locations to be a gathering point for accessing Wi-Fi. One decision to pilot outdoor Wi-Fi access is due to the need for our PE teachers to fully utilize the resources available to them for their classroom, as well as, all other staff. Their classroom during much of the year is outside and without having the ability to access Wi-Fi alters their instruction and/or creates numerous inefficiencies in their practices. This will not only provide PE with the access, but all of our staff to extend learning spaces outside. I will continue to keep you informed on the developments and success of the pilot in March 2016.

### **Village-Wide Wi-Fi Plans**

Step one of this potential future joint effort with other organizations would be to provide outdoor access points at all of our buildings. This is a proposed item in the 2015-2016 tech plan, which is dependent on eRate funding and the success of the pilot during the spring of 2016. As mentioned prior, the technology leaders from Districts 90, 97 and 200 have discussed ways to increase Wi-Fi accessibility throughout our village. With this in mind, the chief information officer for District 200 and I have explored this concept further with representatives from the Village of Oak Park, Park District of Oak Park, Oak Park Public Library and the Oak Park Chamber of Commerce. The group is in the infancy stages of potential plans that would increase Internet access throughout the community. I will keep you updated on the status of these discussions.